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.

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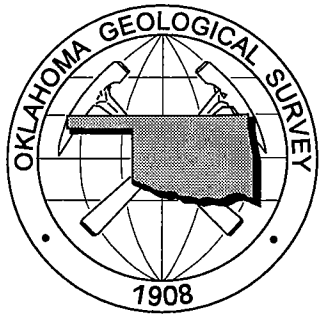
Robert O. Fay

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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.

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¢. 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.

p. 12. Petrolia, Texas. About 18 shallow oil wells have been drilled on the 15-acre tract in this field, at depths of 185 to 200 feet, each yielding about 5 barrels a day, having been drilled in the past 5 years. There are some big gas wells in the field, at 1,675 to 1,700 feet deep, with 400 pounds pressure and 10-million cfgpd. The gas is piped to Dallas, Fort Worth, and other towns in the state.

p. 27. New Incorporations. King-Electra Oil Co., of Nowata, Okla., with capital of $40,000. Incorporators: R. L. Steiner, W. A. Chase, and W. A. Spies, of Nowata.

The Texas-Caddo Oil Co., of Dallas: capital stock, $50,000. Incorporators: H. T. Taylor, Ephriam Garonzik, and H. W. Cutshall.

Altus Oil & Gas Co., of Altus, Okla.; capital, $30,000. Incorporators: J. Ben Russell, H. T. Kimball, and Grant Corbin, all of Altus.

Vol. 10, No. 31, Jan. 11, 1912, p. 6. Personal Mention. H. F. Sinclair, of Independence, Kansas, returned from a visit to the East last week. Mr. Sinclair's holdings in the Mid-Continent fields are probably as large or larger than any individual operating in this field.

Jim Sharp, next to Walter B. Sharp, his brother, the best known official of the Producers Oil Co., is visiting Tulsa. Jim is the "man behind the gun" when things go wrong with any of the company's big wells, his last effort in this line being the extinguishing of the Harrell No. 7 fire in the Caddo Field, a 35,000-bbl. well which burned for 27 days.

p. 10, 12. Oklahoma. Wildcats. It is reported that a test well will soon be started in T. 12 N., R. 19 E., under the guidance of Prof. Gould, former state geologist.

Another test is starting about 8 miles north of Porum, and another near Quinton, in Haskell County.

At Heavener, south of Poteau, in LeFlore Co., some gas has been found.

Joe King & Co.'s first test on the Jas. Towne, Jr., in Sec. 27-15N-14E is flowing by heads from a sand at 1,700 feet.

A well, which will no doubt be watched with a great deal of interest by the oil fraternity, has been commenced near Wilburton, in Latimer Co., Okla. The Leschen Oil & Gas Co., of which Henry Leschen of St. Louis, Mo., is president, started drilling on the J. Poe Farm, in the SE-1/4 of SW 1/4 of Sec. 10-5N-18E, which is located about 4 miles west of Wilburton. This first test, of which there will be a number, is in the midst of more than 20,000 acres of leases which have been blocked solidly, and which were secured within the last year by W. A. Maupin, one of the company's representatives who has been making his headquarters at McAlester. The territory has every indication of making a new oil and gas field, and was leased only after a very careful investigation by geologists who reported the chances as excellent, as the topography and geological formations indicate the probable existence of hydrocarbons. The contract for drilling the first well has been let to J. S. Tetley, of Ft. Smith, who has had much experience in drilling in the southeastern part of the state. The contract calls for a depth of 2,500 feet, but it is understood that the hole will be sunk to a greater depth if necessary, as the Leschen Company has decided to give their acreage a thorough test.

p. 12, 14. Electra Field, Texas. The country for 50 miles or more around Electra is dotted with wildcat drilling wells. A study of the field is very interesting. When one gets through, he does not know any more about it than when he started. The formations are so irregular that every well has a formation of its own, the sands extending from 540 to 1,900 feet. No one knows which way the field will go. Some think it is already defined. Wichita Falls is the headquarters for the field.

Vol. 10, No. 32, Jan. 18, 1912, p. 1. Employer's Liability Law. The Supreme Court of the United States handed down a decision Monday, that the employer assumes all risk in giving employment - the risk not only of the business itself, but of carelessness on the part of a fellow employee when that carelessness results in injury to another. This decision is epochal.

p. 1. And What of Gasoline. The manufacturers of gasoline engines are no longer worrying about their ability to sell their product. They are worried about the inability of the refiners to make enough gasoline to run the engines. The consumption of gasoline is not constant from year to year, but rather tends to double from one year to the next. The automobile alone will mark an increase of 80 percent in gasoline consumption for 1912. The conclusion is that we are facing a gasoline famine, with almost no oil reserved in back-up stock. Alcohol cannot be produced less than 35 cent a gallon, which is much more expensive that gasoline, and cannot compete.

p. 1. The Corporation Tax. The Treasury Department this week has decided on regulations for assessment of corporate taxes on oil and gas companies. The depreciation is figured by measuring the production of the latest year with that of the preceding year. With gas, rock pressure is to be the test instead of volume of production. The new regulations are said to be acceptable to producers.

p. 2. Another Deep Test. El Reno, Oklahoma, 145 miles southwest of Tulsa, is preparing to drill a deep test to 3,000 feet. The company is composed of townsmen, who have invested $30,000. It is far west of Dr. Gould's estimate of area of probable production.

The zero-and-below weather in the southwestern gas belt this week did much to destroy the prestige of natural gas. The pressure refused to respond, resulting in an epidemic of complaints from householders who used wood, coal, and oil-burning stoves.

p. 3. Trade Notes. T. L. Moran, representing a New York syndicate, has leased a total of 209,000 acres near San Angelo, Texas, and in Tom Green, Coke, and Sterling Counties. Some of the bigger ranches are the March Ranch, 42,000 acres; M. B. Pulliam Ranch, 47,000 acres; Richardson Ranch, 40,000 acres; and J. W. Knapp Ranch, 10,000 acres.

p. 10. Natural Gas Resources, Oklahoma. Since the annulment, in 1909, of the state law prohibiting the pipeage of gas from Oklahoma, the gas industry has developed rapidly. During 1910, 151 wells were drilled, of which 93 were productive, bringing the total gas wells to 502. Millions of feet are closed in awaiting a market. The 1910 production was 50,429,646,000 cubic feet, valued at $3,490,704, with 27,880,063,000 consumed in Oklahoma, at an average price of 7.46¢ a thousand in Oklahoma.

Arkansas. No new gas fields were discovered in 1910, but 47 gas wells were drilled in older fields, of which 37 were productive, with a total of 103 gas wells in Arkansas at the end of 1910. The statistics were combined with those of Colorado and Wyoming.

p. 15-16. Electra, Texas. There are 43 wells drilling, 29 rigs up, and locations made for 5 more. The J. M. Guffey Petroleum Co. has offices in the City National Bank Building at Wichita Falls, for John F. O'Donohue, Martin Rowe, W. W. Roberts, Harry Miles, J. C. Strauss, and William Rather. Just across the street from the bank on Ohio Ave., Frank Wilbur, James K. Crawford, W. G. Skelly, and Brice Kinney have taken offices. William Dalton of the Oil Well Supply Co. has taken offices in the First National Bank Building in Electra.

Vol. 10, No. 33, Jan. 25, 1912, p. 2-3. Trade Notes. The St. Louis Oil & Gas Co., of Tulsa, is a new corporation by S. S. Morman, W. D. Dodd, and G. C. Simmons, all of Tulsa.

The Albany Natural Gas Co. of Albany, Shackelford Co., Texas, has been incorporated with a capital of $10,000. The incorporators are: John F. Segwick, W. G. Webb, P. K. Deats, and F. B. Cloud.

The annual meeting of the Petroleum Publishing Co. was held in Tulsa on Jan. 20. The following officers were elected: P. C. Boyle, president and manager; Thomas A. Latta, treasurer; J. N. Perrine, treasurer; and A. V. Bourque, secretary.

p. 4. Personal Mention. Paul Trees, brother of Joe C., who is located temporarily at Lawton, Okla., where the Benedum & Trees Co. is drilling on its leases 20 miles west of Lawton, has been in the Electra Field for the past few days.

P. C. Boyle, president of the Derrick Publishing Co. and the Petroleum Publishing Co., accompanied by his son, E. R. Boyle, and wife, and F. J. Perrine and wife, were in Tulsa last week on business connected with their publication.

E. W. Morgan, of the firm of Morgan & Clark, contractors, is moving a string of tools to Devol, Okla., to start a well for the Electra-Oklahoma Oil Company.

p. 14. Oklahoma. Wildcatters. The Rock Creek Oil & Gas Co. is drilling a test at Ninnekah, near Chickasha, Okla.

The Boggy Oil Co. will drill a test in Sec. 16, 1S-12E, at Stringtown, about 7 miles north of Atoka. J. G. Hamill, of Hamill & Chaffee, will do the work.

The United States Oil Exploration Co. is again working on its well in a section near Roff, Okla., and is down about 850 feet.

p. 16. Electra, Texas. Most of the wells in this field are drilled with rotary tools. A serious objection is that with the hole full of water and the sides plastered over with mud, there is a possibility of drilling through an oil sand and not knowing it. Some contractors are installing a combination rotary and cable-tool rig, using rotary for fast drilling and cable-tool for final completion. The price for drilling is $2.50 for the first 1,000 feet; $3.50 for the next 500 feet, and $4.00 for the next 500 feet. None of the wells are shot, the casing being set right on the sand. The production is close to 10,800 barrels a day. The price is 55¢ a barrel.

p. 16. Southwestern Oklahoma. Near Altus, the Altus Oil Co.'s No. 1 is 1,000 feet deep.

Near Lawton, the Comanche Oil Co. No. 1 is 200 feet deep.

The Marple & Co. No. 1 Marple Farm, 6 miles east of Lawton, is 1,550 feet deep.

Kuntz & Co., 7 miles east of Lawton, is 150 feet deep.

Cunningham & Becket have a rig up on their leases near Lawton.

Vosler & Co. are at 800 feet, eight miles east of Lawton. This well had a long fishing job, but the tools are out now.

The test near Walters is 1,100 feet deep.

The test near Marlow is 1,300 feet deep.

p. 16. Gas. Ponca City. The new gas field near Ponca City, Kay Co., Okla., promises to equal those in eastern Oklahoma. Wells of 400 to 500 pounds rock pressure and 3 to 20 million cfgpd have been developed in the deeper sands. The Kay County Natural Gas Co. has absorbed the Ponca City, Tonkawa, and Indian Agency plants, and are preparing to extend their service to Blackwell, Newkirk, and other points.

Vol. 10, No. 34, Feb. 1, 1912, p. 1. Electra. An Oil Field Freak. In this field, when a well is started, the driller has no idea as to where the sand is going to be tapped. Dr. Gould made an exhaustive study of Electra and says that the sands are pumpkin-seed shaped, and overlap and intermingle.

p. 4. Trade Notes. The Gould Co., at whose head is the former Oklahoma State geologist, Dr. Gould, is drilling a test in Sec. 35-12N-19E, 1 mile south and 2 miles east of Warner, Okla., about 20 miles from Muskogee. The well spudded in last week, and 3 or 4 others are to be drilled at once, testing considerable acreage. Dr. Gould explains that he discovered the field while engaged in his state work. Dr. Gould's dope on the Oklahoma formations has been unusually good heretofore and his prospecting on his own account will be closely watched.

p. 10, Oklahoma. Ponca City. The Leschen Rope Co. and Heberling completed a well on the Knowles Farm, in Sec. 4-25N-2E, which is reported to be good for 100 barrels, the largest oil well completed in this district to date. It is in the Ponca City Field, the land being leased from the 101 Ranch Co. There are a present 4 producing wells in the field, 3 of which are owned by the 101 Ranch Co. The oil is about 43 gravity.

Vol. 10, No. 35, Feb. 8, 1912, p. 1. An Epochal Event. On January 30, 1912, off Copenhagen, the Selandia, a 3000-horsepower ship of 10,000 tons displacement, the largest oil motor ship in the world, was given a trial, which was declared eminently successful. Experts were present from several nations. The vessel was constructed for the East Asiatic Co. Hitherto, the internal combustion engine or Diesel engine has been largely confined to small vessels, but now it can be used in ocean-going vessels. The Selandia is but one of several ships being built similarly. This opens up a new source for oil consumption, especially by navies of the world. (Currently, oil is replacing coal as fuel for steam engines).

p. 1. Colonel Priestley Enters Politics. Colonel George Priestley of Bartlesville, Okla., but formerly of Warren, Pa., has announced his candidacy for the office of Republican National Committeeman for Oklahoma, and is making an aggressive campaign. In announcing his candidacy, Colonel Priestley declared for Colonel Theodore Roosevelt for president, explaining that it was his deliberate judgment that President Taft could not be elected, even if renominated.

Colonel Priestley came to Oklahoma 7 or 8 years ago, went into oil, and almost immediately made good. A few months ago he brought to a successful termination a promotion scheme of large proportions that resulted in the formation of the Central Fuel Oil Co., which took over a large acreage of Oklahoma production, and of which company he became president and general manager. He is well known throughout the oil fields of the country, and is exceedingly popular in Oklahoma, where he has the reputation of doing things.

p. 2. Personal Mention. George C. Priestley is in New York for a few days on a business trip, and is due to return to Bartlesville, his home, next week.

p. 6. Herman Frasch Honored. The Perkins Gold Medal has been presented to Herman Frasch by the Associated Chemical and Electro-Chemical Societies of America in recognition of his achievements in applied chemistry. In the oil business, his most important discovery was the desulphurization of oils in the Lima Field, Ohio, at a cost of about 5¢ a barrel. He also has patents on the refining of Canadian and California oils. He is well known for his process of recovery of sulphur from mines in Louisiana, by melting the sulphur with hot water and bringing the liquid to the surface. The output of sulphur from 6 wells for 2 months was 122,000 tons, which was more than the world consumption for that period of time.

p. 6. New Type Oil Vessels. The Deutsche-Amerikanische Petroleum Gesellschaft (German-American Petroleum Co.) is having new oil tankers built at Kiel, Germany, each 525 feet long, 44 feet wide, and 66 feet high. The propelling power will be supplied by two Diesel motors of the 2-cylinder type, supplying about 3,500 horsepower, sufficient to give the ship an ocean speed of 10 miles per hour. Light and power will be supplied by dynamos connected directly with engines of 35 horsepower.

p. 10. The following areas of public lands have been withdrawn from the public domain for exploration for oil and gas, to be reserved for the U. S. Government for oil and gas reserves especially for the American Navy, amounting to 3,970,429 acres, not counting Alaska; Arizona, 230,400 acres; California, 1,592,704; Colorado, 87,474; Louisiana, 414,720; New Mexico, 419,901; Oregon, 74,849; Utah, 581,566; Wyoming, 568,815. If this policy is carried out, the United States Government will have to produce its own fuel by some plan that is still to be determined. This is stated in the last Annual Report of the Director of the U. S. Geological Survey.

p. 12. Oklahoma. Ponca City. Ponca City still continues to be the topic of interest. The Leschen Rope Co. and Heberling well is flowing natural in the neighborhood of 65 to 75 bbls., 1-1/2 miles northeast of the 101 Ranch Co.'s wells. The well is on the Jessie Knowles land in Sec. 4-25N-2E, and got the top of the sand at 1,520 feet, the total depth being 1,532 feet, still in the sand, but the sand was getting hard. The oil is 42 gravity. The well cost about $6,000 to drill. There was 40 feet of 12-1/2-inch casing, 545 feet of 10-inch, 913 feet of 8-inch, 1,359 feet of 6-5/8-inch, and 1,529 feet of 5-3/16-inch casing. The 101 Ranch Oil Co. has about 20,000 acres of land under lease to others, mostly on a 50% royalty basis.

p. 16. Electra, Texas. Some idea can be had of the size of some of the leases in this area. The Producers Oil Co. has 265,000 acres on the W. T. Waggoner Ranch. In Shackelford Co., they have 53,000 acres on the Nail Ranch. A Mr. Green has 23,000 acres. James Murphy has 5,000 acres. A. H. Russell has 14,000 acres. James V. (Jimmy) Murphy, of Philadelphia, Pa., gave a box party for some of his friends at the Wichita Falls Opera House last night, where they saw "Naughty Marietta." In the party were J. F. Hutson, R. R. Forker, Dr. Gesser, George I. Bumbaugh, and L. C. Heydrick.

p. 20-22. Early History of Oil and Gas (1838-1865). Blue Creek, West Virginia. In Kanawha County, the Ohio Fuel Oil Co. drilled the discovery well on the Barth-Schwartz tract in September 1911. Some later wells flowed 200 bbls. an hour. This discovery was based on the reports surrounding the 1864 discovery of the Burning Springs Oil Field in nearby Wirt Co., by a geologist E. W. Evans, who represented early Philadelphia investors. In the Kanawha County Clerk's office, Deed Book "Y", p. 395-397, Feb., 1865, are Evan's notes. He mentioned that oil had been struck in large quantities on the land of John Gunter as early as 1838. Another well had been struck on the land of James S. Connell in 1841, one-half mile above the Gunter well. The wells were drilled for salt water, but several veins of oil were struck, one of which was at 275 feet and had to be cased off. Evans said that there were numerous oil and gas springs in the area, and on his map he indicates "great spouting well of 1838 on the Gunter farm just above the mouth of Copper's Creek on the north side of Elk River" and the "Connell Oil Well of 1841" on a line with other springs and 1864-1865 oil wells already drilled at Cow Run, Bull Creek, Horseneck, Little Kanawha, and Burning Springs, along an anticlinal axis which he noted. The oil is generally associated with salt springs but not fresh-water springs, indicating a deep source for the oil, according to Evans. On Elk River, the oil struck in early salt wells at about 300 feet deep. Later gas gushers came in at 20 to 40 million cfgpd, and are now furnishing gas to Cincinnati and other cities along the Ohio River.

p. 26. Gas Notes. The discovery of gas near Vian, Oklahoma, has brought a flood of propositions to that city.

Vol. 10, No. 36, Feb. 15, 1912, p. 2-3. Trade Notes. The Peoples Oil and Gas Co., with headquarters at Wichita Falls, Texas, has filed articles of incorporation with the Secretary of State at Austin, Texas. The officials of the company are: President, W. H. Knapp, Chicago; Vice-President, W. B. Hiteshew, Robinson, Ill.; Second Vice-President, W. Skelly, Marion, Ind.; Treasurer, Jas. K. Crawford, Robinson, Ill.; Secretary, Frank S. Wilbur, Robinson, Ill. The capital stock is $250,000. The company has 20,000 acres around Electra and Petrolia, on which they are drilling.

Dr. Robert Kennedy Duncan, of the University of Kansas, is in charge of a study at the University of Pittsburgh, to study the use of petroleum for food, and has a fund of $100,000. It has been discovered that petroleum is amendable to transformation into fatty acids, which, blended with glycerine, forms a new type of food.

The Diesel engine will make the German navy one of the most formidable in the world. Russia is now converting to this type of engine. A wide variation of this engine, called the Junkers reversible, has been invented by Professor Junkers, an engineer at Aix-la-Chapelle, France. The reversible Junkers engine is constructed with opposedly working pistons, which make possible the highest number of revolutions, the highest thermal efficiency, and the greatest certainty of ignition, even at low speed. All valves are omitted, and the engine operates noiselessly and without vibration. These ships with these engines can carry a heavier armament with lower tonnage. This engine will make efficient use of the heaviest of oils and will be a boon to the United States.

p. 4. Personal Mention. William F. Braun, of Pittsburgh, wildcatter, information bureau, and dancing master is in the Mid-Continent field. He drilled the first well in the Carlyle Field, Ill., under the name of Surpass Oil & Gas Co., on the Murphey Farm, giving him the title of "information bureau" of that field. He is president of the United Professional Teachers and Dancers of America, and has been instructing for 27 years, having taught dancing to more than 72,000 persons. He received a decoration by Queen Victoria. He has been looking over the Electra Field.

p. 4. Recent Deaths. Mrs. Thomas O'Neill, died Monday morning at her home in Oil City, Pa. Deceased leaves a husband and six children, three sons, William D., connected with the Fulton Iron Works, St. Louis, Walter P. and Charles B., employed on the Oil and Gas Journal at Tulsa, Oklahoma, and three daughters. The husband is a locomotive engineer running out of Oil City. Cause of death and other particulars are not known.

p. 18. Southwestern Oklahoma. The Steel City Oil & Gas Co.'s test is shut down for an under-reamer; depth, 600 feet.

Comanche Oil & Gas Co., near Lawton, is 200 feet.
Marple & Co. on the Marple Farm, are 1,350 feet.
Beckett, Eisman, & Cunningham are spudding.
E. E. Hill and Associates are at 300 feet.
Vosler & Co. are at 800 feet.
Jackson Co. The Altus Oil Co. test is at 1,000 feet.
Stephens Co. The Marlow test is at 1,400 feet.
Tillman Co. The Big Pasture Oil Co., near Frederic, is at 200 feet.
The Tennessee Oil Co., between Davidson and Frederic, is at 1,000 feet.

p. 30. Apparently the oil and gas business is on the boom in Noble County, Okla. People from Muskogee, who have been working the field, have accepted 10,000 acres in leases from Messrs. Acres, Nelson, & Meinmer on Friday, and will drill a well in 90 days. These local investors secured leases in Watkins, Noble, Black Bear, and Missouri Townships.

Vol. 10, No. 37, Feb. 22, 1912, p. 1. Another Oklahoma Law Annulled. In a decision published Monday of the present week, the U. S. Supreme Court held unconstitutional the Oklahoma Gross Revenue Law enacted in 1910. It provided for a tax on corporations, on their gross revenue in addition to the regular advalorem tax.

p. 1. Another Unreasonable Proposal. A tax inquisitor from Bartlesville has seriously proposed a tax assessment against the oil still underground, on the basis of $250 per barrel, estimated on production at the time of assessment. The proposal has aroused considerable discussion, but it is absurd.

p. 2. Buffalo Bill. Spurred on by the example of his hated competitors, the Miller Brothers of Ponca City, Buffalo Bill has organized an oil company and is preparing to develop a potion of the landscape known as Arizona. In the meantime, Colonel Cody is believed to be sowing up all adjoining acreage. The tenderfeet sure do learn quick.

p. 2. Trade Notes. The Bahrain Island, in the Persian Gulf, imported kerosene from the United States in 1910-1911, valued at $37,181.

Zeb Mackey, of Taft, Okla., was arrested and placed in jail today on a charge of killing Estelle and Herbert Sells, his step-children, last March. The house where the children were staying was blown up with dynamite. Possession of their oil lands, worth $1,000,000 is alleged to have been the motive. William Irvin and D. R. Allen already have ben sentenced to life imprisonment for the crime. Allen implicated Mackey in a confession.

p. 4. Personal Mention. Wm. Mowris, of Tulsa, and Lupher Brothers, of Pittsburgh, Pa., have formed the Nortex Oil Co., and are drilling a well 2-1/2 miles west of Wichita Falls, Texas.

James King Duffy, general manager of the March Oil Co., of Tulsa, with headquarters in New York, has been inspecting properties in Oklahoma.

p. 14. Oklahoma. Ponca City. The first deep hole drilled in this field was in 1909, in Sec. 25-25N-1E, on the 101 Ranch, drilled to 2,600 feet, but was a dry hole. A second test was made to 2,300 feet in Sec. 18-26N-2E, about 15 miles northeast of the first, but was also a dry hole. The first oil well was drilled in June, 1911, the No. 9, on the Willie Cry Farm, and since that time, four producing wells have been drilled, three shallow gas wells have been completed and one gas well was stopped on the top of the sand, four shallow oil wells were drilled, none of which got to the depth of the present producing wells, about 1,550 feet, and two dry holes have been completed.

p. 26. El Reno Contract Let. The city commissioners of El Reno, Okla., let a contract for deep drilling to 3,000 feet for $13,575, to the Pennsylvania Drilling Co. of St. Louis. The city will furnish casing, the rig, fuel, and water.

p. 28. Gas. Oklahoma. The Osage & Oklahoma Co., a gas concern operating in the greater Tulsa area, held its annual meeting at Pittsburgh, Pa. The retiring directors were re-elected as follows: E. P. Whitcomb, president; G. T. Braden, vice-president; R. H. Bartlett, secretary-treasurer; D. Hastings, general manager; and T. N. Barnsdall, P. W. Lupher, R. W. Hannan, and Harry W. Davis. In 1911, they supplied gas to 4,191 consumers in the Tulsa area. The company has 13 producing gas wells. The gross earnings for 1911 was $141,798.

p. 38. Oklahoma. Miscellaneous Wells Drilling.
3S-11E-Sec. 33, Atoka; Local Co. #1.
7N-26E-Sec. 21, Ft. Smith Local Co. #1.
8N-27E-Sec. 7, Ft. Smith Traction Co. #1.
8N-27E-Sec. 16, Ft. Smith Traction Co. #1.
10N-8E-Sec. 8, Inola; Beatty & Co. #1. (19N-17E is Inola ?)
11N-17E-Sec. 35, Kennard; Price Oil & Gas Co. #1. (R. 7E on p. 220,224)
14N-9E-Sec. 8, J. Tiger; Frank Barnes #1.
14N-9E-Sec. 9, W. Vann; Barnes & Co. #1.
15N-11E-Sec. 22, ; Katy Oil Co. #1.
15N-15E-Sec. 9, D, Tiger; Nina Oil Co. #1.
18N-12E-Sec. 9, ; Hicks & Wright #1.
23N-5E-Sec. 22, Ross; Perry & Osborn #1.
28N-2E-Sec. 12, Kay Co.; Wichita Gas Co. #1.
Ahpeatone; Steel City Oil & Gas Co. #1.
Alva; Local Co. #1.
Ardmore; Carter Oil Co. #1.
Eldorado; Nicholson & Tatum #1.
Heavener; Hamilton & Co. #1.
Kinta; Ninety-sixth Meridian Oil Co.
Lawton; Comanche Oil & Gas Co.
Lawton; Robertson & Co. #1.
Loveland; Local Co. #1.
Marlow; Local Co. #1.
Moyers; Unknown #1.
Mulhall; Local Co. #1.
Oklahoma City; Local Co. #1.
Oktering; Local Co. #1.
Ralston; Osborn & Co. #1.
Red Oak; Warren Oil Co. #2.
Ryan; Jefferson Co. #1.
Stigler; Gibbons & Henry #1.
Woodville; Velvet Oil Co. #1.

Vol. 10, No. 38, Feb 29, 1912, p. 3. W. L. Norton, president of the American National Bank of Bartlesville, has been on trial the past 2 weeks in the U. S. District Court at Muskogee, charged with returning false reports and making false entries, and the misapplication of large sums of money. He was found guilty on 3 indictments. Mr. Norton is well known in oil circles.

p. 4, 6. Additional Tax on Oil Leases. Mr. G. L. Watson, a Denver attorney, decided that an oil or gas lease in Oklahoma was taxable as real estate, based on an act dated March 8, 1909, defining the duty of a tax ferret. "Article XI. An act to amend Chapter 81, Article 9, of the Session Laws of Oklahoma 1907-1908, relating to the discovery of property not listed, and declaring an emergency. Article 7,691." The Board of County Commissioners may contract with any person in the discovery of property not listed and assessed, and give that person 15% of the taxes recovered. Mr. Watson placed a value on the oil and gas leases in Washington Co., Okla., and filed a list of the leases, stating that the county could collect $800,000, of which he would receive 15%. John Johnstone, treasurer of Washington Co., refused to send out notices, and the case went to the Supreme Court of Oklahoma. Meanwhile, Mr. Watson filed a similar list in Creek Co., Okla. Mr. Watson and Mr. Ingraham did the same for Tulsa Co., and later for Nowata, Rogers, Okmulgee, Muskogee, Wagoner, Osage, and Craig Counties. Mr. Watson placed a value of $250 per barrel in the ground on the leases, or $3,500,000 in taxes, which would net him about $500,000. Mr. Watson is quoting a statute "Sec. 7544, L. 1909, H.B. 168, art. 1-3, effective March 10, 1909. Real Property Defined. - Real property for the purpose of taxation should be construed to mean the land itself..... and all mines, minerals, quarries, and trees on or under the same."

p. 8. Trade Notes. The following companies have been granted a permit to do business in Texas: the Great Southern Oil & Gas Co., of Hugo, Okla., with principal office at Electra, Texas, capital stock $50,000.....the Searchlight Gas Co., of Warren, Ohio, with principal offices in Dallas, San Antonio, Houston and El Paso, capital stock $200,000.

The Dallas-Caddo Oil Co. met at Vivian, La. Directors are W. E. Spencer, W. L. Spence, A. T. Stringfellow, J. T. Britton, J. Uta, C. W. Foutz, J. A. Brooks, A. S. Wacker, M. F. White, F. R. Fonda, and E. J. Lloyd, mostly from Dallas, Texas. Officers are: E. S. Fonda, Dallas, president; L. J. Valega, El Dorado, Ark., vice-president; and C. W. Claypool, secretary-treasurer.

p. 8,10. Personal Mention. R. L. Beattie, formerly president of the Bartlesville Bank, and lately cashier of the Gate City National Bank of Kansas City, Mo., will return to Bartlesville as vice-president and director of the Union National Bank. Mortimer F. Stillwell, acting president of Union, will have more time to devote to other affairs now. Mr. Stillwell has been the secretary-treasurer of the Indian Territory Illuminating Oil Co. since its organization, and still serves in that capacity.

David Claude Richardson, Jr., and Miss Lena Christian were married at Shreveport, La., Feb. 19. They took a bridal trip to New Orleans, and will make their home at San Antonio, Texas. Mr. Richardson operates in the Caddo Field and is manager of the Richardson Oil Co.

p. 26. Natural Gas Runs Automobile. The Motor Truck Co., of Wheeling, West Virginia, has perfected a system by which natural gas instead of gasoline can be used for fuel to burn in an engine. During the recent New York shows, the company had on the streets one of its Packard two-ton trucks running on natural gas. The gasoline tank is used as a reserve, and it is possible to instantly shift from one fuel to another while running, by means of a lever at the side of the seat and a lever in the footboards. Three natural gas bottles are stored under the frame at the rear, connected by a common pipe with a reducing valve and pressure gauge. The gas is at 1,500 pounds pressure in the tanks, and in one step, reduced to 100 pounds to a regulator, and coming thence through a pipe to the carburetor at 2 ounces above gauge or atmospheric pressure, and mixed with air to the engine. The gas contains about 23,000 heat units whereas gasoline has 18,000 heat units for the same amount of mixture. The Packard Co. is equipping its machines where sold in natural gas territory, and arrangements are now being made to license other automobile companies to equip their machines similarly.

p. 26. Gas Notes. Plans are practically completed for the laying of a natural gas line to Gainesville, Texas, from Bowie, where a connection is to be made with the main line from the Henrietta Field, to Fort Worth. A 40-mile line will be built, and natural gas will be supplied at about 50¢ per thousand cubic feet.

Vol. 10, No. 39, March 7, 912, p. 6. Gets Seven Years. W. L. Norton, formerly president of the American National Bank of Bartlesville, Okla, was sentenced to 7 years in the penitentiary. Norton was connected with the failure of the Columbia State Bank of Oklahoma City also, and was also associated with other banks about the state which failed as a result of the Columbia disaster. The Farmers State Bank of Tulsa failed at about the same time. Norton was charged with having used funds of this institution in an attempt to save the Oklahoma City bank, but he was only tried for conduct at the Bartlesville bank.

p. 16, 18. Electra. Electra will soon have the Denver Hotel, owned by W. E. Crow, and oil men will not have to stay in Wichita Falls. A brick public school building is being built. The Electra Field now has 81 producing wells, 48 drilling wells, and 18 rigs up, with daily production of 10,000 barrels. Moving picture shows are also here. The population is about 2,500.

p. 27. New Oil Companies. Southwestern Oil Co., Ponca City, capital stock, $10,000. Incorporators: L. H. Wentz, E. W. Marland, J. J. McGraw, all of Ponca City.

Texas-Oklahoma Oil Co., Ardmore, Okla., capital stock $30,000. Incorporators, J. Malley Eastham, Ardmore; W. C. Averill, James L. Keith, Beaumont, Texas.

Vol. 10, No. 40, March 14, 1912, p. 1. A Government Oil Trust. The German government is trying to create an oil trust to drive the Standard Oil interests out of Germany. They propose to buy up the existing oil companies in Germany and to tax the American oil heavily enough to make a market for inferior European oils. This will cost German consumers more, to pay for the cost of buying out the companies and for the higher taxed oil. The German policy of "nationalization" seems to have resulted in a further increase in the cost of living. Yet some Americans want the United States to adopt the same policy.

p. 1. Justice for Oil Men. Unscrupulous, conscienceless characters operating in the oil fields of Oklahoma have brought more or less disgrace on the oil business as a whole. These characters, by robbing the widows and orphans, and disregarding every moral precept, have caused the uninitiated to consider "oil men" the same as "grafters". One of these days the oil man is going to come into his own - even in Oklahoma. When he does, the state and the citizenship will feel disposed to make an apology.

p. 2. Sand Bar has Receiver. At a hearing before Judge Campbell of the U.S. District Court at Muskogee, Okla., a receiver was appointed to take charge of the producing lease known as the "sand bar" in Sec. 18-18N-13E in the Arkansas River northeast of Jenks. The property is now being operated by C. S. Avery and others of Waterside Oil Co. of Tulsa, with 9 producing wells at 700 barrels a day. The property is also claimed by the Gypsy Oil Co. and Stunkard Brothers, who are operating one well on the property at 60 bbls. per day.

The Creek Nation asked for the receivership, claiming that the land was allotted to the Creeks and was never divided among allottees and remains as a tribal possession. The State of Oklahoma also claims the land because the bar is part of the navigable Arkansas River, and the State executed a lease to the Pollard-Hagan Oil Co. of Oklahoma City (B. F. Utterback, president).

Considerable space has already been given to the sand bar case in the Journal. The bar covers about 100 acres. Leasing began June 21, 1910 by Gypsy and Stunkard, and Nov. 1911 by Avery, from the same family, after which litigation began, and now the State of Oklahoma and the Creek Nation are involved.

p. 6, 8-9. Trade Notes. The County Commissioners of Tarrant Co., Texas, have granted a franchise to The Texas Co. to construct a pipe line from Electra to the West Dallas refinery. Fifty miles of the 6-inch line to Fort Worth has been constructed, and work is being done to complete the next 80 miles. Work on an 8-inch line from Fort Worth to Gates is nearing completion.

W. N. Robinson has leased the new Hotel Tulsa. His Robinson Hotel will be closed, and converted to an office building. The new Hotel Tulsa contains about 300 rooms.

p. 30. Gas Notes. Howe, Oklahoma. The town council of Howe, Okla., passed an ordinance to the Poteau Light & Gas Co., of Poteau, for a franchise for 25 years to furnish gas to residents at 25¢ per 1,000 cubic feet, and to manufacturers at 3¢ per 1,000 cubic feet. The gas is to be supplied from wells near Poteau.

The Peoples Oil & Gas Co., a new concern organized at Wichita Falls, Texas, the stockholders in which are well known eastern operators, are proposing to build a gas line from the Petrolia Field to a number of towns in the state. W. G. Skelly, who had production in the Sandoval Field, Ill., and Thomas Gavin,

of Independence, Kans., seem to be the moving spirits in the organization, and are endeavoring to secure franchises. The route of the line will be from Petrolia to Ringgold, Myra, Lindsay, Gainesville, Whitesboro, and Denison. The company has a large acreage near Petrolia, and if the franchises are secured, will proceed with developmental work.

p. 30. Liquified Gas Products. The Bureau of Mines has just issued Technical Paper No. 10, "Liquified Products from Natural Gas; Their Properties and Uses", by Irving C. Allen and George A. Burrell. They divided the subject into four parts (1) Natural Gas, (2) Liquified Natural Gas, (3) Light Gasoline and (4) High-grade gasoline.

Vol. 10, No. 41, March 21, 1912, p. 1. Mexican Oil in the United States. Mexican oil is coming to the United States regularly and in increasing quantities. The ports receiving Mexican oil are Tampa, Jacksonville, New Orleans, Baton Rouge, Port Arthur, Sabine Pass, and Aransas Pass. The quantity is increasing each month. Gulf Coast oil is 75¢ a barrel to the refinery, and Mexican oil is 61¢ to 63¢ a barrel, so the Texas refiners like the situation.

p. 1. Vast Expansion Coming. The oil market will remain firm, and the industry is on the eve of vast expansion. In the shipyards of Great Britain alone, more than 40 new oil tankers are under construction. France, Germany, and the United States are doing the same. Orders for ships are coming in faster than the ships can be built. The ships are needed to fill oil orders already consummated.

p. 6. Personal Mention. McFarlin, Chapman & Harwell have taken offices in the Drew Building in Tulsa, Mr. McFarlin having recently purchased the building, one of the best in the city, and headquarters for oil men's offices.

J. H. Bovaird, of the Bovaird Supply Co., has been visiting his brother at Independence, Kansas. He lives in Bradford, Pa., and visits the Mid-Continent once or twice a year.

"Heine" Heberling, the well-known wire rope man, will devote his whole time in the future to looking after his oil properties. Mr. Heberling is interested with the Leschen Wire Rope Co. of St. Louis, in a well at Ponca City, as well as other oil properties in Oklahoma.

E. W. Marland, of the 101 Ranch Oil Company, came to Tulsa for the producers meeting, and took an active part in the Osage discussion. The resolutions were wired to Washington.

W. C. Moore, president of the Hardy Oil Co., with headquarters at Houston, spent several days in the Electra Field. Mr. F. C. Cleminger, president of the Clem Oil Co., and a member of the Hardy Oil Co., has returned to Electra from several weeks visit to San Antonio and Houston.

p. 12. Sand Springs, Oklahoma. (with pictures). Sand Springs, in Tulsa Co., 7 miles from Tulsa, overlooking the Arkansas River, was platted June 17, 1911. Before that, the area was primitive. Located on the M. K. & T. Railroad, and connected to Tulsa by an Interurban line, there are 13 factories or businesses, including the Tulsa Stove & Foundry Co., Sand Springs Iron & Steel Mill, Sand Springs Bottle & Glass Factory, and Phoenix Refinery. The Sand Springs Park, covering 43 acres, with a zoological garden, is the largest in Oklahoma. It was visited by 48,000 people on opening day of Sept. 20, 1911. The area is being developed by the Sand Springs Co-Operative Co., and almost 1,200 people are now employed there. Mr. Charles Page is president of the company. A home for the aged and disabled was recently completed. A green house is under construction and will be the largest in the state. The company has liberal terms for the purchase of new cottages or property. The pure water is the best in the state. Nearly $400,000 was spent to develop the area.

p. 14. Oklahoma. Cushing Field Discovery. What promises to be the opening of a new pool is the well recently completed by Slick-Jones on the Annie Jones Farm, in Sec. 32-18N-7E, in Creek Co. This well was completed several days ago, but has not been opened, and there is considerable mystery surrounding it. The immediate territory is roped off, and guards are posted, allowing no one a close inspection of the well, but from the preparations the owners are making and the large amount of land they are leasing for miles around the well, would indicate that something more than a small well had been brought in.

All that is known of the actual conditions are the depth, 2,200 feet, and that water and mud have been pumped into the hole to keep it from flowing. Two 1,600-bbl. tanks are being erected, and the well will probably be opened as soon as the company has all the land it wants, and the tanks are completed and connected up.

Slick & Jones have taken thousands of acres, paying $1.00 an acre bonus and $1.00 for a semi-annual rental, but a larger bonus has been paid for land close to the well. Most of the people in the portion of the country in which the well is located are renters, the allottees living in the lower counties, and Slick & Jones have six men out leasing the lands from the allottees.

The well is located in Sec. 32-18N-7E, about 12 miles air line from Cushing. The nearest production is in Sec. 10-20N-8E, some 16 miles northeast of the new well, so there is plenty of room for a new field. Every livery rig in Cushing has been hired by Slick & Jones, who want no information to get out about the well. It is impossible to get a conveyance from Cushing to drive out to the well. The notary publics of Cushing are under contract to the well owners, and it is impossible to obtain their services.

Slick & Jones are starting another well, located in Sec. 11-17N-5E, about one mile south and 3-1/2 miles east of Cushing, the rig having been built, and the casing is being hauled in. The same parties recently completed a dry hole, 3,000 feet deep, in Sec. 28-18N-7E, about a mile northeast of their new well, and it is hoped that their faith in the country there has been justified by the new well. If it is a good well, these gentlemen have made a killing.

The Sac and Fox Indian lands are only about a mile to the west in R. 6 E., under jurisdiction of the Interior Department, and no arrangements have ever been considered for leasing them, and it would take some time to lease them.

Another well 2 miles to the east which shows promise is the Wrightsman & Jones test on the A. Barney Farm in Sec. 34-18N-7E, which is being drilled in today.

The leasers are busy, and the hotel accommodations in the towns near the new well are crowded. It is reported that the Hill Oil & Gas Co. is taking a big bunch of leases in 17N-7E, and other companies are also busy.

p. 24. Graham, Texas. (advertisement). Graham Commercial Club. A new oil field in North Texas. Miller well on Andrew's Ranch is only a short distance from Graham, county seat of Young County, and the center of oil operations for West Texas. First class hotel accommodations, graded roads to the field, and the best of automobile service. Make your headquarters at Graham where you have access to the County Records.

Vol. 10, No. 42, March 28, 1912, p. 4. Personal Mention. J. J. McGraw, a brother of Henry McGraw, attorney for the Gulf Pipe Line Co. at Tulsa, was a visitor to Tulsa this week from his home in Ponca City. Mr. McGraw is interested in the oil business, being a stockholder in the 101 Ranch Oil Co. at Ponca City.

p. 6. Recent Deaths. Alfred Lee Drake, eldest son of Colonel Edwin L. Drake, the famous pioneer oil man and Laura E. Drake of Philadelphia, died at Denver, Colorado after a long illness. The interment was at Denver.

p. 14. Oklahoma. Cushing Field. The Slick & Jones well near Cushing is still a mystery, except that it is 2,200 feet deep, and is possibly good for 40 to 50 barrels a day, two feet into the sand. The Wrightsman & Jones test,

two miles to the east, drilled 5 feet deeper. At 2,200 feet they found some gas. Slick & Jones have most of the land leased around the well for a radius of 6 miles.

p. 20. Electra, Texas. A Texas Twister destroyed 117 drilling rigs in the field last Wednesday. Many wells are being tested in Archer Co., Baylor Co., Bellevue, Thornberry, Dean Station, Bacon Station, Iowa Park, Burkburnett, Wichita Falls, Young Co., in addition to Electra and Petrolia, as well as southwestern Oklahoma.

Vol. 10, No. 43, Apr. 4, 1912, p. 1. A Government-owned Trust. The determination of Germany to establish a German monopoly in oil is attracting attention in America, because this action is mainly aimed at American oil trade. In 1911, America produced 126,000,000 barrels, one-tenth of which was purchased by Germany. The underlying motive of this new and drastic policy is to accord the products of Austria, Roumania, and Russia a domination in German consumption, in place of American oil.

p. 2. The Motor Ship Selandia. (pictures). On Saturday, March 2, the motor ship Selandia, the largest oil-engine driven vessel in the world, and the first of the three sister liners being built for the East Asiatic Co. of Copenhagen, Denmark, left her moorings in the London docks en route for her voyage to Bangkok via Antwerp and Genoa. A vessel of 3,200 tons net register, and capable of carrying a cargo of 7,400 tons dead-weight, the Diesel-engined Selandia stands to the credit of the great Danish shipbuilding and engineering firm of Burmeister & Wain. The ship was tried last month when taken from the Copenhagen yards. After her trials, the ship left for Norresundby, a port in Jutland, where by the aid of her electrically driven winches, 8,000 barrels of cement was loaded. On the run to London, the ship made 11-1/2 knots, with a strong wind and sea against the ship, its full speed being 12.75 knots, using ordinary black Roumanian oil.

The ship is 370 feet long, 53 feet wide, and 30 feet deep. The machinery consists of two four-cycle Diesel engines, each 1,250 horsepower, but modified for reversing by compressed air. Full reversal can be made in 20 seconds.

p. 2. The Prairie's Holdings. The Prairie Oil and Gas Co. has property in Oklahoma valued at $18,956,004, distributed in 15 counties: Creek, Haskell, Latimer, LeFlore, McCurtain, McIntosh, Muskogee, Nowata, Okmulgee, Osage, Pawnee, Rogers, Tulsa, Wagoner, and Washington.

p. 8. Jesse N. Perrine, treasurer of The Oil and Gas Journal, and for more than 30 years actively connected with the Oil City Derrick, 26 years of which he was treasurer and manager, has been appointed postmaster at Oil City, Pa., and took up his new duties on April 1. Mr. Perrine is still Secretary and Director of the Derrick Publishing Co.

p. 14, 16. Electra, Texas. Many wells are being drilled in a 50 mile radius from Electra and Petrolia, in Archer Co., Baylor Co., Callahan Co., Coleman Co., Foard Co., Haskell Co., Young Co., Wichita Falls, and across the Red River in southwestern Oklahoma.

James Story and C. K. O'Hara came down from Lawton, Okla., a day or two ago. Mr. O'Hara is starting a well near Duncan, Stephens Co., Okla. He reports that the Steel City Oil & Gas Co.'s well near Ahpeatone, Cotton County, Okla., is at 950 feet.

p. 16. Bowie County. Texas. The Arkansas Natural Gas Co. suspended operations at its location 2-1/2 miles north of DeKalb.

F. W. Offenhauser and others are down to 2,300 feet in their No. 1 Buchanan, 6 miles southwest of Texarkana.

The Nashville Oil & Gas Co. abandoned its test at 2,600 feet, located 3-1/2 miles northwest of Texarkana.

p. 31. Electra Geology. Dr. J. A. Udden, geologist for the University of Texas, is studying the Electra-Petrolia area, and has examined more than 200 deep wells. The oil occurs in bar and beach sands of the Cisco-Albany Groups, mainly in sands 1,500 to 2,000 feet deep, probably over an irregular oval uplift. Other local uplifts may yet be discovered.

Vol. 10, No. 44, Apr. 11, 1912, p. 1. An Important Week. Perhaps the most important development is in the old Cleveland Field, where a wave of deep drilling has swept everything before it. The Paova Oil Co. drilled a deep test on the Miller Farm in Sec. 19-21N-7E to the Bartlesville sand. They got a 75-bbl. producer. The Minnetonka Oil Co. followed suit by deepening an older well, and got 50-bbl. a day. Then the Milliken Oil Co., of St. Louis people, deepened its well from 1,500 feet to 1,800 feet on the Booher Farm in Sec. 19-21N-8E, getting 1,000 bbl. of oil in 22 hours. It was drilled one foot deeper on Tuesday of this week and the flow increased to 50 barrels an hour. About 15 wells are now drilling deeper or starting anew. Probably every old producer will be deepened.

The Slick & Shaffer well on the Annie Jones Farm in the NW-1/4-NW-1/4-Sec. 32-18N-7E is making 150 barrels per day. The Wrightsman & Jones well on the Barney Farm in the NW-1/4-NW-1/4-Sec. 34-18N-7E is making 25 barrels of oil and 5 million cubic feet of gas per day.

p. 2. Petroleum in Wyoming. The Lander and Salt Creek oil fields of Wyoming are the subject of a Bulletin No. 452 of the U. S. Geological Survey. Oil was discovered in this area by Bonneville in 1833, but was practically unknown until 1867, except by hunters and trappers. The first drilling was done in 1883. Recently operations at the wells have been resumed.

p. 6. Personal Mention. E. A. Latimer, division superintendent of the Prairie Oil & Gas Co., with headquarters at Tulsa, together with George Casey, field foreman at Cleveland, paid a visit to the new wells near Cushing. The Prairie Company is setting a 10,000 barrel tank near these wells, and Messrs. Latimer and Casey went there for that purpose.

p. 12. Oklahoma. Cushing. Slick & Shaffer drilled their well first, and made a mystery of it. Last week it was drilled 1-1/2 feet deeper, and instead of 50 it is reported to be 150 barrels a day. The depths of the wells have not been given exactly, but the opinion is that the sand in the Slick & Shaffer well is at 2,181 feet, and is 4-1/2 feet into the sand. In the Wrightsman & Jones well, the top of the sand is at 2,185 feet, and is 9 feet in the sand. The oil is 42 gravity. Slick & Shaffer are drilling a second well 2 miles east and 1/2 mile south of Cushing on the Maloney Farm in the NE-1/4-NE-1/4-Sec. 11-17N-5E, and a third well on the Ollie London Farm on the C-N line-NW-1/4-Sec. 5-17N-7E. Also, Wrightsman & Jones have a second location on the Kizzie Hutkey Farm in Sec. 34-18N-7E, just east of their producing well. The Hill Oil & Gas Co. has a rig up on the L. Brunner Farm in the SE-1/4-NE-1/4-Sec. 23-17N-7E.

The men involved in this development are well known. Charles B. Shaffer and "A1" Smathers are very wealthy men, and with Mr. Wrightsman, have probably put up most of the money necessary to drill the wells. T. B. Slick for some time has been a lease man for these gentlemen, and is probably carried for an interest in the leases taken by him. B. B. Jones is a real estate man of Bristow, Okla. C. J. Wrightsman is a prominent attorney and oil man of Tulsa, with ample means to drill on his own hook if he so desires. Both Shaffer and Smathers are plungers in every sense of the word. Mr. Smathers is one of the best known race horse men in the entire country, and Mr. Shaffer has been a big success in oil. It is not surprising to see them take leases on the entire territory. The Prairie Oil and Gas Co. has contracted for the oil, and is setting a 10,000-bbl. iron tank one mile north of the Slick & Shaffer well. The field is reached by going to Cushing, and then driving 12 miles east. Cushing is a town of 1,500 inhabitants, with the Charles Hotel being the place

of congregation of most of the oil men. There are 25 livery rigs in town. Slick & Shaffer paid every livery man $4.50 a day to prevent anyone from going to their well, but some people paid more and got there anyway. The price now is $3.50 a day.

p. 16-17. Ponca City, Oklahoma. Story of the Town in Kay County, Okla., That Hopes to be An Oil Center. By John L. Hunter. April 8. (With ownership plat map). Ponca City, in T. 26 N., R. 2 E., has a population of 3,590, and is located on the right bank (or west side, looking downstream) of the Arkansas River. The A.T. & S.F. Railroad serves the town.

Prior to the run of Sept. 16, 1893, the area to be designated as a main town was 160 acres in the NW-1/4 Sec. 22-26N-2E, and named Cross. A little later, three men, John Dalton, B. S. Barnes, and J. W. Lynch decided to have their own town one mile south in Sec. 27, which they called Ponca. Later, the two towns merged to form Ponca City.

In 1911, the 101 Ranch Oil Co. struck oil a few miles south of town in T. 25 N., R. 2 E., and the area has since prospered. Real estate doubled in value, and Ponca City became a center for the oil activity in the area. At the present time, there are four producing wells in the field, covering one by two miles along a belt running northeast by southwest.

Vol. 10, No. 45, Apr. 18, 1912, p. 1. Motor Ships on the Lakes. Advices from Canada are that crude oil engines are to compete with steam on the lakes. Such engines are more economical than steam engines, and the power plant takes up considerably less space. King Coal is facing the fight of his life. It is impossible to fix the limits to which this industrial development may go.

p. 2. Increasing Cost of Producing Oil. By Roswell H. Johnson. The failure of the supply of light oil to keep up with demand has caused the price to rise. Some fear that this will lead to increased drilling and that the price will then fall. In comparing the average size of wells and average depth in Oklahoma and Kansas for 1906 to 1912 (first 3 months), it is seen that there is actually little change, except that wells are drilled deeper later on.

Year	Average Size (barrels/day)	Av. Depth (in feet).
1906	47	1,099
1907	107	1,171
1908	63	1,182
1909	54	1,084
1910	54	1,120
1911	58	1,245
1912 (first 3 months)	37	1,347

The average depths by fields, and in Kansas are as follows:

Field Area	Depth (in feet).
Osage area	1,800
Pawnee area	2,000
Creek area	1,500
Cherokee area (shallow sand)	800
Cherokee area (deep sand)	1,300
Miscellaneous	1,500
Kansas	950

With the deeper drilling trend, the cost will rise gradually to the consumer.

p. 8, 12. Personal Mention. D. Q. Brown, president of the Oklahoma Oil Co., is looking over the situation in the Mid-Continent, making his headquarters in Tulsa. Mr. Brown's home is in New York City.

P. A. Chapman and O. H. Chapman of the Red River Oil Co., of Waxahatchie, Texas, and Robert McFarlin of the same company, of Holdenville, Okla., are registered at the St. James Hotel, Wichita Falls, Texas.

Henry McGraw, attorney for the Gulf Pipe Line Co. and the Gypsy Oil Co.,

attended the sale of lands in the Cushing Field at Eufaula last week. He thought it was a Kit Carson show for the price of a Barnum & Bailey performance.

B. B. Jones, of Bristow, Okla., accompanied by his wife, is visiting with C. J. Wrightsman at Tulsa. Messrs. Wrightsman & Jones have just completed a well in the Cushing Field.

p. 10, 12. Biographies of Prominent Oil Men. Jessie I. Gillespie, Tulsa (picture). Jessie I. Gillespie was born in Clarion Co., Pa., July 23, 1875. Producing petroleum being the paramount industry of the county, and his father holding a responsible position with the Standard Oil Co., it was but natural that young Gillespie should engage in this, the most alluring industries of the day. A public school education was rounded out by a six-years' course with the Standard Oil Co., looking after their interests in Wood Co., Ohio, in the meantime investing his savings in oil development.

When 21 years of age, Mr. Gillespie severed his connection with the Standard Oil Co., to become identified with Wolf & Burns, of Toledo, Ohio, who were actively engaged in development work. Being ambitious he entered the field as a buyer and seller of leases. Associated with him in this enterprise, was his uncle, Frank A. Gillespie. Shortly after having branched out in this enterprise, Kansas began to loom up as promising oil territory, and Mr. Gillespie dissolved partnership with his uncle, and removed to Independence, Kansas, where he engaged for a time in his former business. It was while living at Independence, that Mr. Gillespie organized and was elected secretary of the first oil and gas men's association of the middle west.

By paying strict attention to business, Mr. Gillespie accumulated considerable property, most of which went the dry hole route, but not in the least discouraged, he bade adieu to the Kansas field, turning his attention to Oklahoma, then the Indian Territory. Purchasing a string of tools, he began operations south of Sapulpa, Creek Co., drilling eight wells within five miles of the later developed Glenn Pool. With the completion of their eighth well, Mr. Gillespie found himself financially embarrassed, but dame fortune was hovering near. A wildcat well drilled farther east opened up the famous Glenn Pool, and he was among the early operators to reach the field, and succeeded in getting control of lands in the heart of the producing district, which, when developed, produced upwards of 20,000 barrels of oil a day. After the completion of 14 wells, Mr. Gillespie and his associates disposed of their holdings for $408,000.

Mr. Gillespie is yet a young man, and his success in life is due to his aggressiveness in overcoming obstacles that to some might seem insurmountable. He has the satisfaction of knowing that he earned every dollar he owns. He has always been a booster for Tulsa. He has many friends throughout Oklahoma, both social and political, the latter being recognized, when, in 1910 he was elected as a state representative on the Democratic ticket, the oil men largely supporting him so that he could further the interests of the oil industry.

Mr. Gillespie is eminent commander of the Knights Templar, president of the Board of Education, director of the Oklahoma Iron Works, and also director of the Tulsa Daily Democrat.

S. S. Owen, Sapulpa. (with picture). S. S. Owen was born in London, England, March 20, 1875. His father owned oil interests at Allentown, New York, in which an uncle and his grandfather were interested. He decided to join his kinship, the family arriving at Allentown in the Spring of 1892. He found that producing oil was to his liking, his first work being that of pumping his father's wells on an 80-acre tract. In the meantime he attended school at Allentown, graduating in 1894. In Jan., 1895, Mr. Owen, inbued with a desire to learn what fortune held for him in petroleum, went to Wood Co., Ohio, where he secured employment with the Ohio Oil Co., operating in the vicinity of Rudolph. Becoming ambitious, he severed his connection with the Ohio Oil Co., to superintend a lease for the Colt & Mooney Oil Co. Later, months were spent in the Ohio and West Virginia fields, and then he returned to Bolivar, New York, where, with his father as partner, he followed contracting and drilling for oil

and gas, drilling 20 wells at Richburg during the second townlot excitement, to later open up the Ferrington Pool in 1901.

Mr. Owen followed contracting and drilling in New York until 1901, when he removed his family to Independence, Kansas.

In the Spring of 1901, he formed a partnership with J. I, Gillespie, under the name of Owen, Gillespie & Phillips. In May, 1904, the company became identified with the Sapulpa Oil & Gas Co., drilling the first test well in the Sapulpa District. It was while operating in this territory that Owen, Gillespie & McFann became affiliated in the oil and gas business, and the bonds of friendship that then existed have grown stronger with the passing years. It is a matter of history that the boys missed the opening of the Glenn Pool, having drilled within half a mile of the pool.

Mr. Owen remained in development work, and in the Spring of 1905, when the Sapulpa Oil & Gas Co. merged into the Central Light & Fuel Co., he succeeded in interesting Smith & Swan of Independence, Kansas, in the gas business in Indian Territory. With the opening up of the Glenn Pool, he severed his business relations with Gillespie, devoting his time to getting control and disposing of leases, among which was the Reynolds lease in the Henryetta Field, where he formed a partnership with Harry H. McFann and others, known as the Stevirmac Oil Co., and drilled 17 wells. Then they transferred the lease to Twitchell & Myers of Pittsburgh, the consideration being $150,000 cash.

Mr. Owen is also engaged in production of jack or zinc ore at Joplin, Mo. He also takes interest in the betterment of Sapulpa.

H. H. McFann. Sapulpa. (with picture). H. H. McFann, a resident of Sapulpa, Okla., was born at North Washington, Butler Co., Pa., Dec. 6, 1876. Butler County at that time was in the oil fields. His father, L. R. McFann, was an early oil operator on Oil Creek, following the zigzag trail of the wildcatters down to Butler Co., coming into his own with the discovery of the Fairview Pool in 1880. Desiring to follow his father, Harry McFann, at age 12, obtained a position with the Christie Brothers, operating in the Petersville Field, delivering supplies to drilling wells, etc.

With the opening of the McDonald Field, Harry quit his job and joined the Wheeling Gas Co., field operators. During the 6 years following the McDonald discovery, he was employed by the leading oil companies operating in Ohio and West Virginia, among which were the Carter Oil Co. and Forest Oil Co. Later, he accepted a position with the Armstrong Gas Co., to take charge of their interests with the discovery of the Garner Pool in West Virginia, where he was stationed for a year. Then he went to Armstrong Co., Pa., to superintend the construction of pump stations. While there, there was a call for volunteers in the Spanish-American War, and he enlisted in Company E, Fifteenth Regiment, P.V.I.

Returning home, his services were secured by the Peoples Gas Co., where he remained until 1904, when he migrated to Independence, Kansas. He wanted to get into oil, and later turned to the Indian Territory, forming a company later known as the Sapulpa Oil & Gas Co., leasing 200 acres south of Sapulpa, Okla. He did not hit oil, and being financially embarrassed, he began leasing land for the Laurel Oil & Gas Co., retaining an interest, and also acting as superintendent and general manager. He took up all the leases held at present by the Indiana Oil Co. and Laurel Oil & Gas Co., the latter being the largest producer in that field.

Then Mr. McFann, associated with Mr. Owen, organized the Stevimac Oil & Gas Co., operating in the Henryetta Field, Mr. McFann holds diversified interests in Oklahoma, being one of the principal stockholders in the Sapulpa Oil Refinery, which plant he promoted. He is also financially interested in the Sapulpa & Kiefer Interurban Railway.

p. 12. Personal Mention. Harry F. Sinclair, a well-known Oklahoma producer, who has been making his home in Independence, Kansas, is thinking of moving to Tulsa. He has a great deal of developments near Tulsa, and will

find it much more convenient to make his headquarters here. He will try it a few months in Tulsa, and if he likes the place, will no doubt make it his permanent home.

p. 12. In the Courts. A decision by the Supreme Court of Kansas affirming its recent decision that the state owned the bed of the Arkansas River, including its islands, establishes a strong precedent, which, if followed by the Oklahoma and Federal courts, will give the state possession of the land lying in the river beds which is now involved in litigation. An island and a sand bar, lying in the Arkansas River, have been drilled, one of which is the Jimmie No-legs, between the Pawnee and Osage developments, and the other is the sand bar near Jenks on which the Gypsy Oil Co. and the waterside Oil Co. have production, the lease at present being in the hands of a receiver. Beside the oil, the sand and gravel is also claimed by the state. In the Kansas case, the litigation began with two riparian owners on opposite sides of an island in the river. The state intervened, claiming ownership, citing that the river was navigable. The jury decided against the state, an appeal was taken, and the Supreme Court reversed the ruling of the lower court, and held that the Arkansas River now is and always has been navigable as a matter of law, and that the state is the owner of the bed of the stream.

p. 14. Oklahoma. In the Schulter Field, the Brink Oil Co. has a 30,000,000 gasser in Sec. 35-12N-13E, on the Wesley Farm. This is the first test on the lease.

p. 17. Advertisement. Oklahoma oil field maps of all pools in Eastern Oklahoma, giving allottees names, towns, streams, showing all oil and gas developments and dry holes to a late date. Write for descriptive price list. F. A. Innes, Lawson Building, Rooms 14-15, Nowata, Oklahoma.

Vol. 10, No. 46, Apr. 25, 1912, p. 1. The News Event of the Century. The loss of the steamship Titanic off the Newfoundland Banks April 15 was the news event of the century.

p. 1. All Locomotives to Burn Oil. Within 60 days, there will not be a coal locomotive on the Rocky Mountain Division of the Canadian Pacific Railroad.

p. 1. Finding Oil on Theories. Under a Berlin, Germany, dateline is the following. Prof. Jakob Koenigsberger has a new method for discovering deposits of ores, coal, and oil. He found that in borehole tests, the rate at which the earth's crust grows warmer with depth is not uniform. The average is 64 feet for one degree Fahrenheit increase. Near the sea coast, it is 200 feet. Over coal, it is 47 to 55 feet. Over oil it is 15 to 20 feet. By taking the temperature in a borehole several hundred feet deep, it will not be necessary to waste large sums of money in boring very deep holes without discovering anything.

p. 6. Biography in Oil. J. E. Crosbie. (with picture). J. E. Crosbie was born in Petrolia, Canada, in 1862, his father, Gilbert Crosbie, being an oil producer in the Petrolia Field of Canada, one of the oldest in the world. In 1878, at the age of 16, Jack went to work for his uncle, J. W. Crosbie, also an oil producer at Petrolia, and worked there for 17 years as a driller and producer. In 1895, he was offered some drilling contracts by a Dutch company for work on the island of Sumatra, where he worked for the next 5 years.

In 1901, when Spindletop, Texas, was drilled, he was one of the first to go to Beaumont, where he contracted and operated for some years. He drilled the first gusher in the nearby Sour Lake Field. He then drilled in the nearby fields of Saratoga, Batson, and Humble, in that order, drilling 150 wildcat wells in Texas.

After the Glenn Pool came in, Mr. Crosbie came to Tulsa in Dec. 1906, and has resided there ever since. He purchased the Jacob Anderson lease of 100

acres in the Glenn Pool, bringing the production up to 12,000 barrels a day, operating the property for 4 years. He also purchased the Robert Galbreath property of 1,400 acres, upon which the discovery well of the Glenn Pool was drilled. During his 6 years in Tulsa, Mr. Crosbie has bought and sold approximately $4,000,000 worth of oil properties. He is one of the largest real estate owners in Tulsa. He owns the Central National Bank Building and is president of the bank. His home on South Boulder Avenue is the most beautiful in the city.

In 1887, he married Miss Elizabeth Wray of Sarnia, Canada, and they have 5 daughters. Mr. Crosbie is quiet and reserved, not posing in the limelight. His charitable deeds are done very quietly. His judgment is good and his opinions sound, and he is much sought by his associates. He has many friends who like him for himself alone.

p. 6, 8. Trade Notes. Dr. Rudolph Diesel, of Munich, Germany, addressed the Associated Engineering Societies of St. Louis, Mo., last week. His lecture dealt especially with naval construction and propulsion. He was in St. Louis to attend a meeting of the board of directors of the Busch-Sulzer Brothers Diesel Engine Co., which will manufacture the Diesel engine at that point.

Vol. 10, No. 47, May 2, 1912, p. 1. An Important Decision. Judge L. M. Poe, of the Oklahoma District Court, ruled that the Arkansas River is not a navigable stream in Oklahoma, and that abutting property owners have rights to the water's edge, concerning the Larry No-Legs case for ownership of Turkey Island. The state does not own the property. Recently the Public Land Commission of Oklahoma gave a sand and gravel lease to an association of attorneys, covering all sand and gravel in the principal streams in the jurisdiction of the state, but this would now be invalid. Water rights may be affected by this ruling also. The War Department ruled that the Arkansas is navigable. It is not navigable by today's standards without an expenditure of millions of dollars.

p. 4. Trade Notes. The Texas Eastern Oil Co. has been incorporated under the laws of Texas with a capital stock of $100,000, with headquarters at Wichita Falls, Texas. The incorporators are: Howard A. Forman, Howard V. Thomas, Judge A. H. Carrigan, and manager Sam C. Redd. This is the Texas end of the Eastern Oil Co. of Buffalo, N.Y. The company has a large acreage in a number of counties in the Electra District and will probably drill a number of wells.

p. 6. Arkansas River is Not Navigable. Judge L. M. Poe decided that the Arkansas River is not navigable, concerning the Larry No-Legs Island case, on April 26 at Pawnee. The island is in T. 21 N. R. 8 E., Sec. 25 and T. 21 N., R. 9 E., Sec. 30, between Osage and Pawnee Counties. Larry No-Legs claimed title through a deed from the Osage Nation which procured the land from the Cherokee Nation through the government. In 1872, the land was not surveyed by U. S. surveyors, and probably there was more water then, flowing around each side of the island. By 1882, water only ran north of the island all year, so from then on it was part of the land on the south bank. Only at time of high water is the river navigable, so it is not navigable all year. The War Dept. considered it not navigable at Turkey Island. The government never surveyed the island, leaving it to riparian owners or the state. Larry No-Legs has no right, title, or interest in the land in controversy. Judge Poe ruled that the defendants, Thomas and Edmiston, are the proprietary owners of Turkey Island.

p. 6. Personal Mention. F. M. Selby and C. H. Pape, officials of the Selby Oil & Gas Co., have moved to Tulsa, and will make that city their home in the future.

C. K. O'Hara, of Akron, Ohio, who drilled in a good gas well near Duncan, Stephens Co., Okla., was in Wichita Falls on April 27.

p. 14. Oklahoma. Duncan. A report of a 3,000,000 gasser 10 miles east of

Duncan, Okla., has stirred up that town. Frank Jones, on whose land the well is located, has announced his intention of drilling some more wells in the vicinity.

Red Oak. The Warren Co., drilled a second hole in Sec. 12-6N-21E, near Red Oak, where a gasser was completed several months ago. The new well was drilled to 2,015 feet, and only a very little gas was developed, the well being turned over to a farmer. The first well is reported to be good for 3,500,000 feet of gas per day, but it has never been utilized.

Poteau. The Sutton Oil Co. is preparing to drill 4 miles east of Poteau, and expects to get going in the next few days.

p. 19. An Oklahoma Gasser. C. K. O'Hara and James Storey, formerly of the eastern oil fields but now located at Lawton, Okla., have drilled in a nice gas well on the Jones Ranch, 12 miles northeast of Duncan, Stephens Co., about 35 miles east of Lawton. The owners think it is good for 2,000,000 cfgpd, but it has not been tested. The depth is only 525 feet.

Vol. 10, No. 48, May 9, 1912, p. 1. Tax Evil a Real Evil. The Citizens Protective League of America, now being organized throughout Oklahoma, has for its purpose, relief from the taxation besetting the citizens of Oklahoma. The organization is nonpartisan and is bred of sheer necessity. The taxation system in America is archaic and unjust, and in Oklahoma is unscientific and inequitable. Too many of Oklahoma's professional politicians appear to be obsessed with the idea that the oil business is all profit and no risk, and fair game for taxation. Since statehood, the oil companies have been fighting to escape confiscation. The Journal agrees with the League.

p. 2-3. Pipe Line Hearing. On the 10th of April, in Washington, D. C., will be a hearing on pipe lines as common carriers before the Interstate Commerce Commission. It was agreed that there should be a broad interpretation of the law. The Emery Pipe Line Co., Cornplanter Refining Co., National Pipe Line Co., Union Petroleum Co., and Wellsville Refining Co. are common carriers. The Prairie Oil & Gas Co., Ohio Oil Co., and Tidewater Pipe Line Co. are not common carriers and file no tariffs and transport only such oil as they own by production or by purchase.

p. 6. Picture. Slick & Shaffer well, Sec. 32-18N-7E, near Cushing, Okla.

p. 6. Deepest Hole in the World. Charleston, West Virginia. What is intended to be the deepest hole in the world is being drilled on Slaughters Creek by William Seymore Edwards, owner of extensive oil holdings in this country. The well is now 5,230 feet deep, and is being drilled for geological investigation, the nature of the formations through which the tools pass being carefully noted and a record of their thickness kept. At present, the deepest hole in the world is in South Africa, and is 6,004 feet deep. The second deepest is 5,420 feet in depth and is in Pennsylvania.

p. 6. Trade Notes. Bids for a new class of boats - an oil engine submarine - were opened at the Navy Department at Washington last week. The New London Ship and Engine Co. was the lowest bidder at $494,000.

p. 8, 10. Personal Mention. George F. Getty, one of the owners of the Minnehoma Oil Company, who makes Los Angeles his home, was a visitor to the new oil developments in the Cleveland Field, Okla., after which he went to Bartlesville to look after his interests in that area. Mr. Getty, contemplating a trip abroad, had purchased a cabin on the Titanic on its return trip to Europe, but that ill-fated ship never completed its first voyage.

p. 10. Recent Deaths. F. H. Oliphant, a man who gained world-wide prominence as a geologist for the Standard Oil Co., died Monday evening, April 29, while en route from Pittsburgh to his home at Oil City, Pa., on a passenger train. Heart disease was ascribed as the cause of death. He was born in Uniontown, Fayette Co., Pa., in 1846, and comes from a family of iron makers who were some of the first to make iron in the United States. He became educated in mining engineering, and soon became widely known for his knowledge of geology. He has collaborated largely with government geologists, and the statistics that he furnished about the oil business are parts of the information used by the Bureau of Commerce and Labor. He traveled extensively in Alaska, Japan, China, Russia, South America, and other portions of the globe where oil and gas is found. He was a man of extreme modesty in address and manner, slight in physique, and soft of speech, and reticent regarding his achievements. He is survived by his widow, two sons, Bert, of Bakersfield, Calf., and Leo, of Beaver, Pa., and one daughter Miss Lucy Oliphant, at home. He was laid to rest at Pittsburgh, Pa., last Monday.

Vol. 10, No. 49, May 16, 1912, p. 1. Fernand Forest, the inventor of the explosion engine, is an object of charity in the city once ruled by Napoleon. He is in absolute want, and has applied to the French government for assistance. He was given the red ribbon of the Legion of Honor for the discovery and application of the mechanical law which gave us the internal combustion engine. The automobile, aeroplane, and submarine would not exist today without the original Forest invention. It is taking the place of steam engines. Millionaires have been created, yet the inventor is a pauper. There is something wrong in a system that permits such an injustice.

p. 3. Personal Mention. Senator N. V. V. Franchot, of Olean, N.Y., a large operator in the Oklahoma fields, is in Tulsa for a visit of some length.

J. I. Gillespie has returned from a trip to Ardmore, Okla., where he has been looking over the oil situation as a guest of Governor Cruce. The Santa Fe Railroad has made a survey for a railroad and pipe line from their Wheeler Field to Ardmore, a distance of 22 miles.

H. C. Barnard, a prominent banker of Holdenville, was a guest of Messrs. Chapman & Harwell during the banker's convention last week in Tulsa. Mr. Barnard is interested in the oil business with Chapman & McFarlin.

p. 4. Trade Notes. The Finlayson Tool Co., one of the new Tulsa tool manufacturing concerns, last week turned out one of the longest spuds ever made in the oil country. It was a 10-inch spud, 46 feet long. It was made for H. H. Orcutt and shipped to Fulda, Texas. The company established a reputation in the West Virginia fields. John Finlayson is close to 70 years old and is still blacksmithing.

p. 12. Col. E. M. Wheeler - A Reminiscence. By John L. Hunter, Colonel E. M. Wheeler was born in Crawford Co., Pa., July 3, 1831, in a farming community of Athens. In 1859 he was helping his father on the farm when the news came that Colonel Edwin Drake was drilling for oil near Titusville, Pa., not very far away. He journeyed to Oil Creek to see for himself. Caught in the excitement, Wheeler followed the trail of Jonathan Watson down to the McClintock Farm, helping to drill a well by the springpole process near Rouseville, close to Oil City, working for day wages. In the Spring of 1861, he engaged in contract work, running two strings of tools, one on the Ham McClintock Farm and one at Rouseville, drilling a well for Rouse, Mitchell and Brown. The latter well was completed April 17, 1861, flowing 3,000 to 4,000 barrels a day. It was the first well to flow oil by gas pressure. It caught on fire, and was the first well to do this. More than a score of men were killed. Wheeler drilled a second well on the Blood Farm, and this also caught fire, and three men lost their lives. In 1864 he traveled around the world and visited the Russian oil

fields, and visited Galveston and Beaumont, Texas areas. He met a man in St. Louis who was drilling for salt near Huntsville, Mo., in 1864, and returned with a string of tools to help drill more wells, because oil was found to be associated, but the wells were mostly salt.

For a number of years, Colonel Wheeler has been operating in the southwest, spending thousands of dollars on wildcats. He holds large acreages in Louisiana and Texas. He is 81 years old, six feet tall, and healthy. He is now living in Electra, Texas.

p. 24. McCulloch County, Texas. The center of the state of Texas is 7 miles south of Brady, the county seat of McCulloch County, about 150 miles southwest of Fort Worth. The McCulloch County Oil Fields were discovered about 8 years ago, and now consist of 5 shallow wells west of Lohn, about 16 miles northwest of Brady, and 2 wells near Trickham, Coleman Co., about 20 miles northeast of Lohn. Some 8 years ago, a farmer 3 miles west of Lohn was drilling a water well, and struck oil at 210 feet, the hole rapidly filling with oil. Some oil men from Beaumont quickly leased the area, but much of it could not be leased, and interest died down. The farmer erected a windmill pump over the well, and the oil was used locally for fuel and for dip for cattle. At present, the well will yield 2 barrels a day. Near Trickham, a San Antonio company drilled a well in 1906, finding oil at 250 feet, 700 feet, and 950 feet, along with gas. The well was deepened to 1,500 feet, with oil and gas occurring at 1,120 feet and 1,380 feet. About one mile northwest of this well, a second well was drilled recently, and at 938 feet a sand yielded 3,000,000 cfgpd at 325 pounds pressure, and seems to possess excellent staying qualities. Professors E. T. Dumble and Cummins studied the area about 20 years ago, mentioning that some shallow wells had oil and gas in the Pennsylvanian coal measures. Generally the rocks dip northwest, but near Lohn there are gentle reversals. The sandstone near Lohn is about 25 feet thick, and the wells are good for 3 to 8 bbls per day, being 40 to 60 gravity oil. The McCulloch County Syndicate, headed by W. D. Crothers, cashier of the Commercial National Bank of Brady, have about 100,000 acres under lease, and intend to develop the area, with 8 wells to be drilled soon.

p. 27. Northwest Texas and Southwest Oklahoma. A new map of the oil regions of northwest Texas and southwestern Oklahoma is now offered, covering Wilbarger, Wichita, and Clay Cos., Texas, and Tillman and Comanche Cos., Okla. The map is 23 by 39 inches, covering 2,300 square miles, showing creeks and rivers, railroads, towns, villages, original surveys, the oil fields of Electra and Petrolia, all wildcat wells, and trends of the oil sands. Price, $2.50; cloth, $3.50. W. M. Stephenson, The Praetorian Bldg., Dallas, Texas.

Vol. 10, No. 50, May 23, 1912, p. 2. The Life of Oklahoma Wells. There are 21,000 producing wells in Oklahoma today, turning out 130,000 barrels of oil per day. Probably a total of 35,000 wells have been completed in Oklahoma, of which 4,500 were dry at the beginning. These figures leave a difference of 10,500, from which must be deducted the gas wells which are about 5,000, leaving 5,500 wells abandoned after oil production in Oklahoma.

p. 3. Internal Combustion Locomotive. W. T. Batha stated in a paper read before the Cleveland Institute of Engineers that a Diesel locomotive of 1,000 horsepower and weighing 85 tons had been built in Germany. Railway companies in Great Britain are considering doing the same.

p. 4. Personal Mention. George S. Marshall, assistant manager of the Central Fuel Oil Co. at Bartlesville, has resigned his position, and is now secretary to George C. Priestley, Republican National Committeeman of Oklahoma.

p. 8, 10, 12. Geology of Natural Gas. By Charles N. Gould. (with picture).

Dr. C. N. Gould, former head of the Oklahoma Geological Survey, read the following paper before the Natural Gas Association of America in Kansas City.

Oil and gas is where you find it, and no reputable geologist would dare attempt to predict where oil or gas may or may not be found. About all that geologists can do is to eliminate risk. No one living knows for certain how oil or gas have been formed. Scientists have two theories of origin, termed organic and chemical.

Four things are needed for the accumulation of oil or gas. (1) a source of supply, (2) a reservoir, (3) a cap rock, and (4) favorable structural conditions. Nine out of 10 geologists believe in the organic theory of origin. The oil or gas may have originated in place or may have migrated. Reservoir rocks are sandstones, cavernous limestones, and conglomerates. Cap rock is generally shale, or dense limestone, or rock asphalt. The common structure in which oil and gas will accumulate is an anticline or upfolded arch. Gas occurs in the top of the anticline because it has a lighter specific gravity than oil, and oil occurs above water because it is lighter than water. Anticlines may be dry because oil or gas did not drift into them, or leaked out. In Oklahoma, the Bartlesville Field, Glenn Pool, Muskogee Field, Poteau Field, and Wheeler Field are located on anticlines. Some fields are formed from lenticular sands in shale, and are freaks, such as the Electra Field in Texas and Madill Field in Oklahoma.

How long will gas last? In the older eastern fields, the gas has lasted for a few years after discovery. In the Mid-Continent fields, this may not be true. In Oklahoma there are thousands of square miles that are unexplored for gas, and probably not half of the gas in the state has been found. Much of the commercial gas in Oklahoma comes from 4 northern counties. At least 20 more counties need to be explored, especially the area from Ft. Smith to Holdenville, and south to Coalgate. Every well that has been drilled along anticlines in this region has produced gas. The wells at Massard Prairie, Arkansas, from which Fort Smith obtains its supply, are on an anticline located 10 years ago by John C. Branner. Large deposits of gas have been found on the anticline near Poteau. Other anticlines have been drilled near Spiro, Red Oak, and Kinta, all of which produce large quantities of gas. The supply should last for many decades.

p. 12. Gas Excitement at Shreveport. The finding of natural gas on the fairgrounds only 3 miles from the heart of Shreveport, has caused tremendous excitement in that city. The well, which has been drilled to supply a salt water natatorium for the city, has a pressure of 280 pounds and is good for 12,500,000 cfgpd. It is judged that the city will immediately drill more wells. A full account appears in this issue.

p. 14. Oklahoma. Cushing. The Slick & Shaffer well in Sec. 32-18N-7E was deepened to 18 feet in the sand, the total depth being 2,199 feet. The flow has increased to 125 bbls. per day, and was as high as 175 bbls. per day briefly. The gas of the Jones & Wrightsman well will be used for fuel by the various drilling companies. The city of Cushing is trying to get gas piped to that town. It is presumed that the Minnetonka Oil Co. of Cleveland, Okla., will secure the franchise, agreeing to supply gas at 25 cents per thousand for domestic use and 10 cents a thousand for industrial use.

p. 20. Louisiana. Shreveport. Augurs & Josey was drilling a well on the fairgrounds for the city of Shreveport, about 3 miles from the city, and on Friday morning they hit gas. At 990 feet, the bit was in shale, but immediately upon entering the sand below, they struck gas, estimated to be 3 to 5 million cfgpd. The gas will probably be used for Shreveport. The roar of the well could be heart for several blocks.

p. 21-22. Texas. The Arkansas Natural Gas Co. will abandon its well 2.5

miles north of DeKalb in Bowie Co., Texas. The well was drilled to 2,443 feet with no showing.

p. 36. Oklahoma. Completions. Miscellaneous. Red Oak, Warren Oil Co. No. 2, gas well.

Vol. 10, No. 51, May 30, 1912, p. 1. An Adequate Gas Supply. Dr. Haworth, of Kansas, recently prepared a report on Oklahoma-Kansas gas supplies, concluding the gas would be exhausted in about 3 years. Dr. Gould, who severed his connection with the Oklahoma Geological Survey rather than permit it to become an adjunct to a political party, stated that he had learned more about Oklahoma geology in 4 years than some states did in 50 years. Gould said that Oklahoma has adequate gas supplies for current and future usage that can last for many decades. The Journal agrees with Dr. Gould.

p. 2. Trade Notes. The Texas Company's pipe line from Electra to Gates via Fort Worth, was completed last week. The line is made up of 6-inch from Electra to Fort Worth, and 8-inch from there to Gates.

p. 2-3. Personal Mention. F. G. McClintock, a prominent operator and producer in Oklahoma, has purchased an automobile for use in getting around the Bird Creek Field. His son, R. C., expects to allow his father to use the car occasionally.

J. G. (Jim) Hamill, who has been drilling a well at Stringtown, Okla., was in Tulsa last week for several days, leaving again for Stringtown, where he will drill another well for the Boggy Oil Co. 1-1/2 miles west of town, the first hole being abandoned at 1,237 feet. Jim says that his brother Al injured his left hand. The Hamill Brothers, including Kirk, of Gulf Coast and Caddo fame, were the ones who drilled in the famous Lucas gusher at Spindletop, Texas, opening up that famous field. Al is in California drilling for The Petroleum Co., and Kirk is operating at Markham, Texas.

p. 18. Louisiana. Shreveport. The gas well at the fairgrounds of Shreveport was shut in at 280 pounds pressure, with a volume of 12,500,000 cfgpd. The pressure steadily increased to 380 pounds Friday, with an increase in volume of 500,000 cfgpd. The well is 1,007 feet deep, and has about 40 feet of open hole. It is feared that gas is also coming up outside the casing into a water sand about 135 feet below the surface, and there could be a blowout. C. P. Clayton, J. C. McCue, and S. W. Devore volunteered their services to angle-drill two holes to about 135 feet, and to force cement into the well to prevent a blow-out. If this does not work, they will try to kill the well, and to drill a new well with heavier cemented casing. Real estate is booming west and northwest of town, with leases ranging from $1 to $5 per acre, with all the companies having men in the field. Nearer the city, owners were asking as high as $2,000 per acre for leases. Five or six wells will be drilled in T. 17-18, R. 14-15 during the summer.

p. 22. Electra, Texas. R. S. Artley, manager of the Continental Supply Co. of Wichita Falls, pulled up in front of the St. James Hotel Saturday afternoon in a 7-passenger touring car with the words "Continental Supply Co." neatly lettered on each side of the car. With wildcat drilling within a 75 mile radius of Electra and Wichita Falls, they have to have their own automobiles for work.

Vol. 10, No. 52, June 6, 1912, p. 1. Germany's Discrimination. An article appeared in the Cologne Gazette about the oil dealers in Germany organizing an Association of German Petroleum Cos. in Berlin to combat pricing and supply of oil by the Standard Oil Co. They would like to buy more Galician oil, without the aid of a government monopoly. In April 1911, Germany imported 13,529,410 gallons of oil, but in April 1912, they only imported 8,446,113 gallons of American oil; due to voluntary company purchases, separate from a German government decree or German nationalization.

p. 3-4. Trade Notes. Representatives of the Standard Oil Co. of New Jersey say that there is no truth in the report that the Standard Oil Co. may centralize its American and Canadian interests in Sarnia, Canada, in order to escape the laws of the United States. Offices of the Imperial Oil Co., a subsidiary of the New Jersey Company, have been moved from 26 Broadway to Sarnia, to enable the company to compete under better advantages for the Canadian oil trade. Large storage tanks are being erected at Sarnia, but it is not expected that the cost of the new buildings being erected will be as great as has been reported.

p. 4-6. Personal Mention. B. H. McCoy, of Tulsa, and J. E. Goss, of Oklahoma City, connected with the Tennessee Oil & Gas Co., which is drilling a test well near Davidson, Tillman Co., Okla., were in Electra this week.

p. 8. Recent Deaths. Theodore M. Shearer, aged 70 years, died at his home at Butler, Pa., May 31. He was born in Wurttemburg, Germany in 1842. When nine years of age, he moved to America, locating at Buffalo, N.Y., where he grew to manhood and learned the trade of machinist. He conducted machine shops for the manufacture of tools and oil well supplies at Bradford and Butler, Pa., and in the West Virginia Fields. He was an inventive genius, one of his latest inventions being a steam hammer, designed for use in dressing drilling tools in deep hole territory. At the time he became ill, he had just completed the organization of a company to manufacture the hammers and place them on the market. Mr. Shearer removed from Bradford to Butler, Pa. in 1888, and established the Ball Engine Works. He had followed the oil development from McKean Co., Pa. to West Virginia, Ohio, and Illinois, where he established businesses. He is survived by his widow, three sons, Theodore M., Jr., of Bridgeport, Ill.; L. A. of Oakland City, Ind.; Charles M. of Cleveland, Okla.; and six daughters, Mrs. George C. Stewart of Butler, Pa. and Misses Mary, Alice, Sue, Grace, and Elizabeth, at home.

p. 20. Electra, Texas. The county commissioners of Wichita Co. have decided to tax the leases in the area from $50 to $1,500 per acre, depending upon production. There will be a meeting with oil producers on June 6, 1912.

p. 27. Advertisement. The Gould Company. Indian Temple. Oklahoma City, Okla. Reports of geological and mining engineers furnished. We have customers for developed and undeveloped oil, gas, and coal lands.

p. 30-31. A Wildcat Story. Sarnia, Ont., June 1. Numerous accounts have been appearing in the leading newspapers of Canada regarding changes about to take place in Standard Oil Co. holdings. Some are misleading. One account is that the Standard, hounded by legal antagonisms in the United States, intends to move to Canada for its headquarters. Supposedly, $10,000,000 will be spent on grounds and buildings at Sarnia, Ontario, and 250 workers and brick layers will be hired to erect an office building for $75,000. The Imperial Oil Co., a subsidiary of Standard, is enlarging its plant at Sarnia. Mr. J. D. Archbold, managing director of Imperial, has moved his residence from Port Huron to Sarnia, and some clerks have been transferred from New York, Cleveland, and Buffalo to Sarnia. A new office building is being erected at a cost of $10,000. The Standard has leased most of the Trenton Rock Field, and is merging all of the natural gas companies of Ontario into one gigantic concern.

Vol. 11, No. 1, June 13, 1912, p. 1. All Eyes on Petroleum. A few days ago the Muskogee Times-Democrat published that oil prices will boom within the next 60 days, and dollar a barrel oil in Oklahoma is certain. A few days later, the Oklahoman carried an editorial asserting positively that Oklahoma crude will soon be 80 cents a barrel, and a dollar a barrel before the close of the year, and will never go lower. Also they said that oil under Oklahoma City was not tapped yet, but urge developmental exploration.

p. 1. Was Gould Right? The past week has witnessed a significant increase in the gas production in Oklahoma. Four wells have been drilled in widely separated sections with a total daily production of 58,000,000 cubic feet. In 18-17-13, a few miles west of Bixby, an entirely new gas field appears to have been discovered, with six wells recently drilled having been profitable gas producers. To these may be added the Wrightsman well in the Cushing Field, and two wells for 45,000,000 cfgpd near Henryetta in 35-12N-13E.

Before the gas convention at Kansas City a few days ago, C. N. Gould stated that practically all of the east half of Oklahoma, exclusive of the mountain ranges, was probably gas producing territory, and that in his judgment, the Oklahoma gas supply would prove adequate for 50 years. Recent developments go far towards proving the Gould theory.

p. 2-3. Trade Notes. A new Shreveport, La., oil company has been formed to begin development work south of the fair grounds, where a large gasser was completed a short time ago. It is known as the Commercial Oil and Gas Co., and its capital stock is $100,000. The officers are: T. P. Lloyd, president; Dr. E. L. Sanderson, vice-president and general manager; and Dr. A. A. Herold, secretary and treasurer.

The Texas Company will again be awarded the contract for supplying oil to the United States Government, which will be let in a week or ten days. The Texas Company is the only bidder on the contract. In view of the fact that the Navy is using more petroleum every year, it is expected that the present contract will run between 25,000,000 and 30,000,000 gallons, or, almost double that of last year.

The Texas Company has started experiments for usage of oil in smudge pots for orange groves in Texas. The Gulf Coast Nurserymen's Association discussed the feasibility of heating the orchards in Texas. This has been tried in some sections of the country, and good results have been obtained.

p. 14. Oklahoma. Weekly Operations. Down near Henryetta, that district is rapidly getting to be a gas country, with two big gassers completed this week. The Brink Oil Co. completed its second well on the Wesley Farm in Sec. 35-12N-13E, the well making 25,000,000 cfgpd. The Pulaski Oil Co. and Flanagan completed No. 1 Scales in Sec. 36-12N-13E for 10,000,000 cfgpd.

A wildcat was completed by the Duquesne Oil & Gas Co. (Braden), in Sec. 27-16N-14E on the Sallie Peters Farm. The well was drilled several months ago to 2,200 feet. The upper sand was shot at 1,596 to 1,608 feet, and on June 6, the well came in at 300 barrels in 12 hours, with some water. Final production should be about 75 barrels per day. The well is about 8 miles east of south of Bixby, and about a mile southeast of an older well drilled by the same company on the L. Bruner Farm in Sec. 28-16N-14E, which will be re-entered and shot.

p. 19. Rush Into Oklahoma. An exodus of oil men from Electra and Wichita Falls, Texas, to Duncan, Stephens Co., Oklahoma, is in full swing. Among these who have gone and are going are L. G. Heydrick, C. Y. Welles, W. C. Long, John O'Donoughue, C. F. Kelsey, and T. J. Woods. The attraction is the gas well recently drilled 12 miles northeast of Duncan by C. K. O'Hara and James Storey. The well is 838 feet deep and showed a rock pressure of 250 pounds, and a gas volume of 4,800,000 cfgpd. The owners are in the east and the well is shut in. It is the intention of the owners to pipe the gas to Duncan, which is a town of about 3,000 population, and possibly later on to Lawton.

Several locations have been made, such as that of Hosford & Co. in SE-1/4-Sec. 30-1N-5W, three miles south of the gasser. Also, Beckett, Eisman & Cunningham in the SW-1/4-Sec. 1-1N-5W, about 5 miles east-southeast of the gasser.

Vol. 11, No. 2, June 20, 1912, p. 16-17. Louisiana. Shreveport. The Commercial Oil & Gas Co. is rigging up to drill its well on the Fory tract in SW-1/4-Sec. 11-17-14, and Augurs & Josey are drilling at 550 feet in their Herndon well in Sec. 15-17-14. Hester & Henderson have a contract with the Brown Brothers in Sec. 2-17-14. The Shreveport Ice & Brewing Co. will drill on their grounds in Sec. 2-17-14 in the heart of the industrial district. The Cedar Grove Oil & Gas Co., with J. W. Atkins as president, has been organized to drill at Cedar Grove, 3 miles south of Shreveport, with a contract with R. E. Allison.

The gas well at the fair grounds is still being worked on, and is now thought to be under control. There was more than 600 feet of heavy 6-inch casing in the hole, but probably this became unseated when the 4-inch was being anchored to the 6-inch.

Vol. 11, No. 3, June 27, 1912, p. 1. Lucas Versus Harris. In claiming credit for the discovery and promulgation of the "dome theory" of the accumulation of oil in the Gulf Coastal Plain, in his article in Science of April 5, Mr. G. D. Harris excited the active opposition of Captain A. F. Lucas, and made for himself a rather untenable position. In Science of June 21, Captain Lucas answers the Harris article and recites the well-known history of the discovery of the famous Spindletop well which was drilled by Captain Lucas in January, 1901, in an effort to determine this identical "dome theory" of oil accumulation which he had been advocating for some years previous thereto. It is the opinion of The Journal to observe, without holding a brief for either side in this personal controversy, that history has already accorded Captain Lucas his honors in this case. He is generally conceded to be the father of both the "Dome Theory" and the Coastal Plain Oil Field as well.

p. 24. Gas for Checotah. The election granting the Checotah Gas & Power Co. a franchise to pipe natural gas into Checotah, Okla, carried by a 20 to 1 vote, and Checotah will have natural gas next winter. The company which was granted the franchise is headed by Dr. W. T. Amis, of Muskogee, Okla. The gas will be piped from the Morris Field. The contract calls for 6 miles of piping within the city limits, and that gas shall be turned on by November 1.

Cheap Gas for Sapulpa. A contract has been signed between the Commercial Club, of Sapulpa, Okla., and the Gladys-Belle Oil Co., which will provide gas to manufacturers in that city at a cost of 3 cents per 1,000 cubic feet of gas. The consideration was the loan of $10,000 by citizens to the company which will develop its properties, and construct a pipe line connection with the Central Light & Fuel Co.'s plant. The company will repay the loan by setting aside 50 percent of the money received from the sale of gas.

Vol. 11, No. 4, July 4, 1912, p. 17. Texas. Electra. The sensation of the week is the wildcat well of the Corsicana Petroleum Co. on the Schmoker lands (mapped as Atkins), three miles west and a half mile south of Burkburnett Station, 17 miles northwest of Wichita Falls and about 17 miles east of Electra, known as the "Burkburnett Well". Leases were being taken from 2 to 3 miles from the well, with bonuses going up from $1 to $3 per acre. The Red River Oil Co. got 80 acres a half mile from the well for $5 an acre a day or two ago. Upwards of 300 people swarmed around the rig. The well has been shut down for the night.

Vol. 11, No. 5, July 11, 912, p. 2. Oklahoma. Cleveland Field. The old Cleveland, Okla. field is coming back, with the reporting of a 7,000 barrel a day gusher, the largest individual producer, perhaps, ever drilled in the Oklahoma fields. The well of the Milliken Oil Co. is no freak. The Helmick Oil Co. later brought in a 4,000 bpd producer in Sec. 18-21N-8E, a mile north and one location east.

p. 2. John S. Woofter, biography. (with portrait). Mr. Woofter is the secretary-treasurer and special accountant of the Hammett Oil Co. of Sapulpa, Okla., and special accountant to several other oil companies located in Sapulpa. He has made Sapulpa his home for 5 years, and is prominent socially and in business circles, and is a retired exalted ruler of Sapulpa Lodge No. 1, 118, B.P.O.E. He was born at Auburn, W. Va., October 25, residing in that city until manhood when he engaged in the mercantile business in Parkersburg, W. Va. With the opening of the oil fields along the Ohio River, he identified himself with the Oil Well Supply Co., running a store for that company at St. Marys, Ohio, being later transferred to Beaumont, Texas.

In 1903, Mr. Woofter severed his connection with the supply company and accepted a position with the J. M. Guffey Petroleum Co., as head bookkeeper for that concern. In 1908, he became associated with the Fondren Oil Co. of Houston and later with the Hammett Oil Co. of Sapulpa, with which he is still connected.

p. 12. Oklahoma. Cushing. Starting off at 50 bbls. per hour at 14 feet in the sand, the Slick & Jones' No. 1 Eliza Wo-co-che, in SW-1/4-SW-1/4-SE-1/4 Sec. 29-18N-7E, was completed on July 6 for the third and largest well in the Cushing District. The well mad better than 1,000 bbls. the first 24 hours, and at this writing, Tuesday, is putting 600 bbls. in the tanks through one 2-inch line. The well, while not on a line between the discovery well and the Hi-Grade Oil Co.'s first big gasser in Sec. 34-18N-7E, is northeast of the discovery well. This is the well which at 1,375 feet deep got the Layton sand and made 10 bbls. per day for several days, and at 1,693 feet got a sand which made 4,000,000 cfgpd, and again at 1,800 feet found what is termed the Clveland sand which made 30,000,000 cfgpd, decreasing to 14,000,000, allowing the tools to be put back into the hole and the gas cased off. The total depth of the well is reported to be 2,115 feet, which, if true, is somewhat higher than the same company's well on the London Farm in Sec. 5-17N-7E, which got the pay at 2,166 feet, and the discovery well where the top of the sand was found at 2,181 feet.

The Slick & Jones well on the Ollie London Farm in Sec. 5-17N-7E, completed several weeks ago, is making about 275 bopd, and the discovery well is holding at 30 bopd.

The Hi-Grade Oil Co. succeeded in getting the water cut off above the gas sand in its big gasser in Sec. 33-18N-7E, and the well is shut in. It is good for about 25,000,000 cfgpd.

With the completion of three producers and two big gas wells, it seems certain that Cushing is on the map as a genuine pool. The discovery well is located in the NW-1/4-Sec. 32-18N-7E, and the second well, the Hi-Grade Oil Co.'s No. 1 Barney, is in the C-W-1/2-Sec. 34-18N-7E, two miles to the east. The second oil well is in the NW-1/4-NW-1/4-Sec. 5-17N-7E, one mile to the south of the discovery well, and the new producer is in the SE-1/4-Sec. 29-18N-7E, a half mile to the northeast of the initial well. The second gas well of the Hi-Grade Oil Co. is in about the C of N. line of SE-1/4-Sec. 33-18N-7E, almost on a line with the company's first gasser, and about 1-1/2 miles east and south of the discovery well. A large field is predicted.

The Prairie Oil & Gas Co. this week started the construction of a 6-inch line from the Cleveland Field to the new Cushing wells, a distance of about 18 miles. The Prairie Co. built a 10,000-bbl. tank when the discovery well was completed, and is now building a 35,000-bbl. tank, which is expected to be completed this month.

A sixth well was completed in Sec. 33-18N-7E, the Slick & Shaffer test on the Manolia Mikey Farm, for 12,000,000 cfgpd at 1,790 feet, which is 350 feet higher than the sand in the Hi-Grade Co.'s well.

p. 12. Oklahoma. Cleveland. The big well of the Milliken Oil Co. No. 2 on the Williams Farm in Sec. 30-21N-8E, still continues to hold up, with 1,900 bbls. of oil in the tanks on Monday last. Completed on June 29, at 2,328 feet deep, it yielded 600 bbls. daily until July 1, when it was shot with 160 qts., making 350 bbls. per hour for the first 3 hours, and 7,000 barrels in 24 hrs. The well then declined. The well originally had been a Cleveland sand gasser,

drilled in the early days of the pool, the first well on the farm having been owned and drilled by George Davis, who afterwards disposed of the property to the Milliken Oil Co., who drilled No. 2. The top of the sand in the new well was found at 2,275 feet and the pay at 2,280 feet, 53 feet of Bartlesville sand having been found.

The Helmick Oil Co.'s No. 6 Helmick in Sec. 18-21N-8E, a mile and a location north and one location east of the Milliken well, was shot last week, making 4,000 bbls. in 24 hours. The well was making 300 bopd natural before the shot. The top of the sand was found at 2,177 feet, and the oil at 2,185 feet.

Both wells did not have adequate storage tanks, so the oil was run into ditches or nearby creeks, which were dammed, and the oil later recovered. Many older wells are now being re-entered.

p. 16. Texas. Burkburnett. The Burkburnett well is still shut in. The oil is different from that at Electra or Petrolia, the former being dark green and the latter dark brown, while the Burkburnett oil is very black, and 33 degrees gravity.

Petrolia. D. Darrow, a resident of Petrolia, had a water well drilled in his yard. Oil was struck at 140 feet, and the well is now making 3 bopd.

Vol. 11, No. 6, July 18, 1912, p. 24. Texas. Burkburnett. The well was started in January and cost about $12,000. It is 3 miles west of Burkburnett on the Schmoker Farm. When completed, the well made 100 bbls. for a day or two, natural flow, and there are two 250-bbl. tanks on line. It has produced about 40 bbls. this past day, and will probably be put on a pump.

p. 38. Oklahoma. Wells. Miscellaneous. (53 wells drilling).

28-3S-11E, Atoka Co. Local Co.# 1
21-7N-26E, Ft. Smith, Local Co. # 1
8-10N-8E, inola, Beatty & Co. # 1 (19N-17E ?)
35-11N-17E, Kennard, Price Oil & Gas Co. # 1 (R. 7E on p. 220,224)
9-13N-12E, Kicks & Wright # 1
23-15N-11E, Katy Oil Co. # 1
9-18N-16E, Fanny Burnett, Ruth Oil Co. # 1
7-21N-3E, Morrison Station, Producers Oil Co. # 1
28-23N-5E, Acham, Pappam, Central Fuel Co. # 1
15-23N-15E, E. Sunday, Carver & Co. # 1
14-25N-12E, Hildebrand, Keystone Oil Co. # 3
14-25N-12E, T. Wofford, Burlingame & Holmes # 1
13-28N-3E, Kay Co., Wichita Gas Co. # 1

Ada, Local Co. #1
Ahpeatone, Steel City Oil & Gas Co. # 1
Altus, Nichols & Co. # 1
Alva, Local Co. # 1
Ardmore, Carter Oil Co. # 1
Chandler, Local Co. # 1
Clinton, H. B. Nichols & Co. # 1
Comanche Co., Basin Oil Co. #1
Davidson, Local Co. # 1
Eldorado, Nicholson & Tatum # 1
Elmer, Jackson & Co. # 1
Elmer, Local Co. # 1
El Reno, Local Co. # 1
Gotebo, Local Co. # 1
Heavener, Hamilton & Co. # 1
Kinta, Ninety-sixth Meridian Oil Co. # 1
Lawton, Robertson & Co. # 1
Loveland, Local Co. # 1
Marlow, Local Co. # 1
Moyers, Unknown # 1
Mulhall, Local Co. # 1
Oklahoma City, Local Co. # 1
Oktering, Local Co. #1 (Oktaha ?)
Pauls Valley, Burk & Elliott # 1
Poteau, Colonial Petroleum Co. # 1
Roff, Roff Oil & Gas Co. # 1
Ryan, Jefferson Co. # 1
Sagayah, Mallory & Ossenbeck # 1 (Sageeyah)
Stephens Co., Hosford & Co. # 1
Stigler, Gibbons & Henry # 1
Stringtown, Boggy Oil Co. # 3
Tillman Co., Big Pasture Oil Co. # 1
Tillman Co., Campbell, Tennessee Oil Co. # 1
Tillman Co., Comanche Oil & Gas Co. # 1
Tillman Co., Sellers, Beckett & Eisman # 1
Wardville, Test Oil Co. & Warren # 1
Wardville, Test Oil Co. # 2
Woodville, Velvet Oil Co. # 1

Vol. 11, No. 7, July 25, 1912, p. 4. Personal Mention. Senator J. F. Overfield. (portrait). Senator J. F. Overfield, of Independence, Kansas, a prominent oil man of Kansas and Oklahoma, deserves credit for drilling the first wells in Oklahoma, practically opening one of the greatest oil developments in the country. Senator Overfield is manager of the Cudahy interests, as well as having production of his own. He was elected to the Kansas Legislature at the last election, and is standing for re-election.

D. A. Bartlett, of Marietta, Ohio, interested in the Samallen Oil Co., the Deep Fork Oil Co., and the Regent Oil Co., is at Tulsa for a few days.

Wm. F. Leschen, of St. Louis, was at Tulsa for a short time last week. Mr. Leschen's company, the Laclede Oil Co., recently brought in a fine well at Ponca City in a new sand.

Vol. 11, No. 8, Aug. 1, 1912, p. 6. Trade Notes. The will of the late Thomas W. Phillips, an independent oil producer, was filed at New Castle, Pennsylvania, July 25, for probate. The deceased leaves an estate valued at $2,000,000. According to the terms of the testament, a bequest of $30,000 is made to the University of Oklahoma; $5,000 of which is to be used as a ministerial loan, and $25,000 to endow a bible chair. The will states that this bequest shall become void if the University of Oklahoma solicits or accepts any money from John D. Rockefeller or from the general educational fund established by Rockefeller. In the event that any aid is accepted by the university from Rockefeller or the general educational fund, the $30,000 is to go to the board of ministerial relief of the Christian denomination. The board shall have the right to sue for and collect the $30,000 if the college shall accept aid from Rockefeller.

p. 12. Coweta. A new well is that of Gordon & Hayes on the Joe Brunner Farm in Sec. 29-16N-16E, about 2 miles east across the river from Haskell in the Choska Bottom. It is flowing 35 to 100 bopd natural. The top of the sand was found at 1,064 feet, and at 9 feet in, the well began to flow. The oil is of very high grade. The new well is an offset to an old well drilled by Charles Simmons, Eugene Blaise, and George Harmon, about 3 years ago, but which was never put to pumping, the well still showing some oil. It is south about 900 feet from a gas well that is supplying the little town of Choska.

Schulter. The Okla Oil Co. and Jane Oil Co., joint partners, completed a well on the McGilbray Farm in Sec. 22-12N-13E, starting off at 60 bbls per hour and now 25 bbls. per hour. It is two locations south of east of the famous old "picnic" well of Smith & Swan in the same section. That well was drilled some 4 years ago and got its name from the celebration that was staged when the well was shot. The well still makes about 30 barrels per day. It was a deep sand well. Several wells were started for the deep sand, but all were dry. The Jane Oil Co. drilled 7 wells to the east, six shallow, and one deep test in the southwest corner of the farm. Some weeks ago, the Okla Oil Co. purchased a half interest in the Jane Co.'s holdings, and the new well, No. 8, was started. The top of the sand was found at 2,000 feet, and the well finished at 2,011 feet, stopping in the sand. Many shallow wells will have to be deepened. The big well of Smith & Swan has been completed for some weeks, the No. 2 Wesley in Sec. 35-12N-13E, following natural for 500 barrels per day. After being shot, it flowed 1,000 barrels per day.

p. 24. Gas for Denison, Texas. Wade Hampton, Jr., representing the North Texas Gas Co., has assured the citizens of Denison, Texas, that gas will be piped into the city by December 1912. The work of laying the lines is now under way. The company will obtain its gas from The Lone Star Gas Co. At present the company is supplying 13 towns in north and central Texas, and plans to be in Denison, Denton, and Sherman before the close of the year.

Vol. 11, No. 9, Aug. 8, 1912, p. 3-4. Trade Notes. The Gloria Oil Co. is a new Oklahoma corporation with a capital stock of $10,000, the directors of which are Walter C. Nelson, C. E. Shoenfelt, and J. Garfield Buehl, all of Muskogee, Okla. The headquarters of the company will be at Muskogee.

The Journal has received a map of the DeSoto-Red River Field in Louisiana, forwarded by John McAlevy, of Shreveport, La. It covers the new developments in DeSoto Parish. Mr. McAlevy has a full line of maps covering the Louisiana fields and can be reached at Shreveport.

H. M. Byllesby & Co., of Chicago, have ordered ten more pulmotors for installation at ten Byllesby gas properties. The pulmotor is a resuscitation machine, which has demonstrated its success in cases of electric shock, gas poisoning, and the like. The company already has 21 pulmotors in use, and is well satisfied with the results obtained.

The Interstate Commerce Commission has extended from Sept. 1 to Nov. 1, the effective date of its order requiring the 13 companies recently found to be common carriers under the law, to file with the commission schedules of their rates for the transportation of oil. At present, six companies have applied to the court for an injunction to restrain the commission from enforcing the common carrier law. They are, the Standard Oil Co. of New Jersey, Standard Oil Co. of Louisiana, the Prairie Oil & Gas Co., Uncle Sam Oil Co., Tidewater Pipe Line Co., and the Ohio Oil Co. They contend that they were never common carriers, and that they were formed to supply certain refineries and that their facilities are only sufficient to fulfill contracts already made, and that to require them to carry oil for others would deprive them of their property, in violation of the Fourteenth Amendment to the Constitution.

p. 4, 6. Personal Mention. R. H. Wood, assistant geologist for the Government, is at Tulsa getting a line on the sands at Bird Creek and other nearby fields.

Judge L. M. Lane has returned to his home at Tulsa from an extended visit to Eastland County, Texas, where he has acquired a lot of prospective oil land.

Chapman & McFarlin, the successful oil firm of Oklahoma and Texas, have changed the name of the firm to the McMan Oil Company, and have put all of their holdings in the new company's name. The title of the new company is derived from the names of the members of the firm. The Holdenville Oil & Gas Co.'s interests will be merged in the new concern.

Patrick O'Byrne was a visitor to The Journal this week, en route to Binghampton, N.Y., his old home, where he will spend a month. Mr. O'Byrne is interested in the Electra Field. He is the man who put the Markham Field on the map, after the Producers Oil Co. had abandoned the field some years ago, Mr. O'Byrne being manager of the Hardy Oil Co. at that time.

p. 6. Advertisement. The Oil Field Car. (picture). Utility Car For Use In Oil Field Work. Motor, 4-cylinder; 40 horsepower; ignition, magneto and battery; cone clutch; transmission selective. Three speeds forward, one reverse. Wheel base, 112 inches, optional 116 inches. Tires, 36 x 3 and 1/8 inches in front, 37 x 4 inches rear. Clearance 12 inches. Body built in buckboard style for carrying bits, pipe, tools, etc. Removable rear seat can be furnished if desired. Carrying capacity 1,000 lbs. This car is especially designed for oil field work, and cannot be equaled for the price. We want a few good, live agents. Write for particulars. Tulsa Automobile and Manufacturing Co., Box 356, Tulsa, Oklahoma.

p. 15-16. Texas. Burkburnett. The Schmoker well is making about 75 bopd.

Eastland County. The Texas-Pacific Coal Co. surrendered a great deal of coal land in Eastland Co., Texas, and the leasing of these lands for oil and gas has caused a lot of interest. The land is in eastern Eastland Co., especially six miles east of Eastland and six miles south of Ranger, where the coal company made a test which had 40 feet of sand from 550 to 590 feet with shows of a lot of high-grade oil. This is 110 miles south of Electra, on the North Leon River. Judge L. M. Lane, of Tulsa, has secured a lot of acreage nearby the coal company's test, and expects to start a well on his land in October.

Vol. 11, No. 10, Aug. 15, 1912, p. 1. The Selandia's Voyage. The return of the Motor Ship Selandia, triumphant from her 21,000 mile voyage, has again started the scientific world to speculate on the probable effect that this experiment in ship building will have on the industry. Every claim of the makers has been made good. The engines, after their severe test, returned without noticeable wear or strain. The total time lost for engine repairs during the voyage is put down at 15 minutes. The fuel consumption fell far below the advance estimates, while the ease of operation has caused the mechanics to praise the engines. One immediate result is seen in the action of the Admiralty in appointing a commission to investigate the matter of similar engines for English naval vessels, while English experts agree to no delay in the adoption of the Diesel engine for ocean liners of all kinds.

p. 2-3. English Exploiting Oklahoma Oil. The London Joint Stock Companies Journal mentioned that The Kansas-Oklahoma Oil and Refinery Co., Ltd., has been formed in Kansas and Oklahoma. It acquired 10,100 acres in 3 oil districts, and 50 miles of pipe lines to Coffeyville, Kansas, and a refinery on 13 acres. Mr. Thompson and Mr. Hunter reported on the properties. One of the chartered accountants is Price, Waterhouse & Co. of London. The property has 298 producing wells, at 345,000 barrels per year. Most of this comes from the Cherokee shallow sand, with wells averaging about 500 feet deep. A well can be drilled and completed for 250 pounds. The Cherokee deep sand can be explored for at least 10 more years. Some of the property is in the Okmulgee District, where wells are drilled to 2,300 feet. The Cherokee Deep is about 1,000 feet deep. The pipe lines can carry 900,000 barrels a year. The refinery currently handles 360,000 barrels a year, but its capacity has been enlarged to 720,000 barrels a year. The pipe line charge is 10¢ a barrel. They figured that the new company can make a profit of 58,300 pounds a year.

p. 4. The Selandia's Triumphant Trip. (picture). The motor ship Selandia, independent of steam power, has just completed a voyage of 21,500 miles, with only a 15-minute rest for the engines with one slight adjustment of the exhaust valves. In matters of fuel consumption, ease of maneuvers, and general behavior, the vessel far exceeded expectations. The heat radiated from the exhaust affected the temperature of the engine room. The trouble was corrected by installation of fans and ventilators, and will be corrected by natural cooling above decks. The ship averaged 10 nautical miles an hour on consumption of 8.5 tons of oil a day, or about 28.2 nautical miles per ton of oil. The temperature of the water cooling the cylinders at no time exceeded 40.6°C., although 53° had been previously estimated as a working maximum. The chief engineer said that the motors are greatly superior to the steam engine for ease of control and working. He saw no reason why high speed motor ships should not be forthcoming. The Danish East Asiatic Co. has placed an order for 3 more ships, and a German steamship company has recently purchased a sister ship to the Selandia. The United Kingdom is considering similar ships for their navy.

p. 4. Use of Oil in Cement Construction. Mr. Logan Waller Page, Director, Office of Public Roads, Department of Agriculture, recently pointed out the desirability for the use of oil in cement concrete. The government has granted a public patent on this new discovery. Oil is of value in damp proofing in basement floors and walls, watering troughs, cisterns, barns, silos, concrete blocks, roofs, stucco, and other similar uses. A public patent has been granted so that no one has to pay royalties to anyone. For most purposes, five per cent oil is required based on the weight of cement in the mixture. The compressive strength suffers slightly, but not the tensile strength. The new mixture requires about 50 percent more time to harden. The tests were first made in 1910. In Richmond, New York City, about 400 feet of street was laid, in May and June 1910. Two bridge surfaces were laid in April and May 1910. In washington, D.C., about 400 feet of street was laid in June 1910. In Harrisburg, Pa., about one-half mile of roadway was laid. In the Fall of 1910, a United States Treasury vault was constructed 112 feet long by 18 feet wide. Numerous floors and the sub-basement of the Treasury Department were likewise constructed, and all are dry.

p. 6. Trade Notes. A charter has been granted to the United States Supply Company of Cleveland, Oklahoma, the incorporators being B. M. Bloch, J. H. Bloch, M. I. Bloch, of Cleveland, Okla., and H. Silversteen, of Osage. The capital stock is $10,000. The new company succeeds the old U.S. Iron & Supply Co., and is prepared to do an extensive business in either new or second hand supplies.

Vol. 11, No. 11, Aug. 22, 1912, p. 1. Petroleum Mining Degree. Since the University of Birmingham has been considering the desirability of conferring a degree upon students taking special courses in petroleum mining, John Geddes McIntosh has come forward with papers to prove that this proposition is not so new as it had been regarded. McIntosh gives publicity to an article that he published in 1901 advocating the conferring of such degrees.

p. 1. Oil Tankers. In 1886 there were only 12 tank steamers in service, but according to the latest volume of "Lloyd's Register" the number at the end of June last was 258. In view of the great demand for oil-carrying ships and the difficulty of securing early delivery, ordinary cargo steamers are now being bought for conversion into tankers.

p. 1. Farmers and Fuel Oil. There is growing adoption of internal combustion engines for farm work. For stationary work, the suction gas engine has been gaining in popularity for several years, but now the tendency is to apply the internal combustion engine, usually with oil as a fuel, to tractors, motor plows, threshing machines, etc. In America the gasoline plough is already very common, but it is very rare as yet in England.

p. 1-4. The Osage Lands Are Open. The lands of the Osage Indians, believed to contain rich deposits of oil and gas, are at last open to the operators of the world. The rules and regulations promulgated by the Interior Department some time ago have been sustained, the application and lease form approved, and at least 3 men have already filed applications for blocks of land. The land covers 760,000 acres. The lands upon which applications have been made lie northwest and west of Hominy. Dr. S. G. Kennedy, an intermarried Osage, applied for 5 sections. W. A. Springer, of Tulsa, applied for 5 sections. Charles F. Noble also applied. The tracts will be designated by numbers.

p. 6. Trade Notes. The Yellowstone Oil & Gas Co., of Tulsa, has been incorporated with a capital stock of $10,000. The incorporators are Robert Hancock, Frank Z. Curry, ad G. C. Spillers, all of Tulsa.

p. 8. Personal Mention.

The Cleveland Enterprise, published weekly at Cleveland, Oklahoma, carries one of the best oil columns that reaches the office of The Journal. A complete, accurate review of the Cleveland Field is carried each week as well as a personal mention column, which keeps tab on all the oil men that happen within the range of Editor W. C. Bridwell's vision.

Joseph Drouett, the general manager of the Britton-Johnson Oil Co. of Tulsa, was called to Warsaw, Ill., by the very serious illness of his brother. Joseph has production in the Bird Creek Field. He is an old Gulf Coaster, making his headquarters at Saratoga, Texas, for many years.

Joe A. Bartles, of Dewey, Okla., the well-known producer and the president of the Early Days Amusement Co., which stages a big roping and riding contest every year on July 4 at Dewey, has gone to Calgary, Alberta, Canada, to witness the big riding and roping contest on September 4, in which about 20 riders from Oklahoma will participate. Mr. Bartles' mother accompanied him.

p. 10. Fuel Oil for Lumbering. The use of fuel oil in donkey engines in Oregon has increased the output of lumber by 15 to 25 percent. Fuel oil conserves the forest by reducing fire risk to a minimum.

p. 10. Bradford Deep Test. One of the deepest wells in the United States will be started at Bradford, Pa. The well is on the Lawry Farm at Derrick City. Victor Kipchen and Fred C. Wheeler will operate the rig. Johnson & Mannery will be the tool dressers. The well will be started within a few days, in search for the deeper sands.

p. 12. The old post office horse van has been largely superseded by the motor mail van in many parts of London. Recently 50 of these new vans appeared on the streets of London. The London Fire Brigade employs 21 petroleum-driven motor fire engines.

p. 12. Central Fuel Company Closed Out. Suit has been filed in the federal court at Muskogee, Okla., by the Bankers Trust Co. of New York, asking that 13 subsidiary companies of the Central Fuel Co. be declared bankrupt. The companies are Wolverine Oil Co., Mohawk Oil Co., Lumberman Oil & Gas Co., Carnegie Oil Co., Como Oil Co., St. Lawrence Oil Co., Lucknow Oil Co., Sagamore Oil Co., Wigwam Oil Co., Stevens Point Oil Co., Niagara Oil Co., Copan Oil & Gas Co., and Pickwick Oil Co. When the Central Fuel Oil Co. was first organized, it entered into a contract with The Texas Co. to furnish it 15,000 barrels of oil a day, but could not deliver, and The Texas Co. filed suit.

p. 16. Arkansas. Wildcat wells. The well being drilled by the Columbia Oil & Gas Co. in the town of Experiment, Arkansas, has been drilled to a depth of 2,380 feet, and is now standing idle. At a depth of 1,000 feet, some gas sand was found, but no gas; and at 1,870 feet, sand rock was found but no oil. On Tuesday, company officers will decide whether to abandon the well or drill deeper.

p. 25. Bradford's Experiment. On the Lawry Farm, in Foster Brook Valley, near Derrick City, Pa., a gigantic new derrick, 85 feet in height, built to withstand a great strain and handle the heaviest set of drilling tools ever used in the Bradford Field, is at present attracting much attention. The test will go to a depth over 5,000 feet deep, looking for deeper sands than the Bradford sand. The walking beam, the biggest ever used in this part of Pennsylvania, will be in motion possibly by tomorrow. The 40 horsepower engine and boiler from the Bovaird and Seyfang Manufacturing Co. has been set up. Gas will be used in the boiler. The rig is of double strength, and was erected by Contractor Lyle of Smethport. V. P. Kipgen will be the driller. F. C. Mannery and Frank Walters will dress the tools. The Bradford Deep Well Co. is in charge. Former Mayor R. J. Hoffman is president. City Clerk E. C. Charlton is secretary. A geologist from the United States Geological Survey will keep an accurate log. The hole will be 14 inches in diameter at the start. Lower down it will be 12 inches, and at the bottom 6-1/2 inches.

p. 25. Hundred Years of Gas. One hundred years ago, in 1812, the Gas, Light & Coke Co., of London, England, was incorporated by royal charter, and it is this month celebrating its centenary. It originated in 1807, at the Crown and Anchor, Strand, at which meeting a duke, a viscount, a baron, a baronet, and two knights were present, and $100,000 was subscribed for the lighting of Pall Mall. This was the first street lighted by gas, and the price charged was $3.75 per 1,000 cubic feet, which is 6 times what the company now charges. Today the company has a capital of $145,000,000. In 1911, it delivered 25,485,000,000 cubic feet of gas.

p. 26,28. Gas for Los Angeles. The bringing of natural gas from the Midway oil fields to Los Angeles, California, and other points, has some concerned about rates charged. The Pacific Light and Power Co. now supplies artificial gas to the area for $1.50 a month in summer to $2.50 a month in winter for the average family. The same company controls the natural gas. Oil is mostly used in homes and factories, but may be replaced by natural gas. The Midway Gas Co. is slowly building its 12-inch line toward the city, and is starting a 16-inch line, and could supply 100,000,000 cfgpd. The new gas may cost 40¢ a thousand.

Vol. 11, No. 12, Aug. 29, 1912, p. 4. Capping the Mexican Gusher. (pictures).

An illustrated account of the capping of the famous Potrero gusher near Tuxpan, Mexico, has been printed by the English Journal Engineer as follows:

On Dec. 28, 1910, S. Pearson & Son Co. were boring for oil at Potrero del Llano, Vera Cruz, Mexico, at 1,000 feet. The well blew out, the tools forcibly ejected, and the oil flowed at 10,000 barrels a day. The next day, this increased to 20,000, the next day 30,000, and later, 160,000 bopd. The flow continued for 108 days, at a loss of 10,800,000 barrels. The well is about 30 miles northwest of Tuxpan, and the oil flowed into the harbor. Mr. F. Laurie and a Mr. Weaver were in charge of capping the well. There was 1,700 feet of 8-inch casing in the hole. A heavy clamp was placed around the casing at the surface, and a heavy christmas tree of pipes and clamps was inserted into the casing, held down laterally by steel cables and weights, until the oil could flow through lateral valves and could be shut off. The valves tested to 2,000 pounds per square inch pressure and held. The oil pressure was found to be 825 pounds per square inch. The oil was 21 gravity, and the temperature of the oil was 147°F. A 60 acre pit for temporary storage was filled in 60 days with 3,000,000 barrels. Excess oil that was wasted was later burned to protect the harbor at Tuxpan.

p. 6. Trade Notes. Recent Oklahoma incorporations are the Daisy Oil Co. of Tulsa; A. R. Thomas, president, Fred B. Oller, secretary-treasurer, of Tulsa, and N. M. Phipps, of Jenks, vice-president. The Sadie Oil Co., of Tulsa, has also been incorporated, with Max Lebow, Jacob Setkoll, Joseph Davis, and Samuel Lebow, all of Tulsa, directors, The Southwest Oil Co., of Holdenville, with a capital stock of $1,000 was incorporated, with John W. Gilliland, W. B. Key, and R. W. Widner, all of Holdenville, directors.

p. 8. Personal Mention. E. W. Marland, of Pittsburgh, but now calling Ponca City, Okla., his home, is at Tulsa on a short visit. Mr. Marland is general manager of the 101 Ranch Oil Co., and is a hustler from the word "go".

J. L. Larkin, president and owner of the Eastern Torpedo Co., of Bartlesville, was a Tulsa visitor last week. His business is better than ever. He has been making glycerine and shooting wells for many years.

p. 12. Oklahoma. The deal whereby the Indian Refining Co. of New York, believed to be representing the Asiatic Petroleum Co., of Europe, was to become the owner of various large producing properties in Oklahoma, has not yet been consummated, but a portion of the properties will be acquired in a few days. It was about a month ago that P. Abrahams and A. W. Krusiheer, representing the Asiatic Petroleum Co., came to Tulsa through the instigation of Percy D. McConnell who had acquired options on several properties and for a number of months had been trying to interest the foreign company. They went to Bartlesville and examined the property of John A. Bell of Pittsburgh, consisting of the Signal Oil Co., the Kingbell Oil Co., the Standard Oil & Gas Co., and the Morton Oil & Gas Co., as well as some production held in Mr. Bell's name. Mr. Bell agreed to deliver 2,500 bopd for what is reported to be $1,000,000. An option was taken on his properties, as well as the property of the Milliken Oil Co. in the Cleveland Field. Also the Minnetonka Oil Co. at Cleveland was being looked at. New offices of the Indian Refining Co. were secured by Mr. Richard Levering, chairman of the Board of Directors, on the fifth floor of the Robinson Arcade Building, in Tulsa. It is thought that the Asiatic Petroleum Co. controls the stock of the Indian Refining Co., the merger having taken place more than a year ago. The Indian Refining Co. operates refineries at Georgetown, Ky., Lawrenceville, Ill., East St. Louis, Ill., and New Orleans, La., and recently purchased the Lantz property in the Illinois fields involving approximately $500,000. The company is also establishing marketing agencies on the west coast, and is now one of the most aggressive marketing concerns in the United States.

Cushing. The Shaffer interests have what is claimed to be the deepest well drilled in Oklahoma, their test near Cushing on the Maloney Farm in Sec. 11-17N-5E being below 3,600 feet, with a caving hole. The Mississippi lime has not yet been reached.

Boynton, Wainwright, Checotah. A Mr. Amos is reported to have secured a franchise for gas for the towns of Boynton, Wainwright, and Checotah, and will

get the gas from the Mack Oil & Gas Co., and Reese & Reese wells in Sec. 26-13N-14E. A 4-inch line is being laid from the wells.

Vol. 11, No. 13, Sept. 5, 1912, p. 1. To Determine Exact Production. The auditor of the State of Oklahoma is preparing to request that the various pipe line companies in the state furnish him with a list of every producer's daily production, not only for this year, but also for the past three years, so that he will be enabled to check their figures rendered for taxation. This is the first time in the history of the oil business that such a request has been made, the pipe line companies holding that a man's production was private, and have consistently refused all requests in the past of this nature. The auditor claims to have a law whereby such information is obtainable and if the desired information is forthcoming, it will enable the state to check the production figures accurately each year.

p. 1. August Activity. Oklahoma had 533 drilling wells in August, with increased production of 24,390 barrels a day. The Ponca City Field has 5 new completions for new production of 600 barrels a day.

p. 2. Heads of Magnolia Company Indicted. An indictment was returned in the United States District Court at Dallas, Texas, Thursday, Aug. 29, charging the Standard Oil Co. of New Jersey, the Magnolia Petroleum Co., a joint stock association of Texas, Calvin N. Payne, John D. Archbold, Henry C. Folger, Jr., John Sealy, of Galveston, Texas, E. R. Brown of Corsicana, and W. C. Teagle, of Plainfield, N.J., with conspiring to restrain trade in Texas, Arizona, New Mexico, Louisiana, Oklahoma, and the Republic of Mexico. The Pierce-Fordyce Oil Association of St. Louis, Mo., owned by Col. Samuel W. Fordyce, filed the suit.

p. 2. The Mayburg Deep Well. The celebrated deep well at Mayburg, Forest County, Pa., which has been drilled to a depth of 5,250 feet, is only about 40 feet less in depth than Louis Kraeer's deep hole in Sheffield Township, Warren County. Both are the deepest wells ever drilled in Pennsylvania. The tools were lost in the hole and the fishing tools were also lost. The objective was the Medina sand expected at 5,450 feet. T. D. Collins, of Nebraska, Pa., owns 7/8 of the well.

p. 2-3. Trade Notes. The Mannford Oil & Gas Co., of Mannford, Okla., has been incorporated for $50,000. The incorporators are H. U. Bartlett and Theodore C. Lashley, of Mannford, and A. A. Hammer, of Enid.

The Dunn Oil Co., of Tulsa, with capital stock of $7,500, was incorporated by J. H. Winemiller, Allen Holt, and Charles T. Egan, all of Tulsa.

Two new Texas oil companies are the Three-Forty-One Oil Co., of Waxahachie, with a capital stock of $36,000, incorporated by W. K. Ward, S. W. Dunham, and John G. Cornwell; and the McKeesport Oil Co., of Dallas, with capitalization of $10,000, incorporated by J. H. Ransom and R. K. Marsh, of Dallas, and Othie Sackett, of McKeesport, Pa.

p. 4. Personal Mention. D. J. Kelly, president of the Manhattan Oil Co. of Oklahoma, is at Tulsa this week. Mr. Kelly makes his home in New York, and is a large producer in the Osage County field.

Walter Brown, formerly abstract man for the Gulf Pipe Line Co., has resigned from that company and will engage in the leasing business for himself. Mr. Brown has equipped himself with a motorcycle and will cover all the fields.

Henry McConnell, one of the applicants for a blanket lease on a part of the unleased portion of the Osage Reservation, has returned from a trip to Texas where the company he represented, the Victoria Securities Co. of New York, completed a dry hole 3 miles north of Shamrock, Wheeler Co., Texas, the hole being drilled to 2,100 feet.

p. 6. Recent Deaths. Mrs. Sarah Jane Redd, aged 63 years, died at the home of her daughter, Mrs. Charles B. Wuller, at Butler, Pa., Thursday evening, Aug. 29. She had been in poor health for some time. Mrs. Redd was born at Petrolia, Pa., and was a daughter of Mr. and Mrs. John Shakeley. With her husband, J. C. Redd, a well-known oil man, she went to Butler 24 years ago, and has since made that place her home. She is survived by one daughter, Mrs. Wuller, and two sons, Thomas J. and Samuel C. Redd. Both these gentlemen have a large acquaintance throughout the oil country, Sam being the western representative of the Eastern Oil Co., with headquarters at Tulsa, and Thomas J. being interested in production. The interment was in Calvary Cemetery, Butler.

p. 10. Cushing Field. A suit which involves practically all of the leases now carried in the name of Slick & Jones and T. B. Slick, has been filed by Charles Shaffer, who alleges that all the properties in the names mentioned above belong to him; that Mr. Slick was in his employ, and that he furnished Slick all the money that Slick paid for leases, as well as what he spent in securing leases in the field. He also alleges that Slick refuses to deed the land over to him, hence his action. Seven producers have been drilled by the Shaffer interests in the field, and a determined fight will be made before the matter is settled. The Journal knows that the Cushing Field owes its existence to the optimism of Mr. Slick, and he has consistently preached Cushing to every one who would listen. The production of the Cushing Field at the end of this week was approximately 1,825 bopd.

p. 12. Ponca City. The Oklahoma City Refining Co. is building a refinery at Ponca City, having finished the office. It has foundations for two stills.

The Chanute Refining Co. is building a 10,000 bbl. tank, to handle a large part of the oil. The production of the field averages 2,200 bopd.

Vol. 11, No. 14, Sept. 12, 1912, p. 4. Pittsburg County. The Gibson Creek Oil Co., which was recently organized to exploit the territory near Canadian, Pittsburg Co., Okla., is open for bids from contractors to drill a well. The company expects to drill on the Smith Farm in Sec. 18-8N-16E, which it owns in fee, and has about 22,000 acres under lease in Pittsburg Co. The officers are D. L. Roe, president; W. M. Priddy, vice-president; Fain G. Gillock, treasurer; and L. F. Copeland, secretary.

p. 4. Trade Notes. The Bovaird Supply Co. has opened offices in the hotel Tulsa, with J. P. Flanagan, secretary-treasurer of the company, in charge.

The Magdelena Oil Co., with headquarters at Bartlesville, has a capital stock of $25,000, with well-known oil men as incorporators: M. F. Stillwell, H. V. Foster, and Paul Dahlgren, all of Bartlesville.

The Interstate Oil Co. has been chartered in Texas with a capital stock of $50,000. The incorporators are J. E. Head, of Wichita Falls, and R. M. Mayes and F. E. Couch of Fort Worth. Mr. Head will be president and general manager of the company. They have 2,400 acres of leases in the Electra Field, and will start a well at once northeast of the Eeds producer.

p. 8. Personal Mention. A party of prominent Gulf Coast oil men are touring California. Walter B. Sharp, president of the Producers Oil Co. of Houston is negotiating with parties in Los Angeles to manufacture the Sharp & Hughes Rotary Rock Drill Bit, invented by Howard Hughes, who is also on the trip. The bit is the most successful invention for rotary drilling in recent years. Harry R. Decker was also along, the producer, oil fire fighter, and inventor of a type of rotary rig, California type. John O'Neil, a large producer in the Humble Field, was also along.

p. 12, 14. Oklahoma. Henryetta. Northwest of Henryetta, M. C. French, of Okmulgee, completed a well in the C-S. line-SW-1/4-Sec. 8-11N-12E, about 4 miles from production, for a possible new field. The well completed in a new sand at 1,100 feet, and is about 35 bopd after being shot. This is probably in the Schulter District.

Ponca City. How Ponca Was Developed. The Ponca City Field owes its existence to E. W. Marland, manager of the 101 Ranch Oil Co. Mr. Marland came

to Oklahoma in December, 1908, and paid a visit to the 101 Ranch for several days with the Miller Brothers. It looked like it had possibilities for oil and gas and he secured a lease on a large tract of land. On his way back to Pittsburgh, Mr. Marland stopped in Tulsa and was told that there was no oil west of the Arkansas River, and that the land was all red beds. At Pittsburgh Mr. Marland fell into the hands of the gentlemen who afterwards promoted the Federal Oil Co., but they did not raise any money. Then Mr. Marland organized the 101 Ranch Oil Co., and advertised stock in the company, with $7,000 spent in advertising, but only $1,200 worth of stock was sold. He drilled a well close to the 101 Ranch house, drilling to 2,775 feet to the Bartlesville sand, which was dry. He drilled 8 other wells, finally getting oil in the 9th hole.

Mr. Marland had old acquaintances back in Pittsburgh, and finally W. H. McFadden, J. G. McCaskey, and several other Pittsburghers joined Mr. Marland, and it was with their money that he was able to continue his operations. When the 9th well was drilled, the 101 Ranch Oil Co. had more than 100,000 acres under lease. Word was sent to Tulsa that the first oil well was being completed, and representatives of nearly a dozen companies were present. The Willie Cry No. 1 was completed, but everyone called it a "freak". That well is now 15 months old and is still producing 75 bopd. Number 2 was drilled about a month later, and No. 3 about 3 months later, but still these were considered "freaks". To date, 37 wells have been completed, 27 producers and 10 dry holes, some being a considerable distance from the main pool, and still there are some who have no faith in the field. The smallest producers yielded 50 bopd natural, while some were 400 to 500 bopd natural, showing a 10% decline in 10 weeks. The oil sells for 83¢ a barrel. Mr. Marland's company is on the high road to success.

Gotebo, Kiowa Co. The Kay & Kiowa Oil Co. of E. W. Marland and others, drilled in a well on school lands in the NW-1/4-Sec. 34-7N-16W, at Gotebo, Kiowa Co., on September 3, showing for better than 10 bopd natural, and it will soon be shot. This well is an offset to one drilled by West in the SW-1/4-Sec. 27-7N-16W. The West well was drilled to 1,400 feet, and plugged, having showed for a 30 bopd natural well of 39 gravity oil at 425 feet, another oil sand being found at 1,300 feet which was not as good as the shallow sand. The well has been plugged back to the 425-foot pay and the well will be pumped from that formation. Mr. West has made a location about 500 feet west of his first well and has commenced operations. It appears that a shallow sand field will be developed in Kiowa County.

Tonkawa Wildcat Test. E. W. Marland & Co. have started a wildcat well south of Tonkawa on school land, in Sec. 36-25N-2W, about 15 miles west of Ponca City, and about the same distance southwest of the Blackwell Gas Field.

Arkansas City, Winfield, and Wellington, Kansas. The Kay & Kiowa Oil Co. completed No. 6 on school land in Sec. 13-28N-1W and have a good gas well. This is the company that is producing gas to supply Arkansas City, Winfield, and Wellington, Kansas, this winter. An 8-inch pipe line is being constructed to connect up the Kay & Kiowa Company's wells with the Wichita Gas Co.'s lines at Arkansas City. The line is being built by the Peoples Fuel Supply Co., composed of Harry Heasley, Archie Leonard, and J. J. McGraw. The Peoples Fuel Supply Co. has a 10 year contract with E. W. Marland to buy gas from school lands, and a contract with the Wichita Gas Co. to furnish gas for 10 years, the contract calling for a minimum of 5,000,000 cfgpd.

Vol. 11, No. 15, Sept. 19, 1912, p. 1. Education for the Oil Man. The University of Pittsburgh will inaugurate a new course in petroleum engineering at the opening of the college year September 30. Such a venture is being agitated in England, but this is the first step in this country. The course, co-ordinate with that for mining engineers, will take 4 years and lead to the degree of M.M. The curriculum during the first two years is the same as that of the mining engineers. During the last two years the subjects help train the student so that upon graduation, he can do surveying, geological examination, location of wells, drilling of wells, laying out of power plants, pipe lines, and pumping plants, and can evaluate the value of oil and gas properties. Mr. Roswell H. Johnson will have charge of the geological aspects of the work. He has been engaged in practice as a consulting geologist in Oklahoma for the past four years. The University of

Pittsburgh has long been the financial center of the oil and gas business in this country, and there will be a need for men trained in this way.

p. 1. Oil--Burning Battleships. Two of the latest battleships authorized by Congress, and their two immediate predecessors, are to be of the exclusive oil-burning type. It must follow that the government has also taken the necessary steps to insure an adequate storage supply of fuel, properly protected from sabotage both in time of war and peace. A question, not easily answered at this time is, in what quarter and in what manner has the government protected itself in this way? A world-power can not long hide its reserve fuel supply. The recent stiffening of the fuel oil market is associated with this question.

p. 2. Trade Notes. State charters have been issued in Oklahoma to the Zabelle Oil Co., of Sapulpa, with capital stock of $5,000, incorporated by Louis Schmidt, Louise K. Schmidt, and O. M. Irelan, of Sapulpa; and to the Carson Oil Co., of Ponca City, with capital stock of $5,000, incorporated by Mollie A. Miller of Bliss, Okla., and William H. England and John E. Carson of Ponca City, Okla.

Among recent Oklahoma incorporations are the Blackjack Oil Co. of Muskogee, with capital stock of $4,000. The incorporators are J. H. Mitchell, R. W. Hampton, and W. E. Lyles, of Muksogee. The Indian Gas Co., of Bartlesville, with a capital stock of $50,000 has been incorporated by M. F. Stillwell, Charles F. Leach, and John H. Brennan, all of Bartlesville. The Greater Oklahoma Oil & Gas Co., of Tulsa, with capital of $75,000 was incorporated by William M. Ross, J. K. Cleary, and Vernon M. Smith, all of Tulsa. The Ina Oil & Gas Co. of Muskogee, with capital of $10,000, was incorporated by Ralph W. Leftwich, D. E. Shoaff, and H. K. Moore, all of Muskogee.

Vol. 11, No. 16, Sept. 26, 1912, p. 8. Personal Mention. W. T. Reese, father of Tad Reese, an old-timer in the oil business, is moving to Okmulgee, Okla., from Timpas, Colorado. Mr. Reese is interested in some good leases in the Morris Field, and will make headquarters where he can give them his personal attention.

Calvin N. Payne, president of the Lone Star Gas Co., of Texas, and a recent purchaser of extensive gas properties in Oklahoma, is at Tulsa this week. It has been some years since Mr. Payne was at Tulsa, and he has had a busy time greeting many of his old friends.

The marriage of P. D. Lockwood to Miss Delila Tyner was solemnized on Sept. 21 at Tulsa. Mr. Lockwood is interested in the Sabine Oil & Marketing Co. with his father, Senator M. L. Lockwood, and the bride is a popular young lady and a large property owner in the Bird Creek Field.

Vol. 11, No. 17, Oct. 3, 1912, p. 3. Trade Notes. F. A. Innes, of Nowata, Okla. has the finest map to date of Osage and Pawnee Counties. It is on linen, eight feet square, and mounted on a roller, giving every essential detail. Besides the usual information, each allotment shows the enrollment number, age and sex of the allottee. The map has been in preparation for 5 months, and sells for $35.

The deep well near Bradford, Pa., had passed the 3,000 foot mark last Saturday, being at 3,035 feet.

p. 4, 6. Personal Mention. George F. Getty, of the Minnetonka Oil Co., operating in the Cleveland Field and in Osage Co., Okla., is making a trip of inspection to his properties. He lives at Los Angeles, California.

S. Solomon, better known in the old Bradford, Pa. fields as Judge Solomon, is now a full-fledged resident of the wilds of Wyoming, having gone to Casper 22 years ago, when P. M. Shannon drilled his first well on Salt Creek, 52 miles north of Casper.

A. L. Funk, who has a lot of leases scattered around Oklahoma, has returned from a trip to Chicago, and can most likely be found in the Cushing Field, as a 600-barrel well was completed close to some choice acreage he and O. E. Riter have in that field.

C. F. Martin, general manager of the Chelsea Refining Co. is planning to move to Tulsa for his future headquarters. His refinery operates exclusively on oil from the shallow fields and handles approximately 1,000 barrels a day.

Senator N. V. V. Franchot, of Olean, N.Y., is at Tulsa. He is interested in the manufacture of gasoline from gas and has several plants in Oklahoma. Douglas Franchot, his son, lives at Tulsa and manages the business of the firm Franchot & Son.

Captain W. E. Roe, of Williamstown, W. Va., was at Bartlesville, Okla., last week. He has some good producing property in the Hogshooter Field, completing several good wells on it last month. He is a noted river man, having several boats in operation on the Ohio River.

J. G. Hamill, accompanied by Mrs. Hamill, of Stringtown, Okla., were Tulsa visitors last week. Mr. Hamill is drilling a well near Stringtown for the Boggy Oil Co. Mr. Hamill is well known in Oklahoma and in the Gulf Coast fields, together with his brothers, drilling the famous Lucas gusher at Spindletop.

L. B. Riddle, of Marietta, Ohio, is making headquarters at Casper, Wyoming, in the interest of his father, who is the head of the Riddle Oil Co., one time a large producing company in Illinois.

H. J. Critchlow, of Warren, Pa., interested with F. E. Hertzel, president of the Warren National Bank, has been in Casper, Wyoming, for some time, but has gone north to the Cody-Cowley-Grey Bull district, and will also look over Park and Big Horn Counties in Montana.

L. E. Phillips, banker and oil man, of Bartlesville, Okla., was at Tulsa this week. Mr. Phillips is cashier of the Bartlesville National Bank, one of the strongest banks of that city. Frank Phillips, the president of the bank, is a prominent oil man, having extensive interests in the Mid-Continent fields, of which Waite Phillips, another brother, is field manager. The bank gets out a monthly paper "Bartlesville National Bank News".

Henry Roeser, interested in the Helmick Oil Co. at Cleveland, Okla., was in Tulsa last week. His company is subject to purchase by the Asiatic Petroleum Co. and he may form a new company. The Helmick Oil Co. was organized to develop nothing but the Helmick Farm in the Cleveland Field. They drilled a well several months ago which made 400 barrels a day natural, and after shooting, produced 4,700 bopd.

D. C. Stewart, of the Magnolia Petroleum Co., with headquarters at Corsicana, Texas, was in Tulsa and Bartlesville last week. Known as "Dave", he was made general manager of Magnolia on Oct. 1. Formerly, he was vice-president and general manager of the Oklahoma Pipe Line Co., going to that company from the Prairie Oil & Gas Co. He completed the lines from Electra to Corsicana to Beaumont just recently, and now had charge of all the business of Magnolia, reporting only to Mr. Brown, vice-president of the company.

p. 8. Bell Deal. Roxana Petroleum Co. The consummation of the deal whereby the Asiatic Petroleum Co. became the owners of the John A. Bell properties in Oklahoma, took place on Sept. 25, at New York City. On the following morning, the new company, incorporated as the Roxana Petroleum Co., took possession of the properties. The properties consist of 192 producing wells, with a total of 2,910 barrels a day, and 13,000 acres, with the purchase price being more than $1,000,000. The Roxana company has taken a large suite of offices in the Robinson Building in Tulsa, with John Harvey, secretary to P. Abrahams, being in charge.

p. 9-12. Past and Present of the Wyoming Oil Field, by George A. Whitney, Jr. Casper is the headquarters for oil in Wyoming, with a population of 3,500 people. Two refineries were built on the outskirts of Casper, with pipe lines to the Salt Creek Field 52 miles northwest being connected. Railroad rates are 3 to 4 cents a mile, and stage rates are 10 cents a mile. One refinery is at Cowley, northwestern Big Horn County. About 5,000 barrels of oil a day is being handled in Wyoming. There are two small refineries in Uinta Co. near Evanston and Spring Valley. Much of the land in Wyoming is segregated Government land, and there are law suits by the Government against some oil companies because some of the wells are on segregated land, such as that in the Salt Creek Field, the largest in the state, in Natrona Co., which also includes Casper. The Natrona Pipe Line and Refining Co. and the Midwest Oil Co. are the owners of the two Casper refineries, and they handle most of the oil in Wyoming.

Oil was known to exist in the Salt Creek area, as seepages, prior to 1880. In 1889, P. M. Shannon, of the Pennsylvania Oil & Gas Co., drilled the first well. The oil was a heavy olive-green oil, of 23.9 gravity, with 1% paraffine wax, with little to no sulphur or asphaltum. The oil was hauled to Casper and marketed in the crude state until 1895, when a small refinery was built. Only 13 wells were drilled by that time, in the Shannon Field, nearby Salt Creek. The property was sold to foreign investors in 1905, and the new owners drilled about 3 miles south of the Shannon Field, on the Salt Creek Dome. This well is known as the "Old Dutch Well", and was the first in the Salt Creek Field. It was completed in October 1908, at a depth of 1,000 feet, in the Wall Creek sand, and produced about 50 bopd. It is a dark green oil, with 6% paraffine and 16% naptha, and is different from that of the Shannon sand. The Shannon sand occurs higher and was eroded off of the Salt Creek Dome. The dome is about 5 miles long and 2-1/2 miles wide, covering Secs. 13, 23-27, 35-36 of T. 40 N., R. 79 W., and 47 wells have been drilled to date, with 6 dry holes. The producing sand is at 1,420 to 1,760 feet.

The Oil Mountain District is 20 miles southwest of Casper. Oil springs have provided inhabitants with oil for many years. The springs are in the Benton Shale. One well was drilled there to a depth of 600 feet.

The Powder River Field is 15 miles northwest of Salt Creek in Natrona and Johnson Counties. Oil springs also occur here. It is a dome, but the Wall Creek sand was eroded from the top. Nine or ten shallow wells have been drilled less than 1,000 feet, and all were dry holes, but the Ohio Oil Co. is now drilling deeper. In the 1870's and 1880's the oil springs were reported, and in the 1880's an eastern firm drilled some of the first wells. Near the head of Trail Creek are several pits, two of which contain large quantities of oil. In Oil Canyon is a pit 50 feet deep in which oil rises within 6 feet of the surface, and from which oil was hauled to Sheridan and Buffalo. In Salt Canyon, about 2 miles south of Oil Canyon, oil is slowly trickling out of the Dakota Sandstone, and a pit is flowing oil and water. East of Salt Canyon, the Jurassic beds contain oil sands. The structure of the Powder River Field is an elliptical dome, the center of which has Dakota Sandstone and underlying Jurassic rocks, with average dip of 10° on the flanks.

The Lander Field, in Fremont Co., western Wyoming, was known also from oil springs. The field is 39 miles long and 3 to 11 miles wide, divided into three parts around the springs: Little Wind River northwest of Lander, the Dallas Field southeast of Lander, and Big Popo Agie northeast of Lander, with shallow wells being drilled from 300 to 1,520 feet deep. The oil in the Dallas Field occurs in the Embar Formation and overlying Chugwater, and the first well was drilled in 1880, at 2 bopd. About 5 years later, 3 wells were drilled by George B. Graff, of Omaha, Neb., to a depth of 300, 500, and 800 feet. Four more wells were drilled in 1897, producing about 25 barrels each. Forty wells have been drilled in the Dallas Field to date, with 17 producers, with some of the older wells going dry. The Little Wind River area was started about 1906 by Col. R. E. Plunkett who leased lands adjacent to the Washakie oil spring and drilled 7 wells, with only one producer at 4 bopd, at 275 feet in Lower Cretaceous sandstone about 2,580 feet stratigraphically above the sands of the Dallas Field. In the nearby Sage Creek seepages, known as early as 1864, the first well was drilled in 1909 by the Washakie Hydrocarbon Mining Co. in Sec. 35-1N-1W, to 800 feet, with some oil at 171 feet, 650 feet, and 670 feet.

In Park and Big Horn Counties, Wyoming, the Bonanza, Cody, and Cottonwood Fields seem promising. Near Grey Bull, Big Horn County, four wells have been drilled, yielding oil and gas. The gas is piped to Basin and utilized for heating and lighting. The source of the oil and gas is a black shale at the base of the Colorado Group. Unknown parties are now at work 12 miles east of Basin, upon a dome 1 mile long by 3/4 mile wide.

Six miles southeast of the Salt Creek Field is Teapot Creek, where an oil seep occurs, and one shallow well has been drilled. The structure is in the shape of a dome and is termed Teapot Dome. The Shannon and Wall Creek sandstones underlie the dome, and could be good objectives.

Most of the oil in Wyoming occurs in the Dakota Sandstone, the Wall

Creek Sandstone 1,350 feet above the Dakota, and the Shannon Sandstone, 1,970 feet above the Wall Creek.

Oil and gas has also been found in Converse Co., Weston Co., and Crook Co. near Douglass, Newcastle, and Moorcroft.

p. 14. Oklahoma. Ada. A small gas well was completed on October 1 near Ada.

Gotebo. West & Rosser completed a well on Sept. 22 near Gotebo, Kiowa Co., for about 100 barrels a day. They shot 50 quarts at 480 feet, and the well filled up 250 feet with oil in one hour. They estimate that the well will fall off to 60 barrels a day. F. B. West is an old oil operator from the Gulf Coast and Mr. Rosser lives at Elk City, Okla. This is their second well, the first well making about 40 barrels natural per day after 2 months.

Vol. 11, No. 18, Oct. 10, 1912, p. 1. General Outlook For Oil. All over the world the production of petroleum has now become a matter of vital importance, says Oil Age. Its use in industries of all kinds is daily increasing. The supply of fuel oil in the United States is a national asset. The naval authorities of Great Britain, the leading naval power, are engaged in a study of oil supply in the various colonies; and other European countries are developing the oil-burning capacity of their navies. The power that controls petroleum fuel is likely to take the lead in all maritime affairs.

California, with its enormous production, now realizes that their production is not enough to keep pace with the demand. The figures for August show that consumption is fast gaining on production. It will be immediately necessary to develop the present fields to their utmost capacity, and to find new fields. There is a vast wildcat territory that needs to be developed. The northern trans-continental railroads are now using oil on their systems as the sole fuel. The fear that there will not be enough fuel oil for transportation and industries is groundless. Even if the eastern fields of the United States are falling off, one has only to remember the vast fields of Mexico which has scarcely been touched.

The search for new oil fields is going on all over the world. Geologists and oil experts have their hands full, in South Africa, Australia, North Africa, Alaska, the Mediterranean, Cyprus, Palestine, Asia Minor, Greece, and the Philippines, to mention a few places.

p. 4. Personal Mention. P. C. Boyle, president of the Derrick Publishing Co. and the Petroleum Publishing Co., was at Tulsa this week in the interest of his publications. He returned to his home at Oil City, Pa.

J. G. Hamill has moved his tools from Stringtown, Okla, where he completed two dry holes for the Boggy Oil Co. Jim has the honor, together with his brothers, Al, who is now drilling wells in California, and Curt, who is drilling at Markham, Texas, of drilling the famous Lucas gusher at Spindletop, Texas.

p. 10. Recent Deaths. Victor Gretter, aged 70 years, who followed the oil business from the days of Pithole, died suddenly at Englewood, a suburb of Chicago, Monday, September 30. Heart disease was the cause of his death. He served in the Civil War as an artilleryman. He engaged in the oil business at Pithole in 1865, following drilling and contracting for a while, when he engaged in production. Later, he turned to the oil exchange business, being a member of the Parker, St. Petersburg, and Bradford exchanges. In 1887, he joined Standard Oil Co., being one of a number of old timers who introduced fuel oil for the company. He was employed in that branch until his death.

Mr. Gretter was the inventor of the "Gretter Oil Saver", a very useful appliance in its day. It was made on the stuffing box order, and came at a time when casing was being first used in wells. The casing shut out the water from the sand, allowing the oil and gas to flow. When the holes were drilled in wet, there was little chance of a flow of oil, but the casing made the flows possible. He also gained much notoriety from his success in extinguishing the famous burning well "647" at Cherry Grove, after the most experienced men had failed. He shot the casing-head off with a cannon ball, and after that it was an easy matter to extinguish the fire.

p. 10. Roxana Petroleum Company Deal. The Paova Oil Co., the Helmick Oil Co., the Quintuple Oil Co., and the Cleophane Oil Co., were sold the past week to the Roxana Oil Co. The deal consists of acreage in the Cleveland, Flat Rock, and Wann Fields, with 2,195 barrels a day, for $700,000. Several large stockholders of the Asiatic Petroleum Co. are interested in Roxana, but there is no connection with Asiatic as a whole. Also, the Indian Refining Co. acted as an advisor when the Bell properties were examined, and is not related to Roxana.

The Roxana Petroleum Co., of New York, is the parent concern, and the Roxana Petroleum Co. of Oklahoma is the operating end. The officers of the Oklahoma company are C. D. Martin, president; Thomas Lyons, of Tulsa, vice-president; and J. A. Harvey, secretary-treasurer.

p. 12. The Sulloly Oil Co., of Bristow, Okla., has been incorporated, with a capital stock of $10,000. The directors are M. Jones, R. L. Jones, and George McMillan, all of Bristow.

p. 12. Oklahoma. Adair Field. The discovery of the Adair pool by John A. Bell some time ago first attracted attention to that area. The first well was drilled on the Adair Farm in Sec. 36-26N-14E, which was the beginning of the best pool opened this year. Mr. Bell's companies were Signal Oil Co., Morton Oil & Gas Co., and Standard Oil & Gas Co., which he recently sold to Roxana Petroleum Co., which involved mostly production in the Adair Field, west of Nowata, in Nowata Co.

Skiatook Wildcat, Burgess sand. The well by Kennedy, Fetzer & Schonfeldt on the Ora Kay Farm in the NW-1/4-SW-1/4-Sec. 30-23N-13E was drilled in at 1,656 feet in the Burgess sand on Friday of last week, and reportedly oil was flowing over the derrick at 600 barrels a day. Today, the well is flowing at 250 barrels a day natural. The Prairie Oil & Gas Co. has connected, and the well is making between 10 and 15 barrels an hour. The Burgess is the least prolific of the 3 sands in the Bird Creek - Skiatook District, and was a poor stayer in other wells, but now the Buress has found a home, along with the Bartlesville and Tucker sands. The well is about 5 miles north of Skiatook, and 5 miles west of Vera, and most of this area is now leased as a result of this producer.

Coweta. About 5 miles east of Coweta, in Sec. 24-17N-16E, Dr. Sheets has opened a new well on the Peter Wilson Farm, for 50 bopd, at 800 feet.

p. 16. Gotebo, Kiowa Co. The Kay & Kiowa Oil Co. No. 2 well on school land near Gotebo in Sec. 33-7N-16W, will be in the sand this week. It is an offset to the West well which is doing about 50 barrels a day. E. W. Marland & Co. of Ponca City own the Kay & Kiowa Oil Co. The hotel at Gotebo is filled up with oil men, and many familiar faces are to be found there.

Vol. 11, No. 20, Oct. 24, 1912, p. 2. Refinery for Sand Springs. The Phoenix Refining Co. of Oklahoma is to build a refinery at Sand Springs, with a capacity of 2,000 barrels a day. Phoenix is affiliated with the March Oil Co. Regal Oil & Gas Co. of Delaware is the holding company of both concerns. Regal was organized to take over the Charles Page properties in the Taneha Field, the March Oil Co. being formed at that time to operate the property beginning May 1911, with 1,400 barrels a day production. They paid $800,000 for the property, and intended to build a refinery at that time.

The officials of the Phoenix Refining Co. are James King Duffy, president; Frank S. Hastings, treasurer; and E. D. Forquer, secretary, with capital stock of $300,000.

The March Oil Co., the operating concern, has M. J. Quinn, president, representing E. C. Benedict, a New York banker; James King Duffy, vice-president, treasurer, and general manager, and Ben Rice, of Tulsa, secretary.

The Regal Oil & Gas Co. has Clifford B. Harmon, president; A. A. Anderson, vice-president; James King Duffy, secretary, and Frank S. Hastings, treasurer.

The stockholders of the various companies are the same, and include many prominent people, including E. C. Benedict, the New York banker; M. J. Quinn, a prominent New York capitalist; Ernest Thompson Seton, a naturalist, and his wife, Grace Gallatin Seton, a prominent authoress, and Frank S. Hastings, the executor of the Grover Cleveland estate. J. P. Keenan is general superintendent of the

March Oil Co., with Tulsa headquarters. James King Duffey will be the general manager of the refinery.

p. 4. Formed New Oil Company. A charter has been granted to the National Petroleum Co. of New Orleans to drill for oil and gas in the Caddo Field in Louisiana. The capital stock is $1,000,000, $500,000 of which has been paid in. The officers are H. D. Smith, Sr., president; H. D. Smith, Jr., vice-president; and D. W. Curry, secretary-treasurer. These gentlemen, along with R. M. Jemison and Eldon S. Lazarus constitute the board of directors.

p. 4. H. P. Boyd Sells Business. John A. Bell, Jr., of Bartlesville, and Robert E. Henry, of Bartlesville, have purchased the business of H. P. Boyd & Co., who handled New Bedford cordage and oil well supplies in the Mid-Continent. The main offices were at Bartlesville. The new concern will be known as the Interstate Pipe and Cordage Co., and will remain in Bartlesville, with Mr. Bell, president, and Mr. Henry, secretary-treasurer.

p. 4. Personal Mention. R. E. Fuller, who, together with the Devonian Oil Co., is interested in the Cushing Field, has opened an office in the First National Bank Building at Tulsa.

Thomas H. Kennedy, of Bradford, accompanied by his nephew, William C. Kennedy, and his daughter Marie, are at Cleveland, Okla., where Thomas, a pioneer of that field, has several wells nearing completion.

Robert Watchorn, of Los Angeles, California, and J. M. Critchlow, of Titusville, Pa., interested in the Union Oil Co. of California, were at Cleveland, Okla., last week. The Union Company expects to start a well in that field in the very near future.

D. O'Rourke, who formerly scouted the Cleveland Field for the Gypsy Oil Co., is now in the production department and is in charge of that company's production in the Cleveland Field. John Robinson will scout the field, taking Dan's old job.

Lee Bean, who has seen every initial well on every field in the country drilled in with the possible exception of the Drake well, is at Cleveland, Okla., watching the new extension of that field. Jim Scott, who dressed tools on the original Drake well, when last heard from, was at Wichita Falls.

p. 6. Gotebo well. (picture). Well brought in two miles south of Gotebo, Okla., Sept. 22, after a shot of 50 quarts.

p. 26. Well Reported Near Staff, Eastland Co., Texas. The well being drilled near Staff, Eastland Co., Texas, 5 miles east of Eastland, was showing some oil. The Texas & Pacific Coal Co., of Thurber, has been drilling a lot of wells with a core barrel, but recently a rotary was rigged up. Mr. Gordon, president of the company, took a number of samples of the oil away with him a few days ago.

p. 26. Refinery at Cleveland, Oklahoma. A small refinery will be built in the Cleveland Field. H. H. Hoevel, of Oklahoma City, a nephew of Henry Leschen of St. Louis and a son-in-law of O. A. Mitcher, of Oklahoma City, who has large interests in Cleveland, will be in charge. The refinery will be built on the west side of the Helmick Farm, west of the brick plant, and will be managed by Mr. Hoevel, who was employed by the Waters-Pierce Co. of Oklahoma City. The plant will have two 300-bbl. stills, but this could be increased later.

p. 26. Gas Output for 1911. In the United States, 508,353,241,000 cubic feet of gas were produced, with a value of $74,000,000, in 1911. Also, 7,425,839 gallons of gasoline was produced from casing-head gas. There were 28,428 producing gas wells in the United States in 1911.

Vol. 11, No. 21, Oct. 31, 1912, p. 4. Barnsdall's Big Deal. The visit of Theodore Barnsdall to Tulsa last week indicated that the big deal, which has practically been consummated, will be carried forward to a successful completion within a very short time. He is lining up all his oil and gas properties, with the exception of those under mortgage to the Prairie Oil & Gas Co., and known as the Barnsdall Oil Co., and will dispose of the entire lot to Doherty & Co., bankers of New

York, the gas properties consisting of the Quapaw Gas Co., the Bartlesville Oil & Gas Co., the Wichita Gas Co., and the Dominion Gas Co. of Canada, while it is understood that about 8,000 barrels of oil daily has also been lined up which is said to include the Indian Territory Illuminating Company. He is perhaps as great a plunger as the game has known and has been up and down several times, and it now looks as though he will soon be up again.

p. 4. Independents to Build Line? It is reported that the Cudahy Refining Co. and the Petroleum Products Co. are going to consolidate, and will build a line through Oklahoma to supply all the small refiners with oil. Cudahy is supplying some of the small refiners at present. They would not have to build very much, as these two companies have a lot of lines in the Bartlesville and Dewey Districts, and through all the shallow fields as well.

The Petroleum Products Co. is owned by J. Ogden Armour, of Chicago, and managed by A. A. Benson, of Independence, Kansas. The Cudahy Refining Co. is owned by the Cudahy Packing Co. interests.

p. 4. Personal Mention. M. S. Abraham, financial agent for the Asiatic Petroleum Co. of Europe, was at Tulsa this week, visiting with the Roxana Petroleum Co. which was organized to take over the production purchased by Mr. Abraham.

p. 4. The Utilities Improvement Company. The Utilities Improvement Co., incorporated in Delaware for $40,000,000, has purchased a dozen or more properties in the United States, to try to improve the earning capacities of each, and then sell the utility companies to a permanent managing company. In Oklahoma, two such companies are the Bartlesville Gas & Fuel Co., and the Empire Gas & Fuel Co. of Kansas, Missouri, and Oklahoma. The president is Henry L. Doherty; vice-presidents Frank W. Frueauff and Charles T. Brown; general manager, Holton H. Scott; secretary, Paul R. Jones; treasurer, Louis F. Musil. Other bondholders and stockholders are William F. Hoffman, Columbus, Ohio; Leslie M. Shaw, Philadelphia; James Mitchell, London; Warren W. Foster, New York City; and James Satterfield, Dover, Delaware.

p. 27. New Incorporations. The Alabama Oil Co., of Oklahoma City, has been incorporated, with capital stock of $30,000, by C. J. Phillips and William Taylor of Oklahoma City, and D. W. Camp, of Mobile, Alabama.

The Senora Oil & Gas Co., of Henryetta, Okla., has been incorporated, with capital stock of $25,000, by Leslie Martin, C. J. O'Hornett, R. E. Simpson, J. C. Fretwell, and J. O. Hamilton, all of Henryetta, Oklahoma.

The Great Bend Oil Co., of Muskogee, has been incorporated for $100,000, by E. C. Briggs, W. A. Jarvis, and N. A. Weems, of Muskogee; Peter Kindsever, of Wichita, Kansas; and J. P. Weber, of Ellinwood, Kansas.

Vol. 11, No. 22, Nov. 7, 1912, p. 8. New Incorporations. The Haskell Oil Co., of Muskogee, has been incorporated, with C. N. Haskell, A. T. Wood, and E. C. Y'Arnett, all of Muskogee, incorporators. Mr. Haskell was the first governor of Oklahoma, and was defeated in the last primaries by Robert L. Owens for United States senator. The company proposes to start work immediately on 1,000 acres of leases in and around the Glenn Pool, according to brief notices to the Journal.

The Kehota Oil & Gas Co. was given a charter, with J. A. Hobson, R. W. Kellough, and E. L. Talman, all of Tulsa, as incorporators. Mr. Hobson is secretary of the Oklahoma State Oil Co., Mr. Kellough is a prominent attorney and oil man, and Mr. Talman has been in charge of the Penn-Okla Oil Co. Mr. Hobson is also connected with Homer Preston's various companies.

The Emu Oil Co., of Tulsa, has been incorporated, by Thomas D. Lyons and Benjamin F. Rice, of Tulsa, and Thomas W. Stephens, of Montclair. Messrs. Lyons and Rice are prominent attorneys of Tulsa, Mr. Lyons being vice-president of the new Roxana Petroleum Co., and Mr. Rice is an official of the March Oil Co. and the Phoenix Refining Co., and receiver for the Waterside Oil Co.

The Nowata Drilling & Producing Co. is a new corporation at Nowata with capital stock of $3,000. The directors are D.L. Avery, A. Dale, C.S. Armstrong,

and W. A. Chase, Nowata, and P. A. Shannon, Delaware.

p. 14. Oklahoma. Gotebo. J. D. Patrick, a well-known producer from the Gulf Coast fields, and others, are preparing to drill a well at Gotebo, Okla. He is associated with some Anadarko people and Mr. H. Morgan of Muskogee. The well is to be drilled on Morgan's property, in the SE-1/4-Sec. 13-7N-16W.

Henryetta. West of Henryetta, a new shallow pool was confirmed by the test of the Gypsy Oil Co. and French on the Frank Summers Farm in Sec. 8-11N-12E, making 40 bopd after an 80 quart shot in a sand from 1,048 to 1,117 feet.

Vol. 11, No. 23, Nov. 14, 1912, p. 4,6. Gulf Coasters Who Have Made Good. Brief Character Sketches of Those Who Pursued the Goddess in Texas and Have Found Her in Oklahoma - Semi-historical Review of the Coastal Plain Operations and the Immediate Past of the Now Famous Mid-Continent Field. By A. V. Bourque.

J. E. Crosbie. Mr. Crosbie, better known as Jack, is one of Tulsa's most prominent oil producers, a banker, and real estate owner. He left his home in Canada, where his father had been a producer before him, and came to Texas in the early days of Spindletop, going from one field to another, being one of the first to exploit the Sour Lake Field. He came to Tulsa some years ago, securing one of the best leases in the Glenn Pool. He is one of the wealthiest men in Tulsa, being president of the Central National Bank.

J. G. Hamill. Jim, one of the Hamill Brothers who drilled the world's famous Lucas gusher at Spindletop, opening that field, came to Oklahoma some years ago as a contractor. He opened the Dutcher Field some time ago. Recently he has been drilling wildcats, and temporarily moved to Thurber, Texas, to drill some wells for the Texas & Pacific Coal Co.

O. E. Riter. Mr. Riter now lives at Tulsa, but came from Coffeyville, Kansas, being interested in the shallow fields of Nowata County, Okla. He has various interests in the Mid-Continent, with two recent acquisitions in the Morris and Cushing Fields, with A. L. Funk as partner in the Mutt & Jeff Oil Co.

W. H. Cunningham. Bill has been contracting in the Mid-Continent for some time, moving to Tulsa this year from Beaumont, Texas.

W. M. Black. Mr. Black went through all the excitement of the Humble Field in Texas, first as district foreman for the J. M. Guffey Petroleum Co., and later as a producer for himself. He has been in Oklahoma a few years. He and Mr. Stauffer have a lease in the Schulter Field, with 60 bopd production, and are drilling a well to a deep sand. He recently took a flier in the Electra Field, Texas. He owns a good automobile and picks up friends and gives them rides.

Captain Sim Parish. He has the Tulsa Drilling Co. and does contracting business when not fishing in Texas. He owns production also.

W. H. Tucker. Bill left Beaumont, Texas, several years ago, and moved to Coffeyville, Kansas, working in the shallow fields. Several years ago, he, along with his partner Cooke Wilson of Beaumont, drilled in the Vinton Field, then Pine Prairie Field. Recently he returned to the Vinton Field and drilled a well that came in at 5,000 barrels a day, but rapidly fell off to several hundred barrels a day. For many years he was associated with Tumps Bass in the Spindletop and Jennings Fields, and at one time owned the Big Five Oil Co., which was later sold to Underwood Nazro.

H. E. Conley. Herb has been in Oklahoma for several years, looking after the interests of the Paraffine Oil Co. of Beaumont. At the birth of Spindletop, Saratoga, and Batson he was present, being in charge of those fields for the J. M. Guffey Petroleum Co. He has never raised a family.

Murray M. Doan. Murray is general agent of the Gulf Pipe Line Co. Up to 1910 he worked for Sun Oil Co. at Beaumont, Texas, as confidential man to J. Edgar Pew, the general agent of Sun. Because of his wife's health, he desired a change, and Gulf offered him a position as land commissioner, and later general agent in Oklahoma.

E. T. Gatrell. Gate is pipe line superintendent for the Gulf Pipe Line Co. He ran the oil in the various Gulf Coast fields when only earthen storage was used, and fires and leaks were common. Only gushers were wanted and only gushers were drilled. He worked up from gauger, to foreman, to division superintendent,

to superintendent, and later to take charge of the Oklahoma lines. The Gulf officials gave him a Howard watch, suitably engraved, for conspicuous bravery and general good service.

John E. Anderson. He is division superintendent for the Gulf Pipe Line Co.

Charley Neill. He is district foreman for the Gulf Pipe Line Co. in Oklahoma.

John Robinson. He was with the warehouse department but is now scouting the Cleveland Field for the Gulf Pipe Line Co.

G. M. Gerst. He is an office man in Oklahoma for the Gulf Pipe Line Co.

F. L. Schumaker. He is head of the telegraph department for the Gulf Pipe Line Co. in Oklahoma, coming from Beaumont, Texas.

I. S. Ridebaugh. He is an operator in the telegraph department of the Gulf Pipe Line Co., coming from Beaumont, Texas.

C. A. Proffitt. He is the engineer of the Gulf's station at Watkins, Love Co., Oklahoma. He came from the station at Sour Lake, Texas.

R. L. Larkin. Bob is purchasing agent of the Gulf Pipe Line Co. He came to Oklahoma in 1907, when Gulf began construction of its main pipe line to the Gulf Coast.

H. P. Langworthy. He is auditor for the Gulf Pipe Line Co., coming to Oklahoma from Beaumont in 1907.

B. W. Grant. He is assistant auditor and cashier for the Gulf Pipe Line Co. coming from Beaumont, Texas in 1907.

John H. Yust. He is traffic manager for the Gulf Pipe Line Co., coming to Oklahoma in 1907 from Beaumont, Texas. He was chief clerk at Beaumont, but when Mr. Leovy left Beaumont to take charge of the Oklahoma division, he brought Mr. Yust along. He has helped in getting freight rates lowered, and to get more trains in Oklahoma, with better schedules.

Captain H. Y. Arnold. For many years, he was the manager of the plant of the Gulf Refining Co. at Port Arthur. He now has good production in the Mid-Continent. He is president of the Tulsa County Club.

W. E. Broach. Of Spindletop renown, he has been in Oklahoma for some time, and has production. He lives in Tulsa.

Joe Drouett. He worked in the Saratoga Field in Texas and came to Oklahoma several years ago, becoming interested in the Britton-Johnson Oil Co., operating in the Bird Creek Field, with 1,200 bopd production.

Dalton Lain. He is associated with Joe Drouett of the Britton-Johnson Oil Co., and looks after the office end of the business. He came to Oklahoma in 1907 with the Gulf Pipe Line Co., marrying a Tulsa girl. He is also connected with the Indianola Oil Co. and the Damon Oil Co.

George H. Johnson. For many years he was the Johnson of the Britton-Johnson Oil Co. of Texas and Oklahoma, but he disposed of his interests some time ago, and has been a resident of Tulsa for a number of years, leaving Beaumont, Texas, in the days of the Glenn Pool excitement. He still owns production in Oklahoma, but has strayed to California at times, being a stockholder in The Petroleum Co. which has just completed its second well in La Habra Valley, the two wells having gross production of 1,500 bopd.

John H. Markham. Coming from the Gulf Coast, he has a lot of production in the Mid-Continent.

R. E. Markham. He also was an early Gulf Coast developer, and has much production in the Mid-Continent.

H. R. Ketchum. He built earthen tanks in early Gulf Coast days. He does a lot of ditching in Oklahoma, but his trade is now a lost art.

C. W. Nelson. He was a pioneer Gulf Coast producer, but has lived in Oklahoma for some years, living at Muskogee. He recently had a good well at Havana, Kansas. He became interested in the Mexican fields several years ago, and he sold some properties to the East Coast Oil Co. He has a son, W. C. Nelson, who has done a lot of work around Muskogee.

L. W. Burrows. He works for The Texas Co., coming from Houston, and was a clerk, then scout, and now assistant to D. F. Connolly, trustee, looking after Oklahoma production.

J. W. R. Attleberger. He works in the Tulsa office for The Texas Company.

H. L. Stewart. He is in charge of the Tulsa office for The Texas Co.

A. L. Farmer. He came from the Gulf Coast to Tulsa several years ago. He issues insurance policies on oil men.

A. E. Duran. He also came to Tulsa several years ago, and also sells insurance policies to oil men.

J. W. "Wes" Sturm. He died last week in Tulsa. In 1896, he worked at Corsicana for 3 years with the American Well & Prospecting Co., and then went into the oil business for himself, being one of the first at Spindletop. He came to Oklahoma several years ago, having splendid property at Cleveland, Okla. at the time of his death. He died in bed on November 8.

Underwood Nazro. He went to the Gulf Coast from West Virginia in 1901, as secretary of the old National Oil & Pipe Line Co. at Beaumont, where he remained until 1906. He then organized the Unity Oil Co. and acquired production in several Gulf Coast fields. A few years ago his company acquired the Big Five Oil Co., one of the best paying properties in the Spindletop Field. That property has been a bonanza. Several years ago, the Producers Oil Co. offered the vice presidency to Mr. Nazro, but he remained free lance. It was recently announced that on Nov. 15, Mr. Nazro will be assistant to the vice president of the Gulf Pipe Line Co. at Beaumont.

p. 8. Recent Deaths. Mrs. David Bovaird, aged about 80 years, died at her home at Bradford, Pa., Monday, Nov. 11. She had been in poor health for some time. David Bovaird, her husband, who died about 2 years ago, organized the Bovaird and Sefang Co. and the Bovaird Supply Co., with shops in the East and Mid-Continent. She was the mother of William J. Bovaird, of Independence, Kans., president of the Bovaird Supply Co.; Walter, of Sapulpa, Okla., who is connected with the same concern; Dr. Bovaird, of New York, and Joseph and David, of Bradford, Pa. She is also survived by two daughters.

J. W. Sturm. "Wes" Sturm died in his room at the Elks Club at Tulsa, Friday Morning, Nov. 8, at 8 o'clock. He was born at Rogersville, Tenn. 42 years ago, going to Texas in 1896. In 1896 he went to work for the American Well & Prospecting Co. at Corsicana, Texas, where he remained for three years, and then went into business for himself, being among the first in the Spindletop Field in 1901. He came to Oklahoma some time ago, and had production in the Cleveland Field. He left a father, mother, 3 sisters, and 4 brothers, two at Electra, one at Shrevesport, Will, and one in India. Hugh, from Electra, arrived at Tulsa Saturday to accompany the remains to Rogersville. The Elks Club of Tulsa held memorial services Sunday afternoon. J. E. Crosbie, J. W. Sloan, J. V. McMahon, George Davis, Ray S. Dodd, and W. C. Newell were active pallbearers. Crosbie and Sloan worked with Wes in the Gulf Coast. Crosbie and Davis were partners with him in the Cleveland Field.

Vol. 11, No. 24, Nov. 21, 1912, p. 3. New Oklahoma Oil Companies. The Edison Oil Co., of Tulsa, with capital stock of $5,000 has been incorporated by Charles Page, T. D. Lyons, and C. F. Tingley, all of Tulsa.

The Wainwright Oil & Gas Co., of Muskogee, with capital stock of $12,000, was incorporated by E. A. Young, W. H. Wainwright, W. E. May, and F. H. Mayland, all of Muskogee, and E. M. May, of Memphis.

The LaSalle Oil & Gas Co., of Tulsa, with capital stock of $50,000 has been incorporated by W. H. Carlin, F. Lynn Brown, and Fred D. Oiler, all of Tulsa, and Frank B. Jackson, of Muskogee.

The Gillette Oil & Gas Co., of Tulsa, with capital stock of $10,000, has been incorporated, by J. M. Gillette, B. C. Beans, and E. P. Hawkins, all of Tulsa.

The Oceola Oil Co., of Oklahoma City, with capital stock of $200,000 has been incorporated, by C. F. Colcord, James S. Bryan, J. A. Ryan, W. B. Moore, Fred H. Reed, Fred E. Sutton, and W. S. Thompson, all of Oklahoma City.

The Pittsburgh Oil Co., of Tulsa, with capital stock of $25,000, has been incorporated, by Thomas Gilcrease, R. I. Wilson, and B. M. Gilcrease.

The Sterling Oil & Development Co., of Sterling, Okla., capitalized at

$50,000, has been incorporated by O. E. Winn, V. G. Depenbrink, and J. E. Fisher, all of Sterling.

The Cushing Electric & Power Co., of Cushing, with capital stock of $15,000, was incorporated by F. M. Overlees, H. Askin, and J. W. Pollard, all of Bartlesville.

p. 3. Central Torpedo Company. Central has announced plans to build a plant at Cushing. The company was formed less than a year ago, and has 6 magazines, at Jenks, Tulsa, Flat Rock, Skiatook, Cleveland, and Bartlesville. They have 15 wagons. W. F. Sinclair, of Montpelier, Indiana, is president.

p. 6. Personal Mention. M. C. French, of Okmulgee, was at Tulsa this week. He recently opened a new shallow pool west of Henryetta which has caused a lot of work in that vicinity.

Former Congressman Beeman C. Dawes, of Marietta, Ohio, president of the Vivian Oil Co., was in Shreveport, La., the past week, looking into the gas situation. He is also identified with the new Southeastern Gas & Electric Co., a consolidation of the Caddo Oil & Gas Co., the Louisiana Gas Co., and the Shreveport Gas, Electric Light & Power Co.

Vol. 11, No. 25, Nov. 28, 1912, p. 2. Texas Oil and Gas Report. The Texas Bureau of Economic Geology, at Austin, has just issued Bull. 246 on the oil and gas of Wichita and Clay Cos., Texas, by Dr. J. A. Udden, assisted by D. M. Phillips, and is 308 pages. This covers the Electra and Petrolia Fields, and has beautiful plates and numerous maps.

p. 2. Oil and Gas of North Central Oklahoma. The U.S. Geological Survey has just issued Bull. 531-B, by Robert H. Wood, covering oil and gas in an area 82 miles N-S by 60 miles E-W, within the Pawnee, Otoe, Ponca, Kaw, and Tonkawa Indian Reservations, in Grant, Kay, Osage, Pawnee, Noble, Garfield, Logan, Payne, and Lincoln Counties. Principal towns are Guthrie, Pawnee, Perry, Ponca City, Newkirk, and Blackwell. Little geologic work has been done in the region. The prospects for oil and gas seem to be good.

p. 4. Incorporations. The National Oil Co., of Mounds, Okla., with capital stock of $10,000, has been incorporated, by H. M. Walker, S. W. Anthony, and J. I. Brown.

The Creek County Gas Co., of Stillwater, with capital of $400,000, has been incorporated by W. J. Rowland and J. W. King, of Pittsburgh, Pa., and R. A. Lowery of Stillwater, Okla. They have a franchise to build gas lines to Stillwater and Cushing from the Cushing Field.

The Red Oil Co., of Henryetta, with capital stock of $25,000, has been incorporated by Leslie Marshall, J. G. Fretwell, W. C. Poague, C. H. Kellogg, and Julia Buchanan, all of Henryetta.

The Flint Oil Co., of Stillwell, with capital stock of $10,000, has been incorporated by F. A. Blanck, T. E. Wyly, and George C. Anderson, all of Stillwell.

p. 4. Personal Mention. Calvin Payne, of Titusville, Pa., interested with S. S. Bryan of Titusville in the gas business in Oklahoma, is at Tulsa on a visit.

Frank Phillips has returned from a two weeks' business trip on Broadway, New York City.

Basil Duke, connected with the U. S. Geological Survey, has been making a topographic map around Nowata, and has given the operators many valuable elevations around the Adair Field. He had been stationed in the Osage Nation, and he has compiled a lot of valuable information on old holes drilled in Osage County.

W. M. Chapin, general sales manager for the Uncle Sam Oil Co., with headquarters in Kansas City, was at Bartlesville this week. The company is building a 3-inch line from its West Tulsa refinery to the Bird Creek Field. This will connect with the main line from Cherryvale, which now extends about 6 miles south of Bartlesville. H. L. Freeman is in charge at Bartlesville, and A. M. Barker is field manager of production.

Vol. 11, No. 26, Dec. 5, 1912, p. 1. Cushing Field. The first well was drilled in this field in early April 1912, and was 20 miles from the Cleveland Field, the nearest production. Today, a total of 46 wells have been drilled, 41 oil, 4 gas, and one dry. The daily production is now 8,500 barrels, in an area 5 miles N-S by 3-1/2 miles E-W. There are two recognized producing sands, the Layton at 1,450 feet, with the bulk of the production, and the Wheeler, at 2,250 feet. This last week, Gunsburg & Forman encountered a new sand at 900 feet, for a possible third horizon. This is the most active spot in Oklahoma. There are no conveniences in the field or nearby.

p. 2-3. Foreign Interests in Oklahoma Oil. by A. V. Bourque. During the past 4 years, four foreign companies have come into Oklahoma and Kansas, controlling 8,500 barrels of oil per day production. Now a fifth company, from England, is added, the Asiatic Petroleum Co., with its subsidiary Roxana Petroleum Co.

The first foreign company to enter Oklahoma was that of Emil Dean, of The Hague, Netherlands, on Feb. 1, 1908, representing foreign capitalists. They purchased the Oklahoma State Oil Co., owned by W. H. Roeser, with property in the Glenn Pool in Secs. 17-18-17N-12E, paying $200,000 for the property. In Dec. 1908 they purchased the Best Oil Co. in which F. M. Selby had a half interest, for $240,000. In August 1908, Mr. J. E. Crosbie became president of the concern in Oklahoma. Since then, Mr. Dean has formed the Union Petroleum Co. of Paris, France, the holding company for the American subsidiaries. Later, other companies taken over were Tulsa Oil Co., in the Glenn Pool; Kansas-Oklahoma Oil Co., Henry Oil Co. and Monitor Oil Co. in the Tiger Flats Field, and the Premier Petroleum Co., operating in the shallow fields. Meanwhile, Mr. Crosbie resigned, selling his interests, and Homer M. Preston became general manager of the Oklahoma interests, all under the name of the Oklahoma State Oil Co.

Several months ago, an English syndicate purchased the Alluwe Oil Co. and Chelsea Oil Co., operating in the shallow fields, with 500 bopd production and a skimming plant at Coffeyville, Kansas.

Another Englishman, Clive B. Meares and associates, formed a holding company, Tulsa Oil Co., Limited, operating under the name of Lee Oil Co., and bought part of some Glenn Pool property, with 275 bopd production.

At present, there is another English syndicate looking at production, but no deal has been closed as yet. A few weeks ago, Mr. Wetmore was looking over the Morris, Schulter, and Tiger Flats Fields, lining up 20,000 bopd production, but he has not offered enough money as yet.

The Roxana Petroleum Co., of the Asiatic Petroleum Co. interests, has about 5,000 bopd production, as a result of two separate deals. Mr. John A. Bell, of Pittsburgh, sold 13,000 acres and 2,910 bopd production in August of this year, for $1,075,000, covering parts of the Bartlesville, Dewey, Copan, and Adair Fields. On Sept. 20 of this year, Roxana purchased Paova Oil Co. and Helmick Oil Co. in the Cleveland Field, the Quintuple Oil Co. in the Bird Creek Field, and the Cleophane Oil Co. in the Dewey Field, and is still in the market for more.

p. 3. Last Saturday, the deep well near Bradford reached 4,335 feet in a dark lime formation.

p. 3. New Pipe Specifications. For the past few years, pipe line companies have had difficulty in stopping leaks at collars, using screwed pipe. H. C. Reeser, assistant to the president of the Ohio Fuel Supply Co., called in representatives of all pipe manufacturers, and explained that in the future all of his specifications for screw pipe would read "with square-faced collars". It was agreed that this would be best for collar-leak clamps with rubber seats which would then correctly seat around the square collars.

p. 4. Personal Mention. G. M. Hatch, for 15 years auditor of the Aouth Penn Oil Co., has been appointed office manager of the Hi-Grade Oil Co., with Tulsa headquarters.

B. L. Love, of Bartlesville, was at Tulsa this week. His company, Nodak Oil Co. has a good test in Sec. 1-11N-13E.

W.L. Neubeck and son B.G. Neubeck, and S.F. Hovis, all of Marietta, Ohio

were in Tulsa last week. Mr. Neubeck has interests in the Link Oil Co., with production in the Adair Field, and he and Mr. Hovis are drilling there.

W. J. Rowland, of the firm Treat & Rowland of Pittsburgh, Pa., has been closing contracts on the Cushing Field, in order to supply gas to Stillwater and Cushing.

p. 10. Cushing Field. The second well of Gunsburg & Forman in Sec. 5-17N-7E, on the Richards Farm, is making 50 bopd from a 900-foot sand, and is new to the field. The first well in the Cushing Field, drilled by Slick & Jones, was in the deep Wheeler sand. In later tests, the Layton sand produced 800 feet higher. Now, a new sand was discovered.

Wildcats. In Sec. 2-15N-14E, E. K. Moss & Co. has a well, reported to be 100 bopd or better. This is distinctly in advance of any production around.

In Sec. 1-11N-13E, on the Davis Farm, the Nodak Oil Co. has an oil well, in advance of any surrounding production. The well was originally a 22,000,000-foot gasser in the shallow sand, the gas being saved while the well was deepened for oil. This is probably part of the Schulter Field.

Vol. 11, No. 27, Dec. 12, 1912, p. 2. Million-Dollar Oklahoma Oil Deal. The Canadian-South American Co., Limited, of London, England, purchased the properties of 10 companies, consisting of 5,500 acres, 275 wells, and 3,151 bopd production, for $1,400,000. The purchaser was represented by Dr. Boddington, of London, and the sellers were represented by Archibald Campbell. A new company will be formed, and E. R. Perry, an attorney of Tulsa, will operate the properties. The companies that sold are: Savoy Oil Co. of Manuel Hirsh and associates, in the Bird Creek Field; Annex Oil Co. of Hirsh, in the Bald Hill Field; Helena Oil & Gas Co., in the Morris Field, belonging to W. M. Armstrong of Kansas City and Judge John P. Elkins of Indiana, Pa.; Mohonk Oil Co., of A. D. Morton, and Keeler, Morton & Yoakum Co. in the Bartlesville, Dewey, and Adair Fields; the Hecla Oil Co., in the Bird Creek and Taneha Fields; the Devonian Oil Co. in the Nowata and Okmulgee Fields, belonging to Joe Evans; Advance Oil & Gas Co., in the Okmulgee and Morris Fields, of Joe Evans, Harry Heasley, and Archie Leonard; the Kerr Oil Co., in the shallow fields, owned by the Neelys, of Lima, Ohio, and Mat McCormick; and the Pine Creek Oil Co., in the Morris Field, of J. H. Rebold and W. C. Newman. Part of the Hecla properties were also owned by George H. Johnson, S. Gailah, and W. C. Elliot. The new company will still be in the market for new properties.

p. 8. Walter Bedford Sharp, Deceased. (with portrait). Walter Bedford Sharp died in Mercy Hospital, Chicago, Nov. 28, 1912, after two kidney operations. He was born at Covington, Tenn., Dec. 11, 1869. His parents removed to Texas in the early 1870's, settling in Dallas, where Mr. Sharp was reared. His mother was a relative of General Nathan Bedford Forrest, wherefore his middle name and that of his eldest son. He started in the oil business at Corsicana, Texas, in the early 1890's. In 1893, he made the first test in the Spindletop Field, but the test was too shallow. After the Lucas gusher at Spindletop in 1901, Mr. Sharp began drilling there again. In 1903, he went to Sour Lake, later selling his production to The Texas Co. Shortly after, he became president of the Producers Oil Co., a position he held until he died. Mr. Sharp's mother died when he was a boy, and his father died in 1893. Mr. Sharp lived at Houston, Texas, at 4301 Main St., where the funeral was held Sunday afternoon. He has two brothers living: John Sharp, of Dallas, and James R. Sharp, the younger, vice-president of the Producers Oil Co., with headquarters in Houston. Surviving also are his widow, who was Miss Estelle Boughton, and two sons, Bedford, age 16, and Dudley, age 7. He was a member of the Houston Club, the Thalian Club, the Z.Z. Club, the Elks, and the Country Club. Several months ago he was King of Houston's annual carnival No-Tsu-Oh. Close to 1,000 people attended the funeral, including many prominent oil men from Texas, Oklahoma, Louisiana, New York, and Mexico, including the following:

Adoue, J. B.
Allison, R. A.; Shreveport
Autrey, James L.
Bahan, M. W.; Ft. Worth.
Beatty, A. L.,
Black, John F.; Tulsa.
Blaffer, B. F.
Brooks, R. E.
Callaway, W. A.
Carlton, L. A.
Clayton, C. P.; Shreveport.
Cline, W. D.; Laredo.
Connolly, D. F.; Tulsa.
Crawford, Dudley; Marshall.
Crosbie, J. E.; Tulsa.
Cullinan, Frank; Wichita Falls
Cullinan, J. S.
Cullinan, Dr. M. P.; Laredo
Donoghue, T. J.
Farish, W. S.
Farrar, Edgar H.
Freeman, F. W.
Gates, Charles C.; N.Y.
Hamman, George
Harris, Beverly
Herman, George H.
Hogg, W. G.
Hughes, Howard R.
Ireland, Frank
John, Robert H.
Jones, H. H.; Tampico.
Jones, Jesse H.
Lane, Charles H.
Lufkin, E.C.; New York.
Lyne, W. H.
Lyon, Cecil A.
McCue, J.C.; Shrevep.
McMahon, J. L.;
San Antonio
Miglietta, A.C.; N.Y.
Moran, M.M.; Tulsa.
Pannell, Paine;
Vinton, La.
Prater, Ed.
Rice, William
Schlaet, Arnold
Scott, John T.
Shakard, F. A.
Sims, E. F.; Tampico.
Sloan, J.W.; Tulsa
Spencer, T. A.
Spotts, E. R.
Stanton, M.A.;
Shreveport.
Story, Hampden
Thompson, Lewis

p. 10. Personal Mention. Harry F. Sinclair, accompanied by Mrs. Sinclair, is at Tulsa, it being his intention to locate in this city, moving from Independence, Kansas. He is a prominent oil man in the Mid-Continent.

F. E. Gilmore, president of the Louisville Oil Co., residing at Roff, Okla., was at Tulsa last week. His company is drilling a well near Tulsa. "Granny" Lewis, of the company, is a well-known oil man, living in Tulsa.

p. 14. Oklahoma. Wildcat, Pittsburg Co. The Canadian Realty Co.'s test in Sec. 18-8N-16E, known as the Pittsburg-Gibson No. 1, has been started. L. F. Copeland is manager of the company, and they have several hundred acres under lease.

p. 30. Texas. Denton. Denton, Texas, will be furnished with gas within the next few days, by The Lone Star Gas Co. The lines from Petrolia have been completed. Consumers will pay from 30 to 50 cents per thousand, with a sliding scale of rates being in effect.

Vol. 11, No. 28, Dec. 19, 1912, p. 4. Incorporations. Many new oil companies have filed charters in Oklahoma with the Secretary of State.

The Rio Grande Oil Co., of Pawhuska, with capital stock of $10,000, was incorporated by C. E. Vandvoort, of Pawnee, and John L. Gird and A. W. Hurley, of Pawhuska.

The Okmulgee Development Co., of Okmulgee, was chartered by L. S. Skelton, J. A. Price, G. W. Mabry, D. E. Kennedy, J. T. McCracken, W. S. Bell, and A. W. Firestein, all of Okmulgee, with capital stock of $10,000.

Oklahoma Oil Operating Co., of Oklahoma City, with capital of $1,000,000 was incorporated by Hugh L. Harrel, Ben F. Harrison, and King L. Fitzpatrick, all of Oklahoma City; and William P. Troth, L. R. Warren, and Thomas A. Wallace, all of New York.

The Reserve Gas Co., with $10,000 capital, of Oklahoma City, has directors J. M. Condit, M. H. Inglish, and W. R. Crusoe, all of Oklahoma City.

The Abernathy Oil Co., of Purcell, with capital stock of $5,000, was incorporated by John L. Abernathy, Charles Wallace, and James McCaleb, all of Purcell.

p. 4. Bradford Deep Test. The deep well near Derrick City was down close to 4,500 feet, and going along nicely in a lime formation.

p. 12. Oklahoma. Refineries. The Ponca City Refining Co. is about ready to start up, and on Jan. 1 will probably be in shape to make its first run.

The Cleveland Petroleum Refining Co., at Cleveland, Okla., has completed an office and boiler house, and is proceeding rapidly.

The Phoenix Refining Co., at Sand Springs, Okla., is just breaking ground for its new plant.

The Consumers' Refining Co., a West Virginia Corporation, with headquarters in Chicago, Ill., has filed articles of incorporation with the Secretary of State of Oklahoma. They will erect a refinery at Cushing. The capital was $500,000. This is the third Cushing refinery, with C. B. Shaffer and Frank Jones being the owners of the other two.

Lookeba, Caddo Co. A small gas flow has been found on the farm of Joe Novotony, 4-1/2 mile southeast of Anadarko. The gas comes from a hole 20 feet in diameter, but of unknown depth. A similar condition exists at Lookeba, which is about 25 miles north of Anadarko, in Caddo County. Mr. West, a well-known operator of Sour Lake, Texas, has contracted to drill a well on Jack Harston's farm, 8 miles from Lookeba, the test to be started within the next 60 days.

p. 18. Texas. Wildcats. Many wells are being drilled in Stephens, Hardeman, Young, Shackelford, Hall, Wilbarger, and Archer Counties.

In Hardeman Co., a well is being drilled by Whitecotton, et. al., 2-1/2 miles southeast of Quanah. The Acme Oil Co. has a test on the Newby tract. The Quanah Oil & Gas Co. has a test on the Halcomb tract, 5 miles southwest of Quanah. The Quanah Oil & Gas Co. was recently incorporated for $15,000, by B. F. Robbins, T. D. Frizzell, and Ben J. Brothers.

In Hall Co., Bane et. al. is at 300 feet on the Hollowfield Farm, 6 miles southeast of Memphis.

Vol. 11, No. 29, Dec. 26, 1912, p. 1. Oil Prospecting Rampant in Oklahoma. The western and central-western parts of Oklahoma are catching the oil fever. This vast area is to be thoroughly prospected in the next 12 months. A few months ago, the Oklahoma Geological Survey published a map showing the theoretical geology of the state with respect to oil and gas, giving the known producing areas, the probable producing areas, and the possible producing areas. The remainder of the state, embracing practically all of what was formerly old Oklahoma Territory to the west, was condemned. The map was prepared under C. N. Gould's direction some time ago, and he has been besieged by enterprising citizens and communities for an opinion on various projects. Many people in the Redbed section of the state are organizing oil and gas companies. Enid, Guthrie, Oklahoma City, and El Reno are all bent on drilling test wells in their areas. And the movement is spreading. Gould says that their efforts are useless, but he welcomes their efforts. If petroleum exists in any part of Oklahoma, it is safe to say that the area will be developed before the close of 1913.

p. 1. Gasoline - The Modern Necessity. It seems almost unbelievable that there was once a time when the refiners of petroleum were concerned with finding a market for gasoline. Now they are concerned that they will not have an adequate supply for the ever increasing demand for it. Gasoline is a modern necessity. An immense industry has come into existence in the last 20 years, increasing in quantity at an alarming rate. It affects every convenience and pleasure of the world, linked with the onward march of civilization and the progress of humanity. The present requirements of the gasoline engine have taxed the gasoline supply almost to the limit, the chief factor being the automobile. The auto manufacturers state that the actual number of machines in use will be increased 300,000 during 1913. Manufacturers of gasoline assert that the gasoline supply to meet this increased demand is seriously questionable. If not enough gasoline or a substitute for gasoline can be secured to run these machines, then the automobile industry faces a serious situation. These briefly are the facts, when the best of our minds forecast 30-cent gasoline. The mysterious stranger of a few years ago has become a house-hold necessity, the scarcity of which alarms the industrial world.

p. 2. Eleven Years of Oil in Oklahoma. Dr. D. W. Ohern, director of the Oklahoma Geological Survey, submitted an interesting report to the governor of Oklahoma. During the past year, the Survey has undertaken a thorough and exhaustive study of the Redbeds of the state, under Prof. J. W. Beede, of the University of Indiana, who spent the entire last summer in Oklahoma. The Survey is interested in the oil and gas possibilities of these redbeds.

The first oil reportedly produced in Oklahoma was in 1891, when 30 barrels was produced. The increase was not marked in the next decade. A table shows the oil and gas from 1901 to 1911, as follows:

Year	Barrels of oil.	Value ($)	Av. price/bbl.	Value of Gas ($)
1901	10,000	7,125	$0.712	---
1902	37,100	32,940	0.888	360
1903	138,911	142,404	1.025	1,000
1904	1,366,748	1,325,745	0.970	49,065
1905	6,466,200	3,524,122	0.545	130,137
1906	1,803,600	8,000,000	0.443	259,862
1907	43,524,128	17,213,524	0.402	417,221
1908	45,498,765	17,694,843	0.386	860,159
1909	47,859,218	17,428,990	0.364	1,806,193
1910	52,028,718	19,922,660	0.383	3,490,704
1911	56,069,637	26,454,767	0.470	6,731,770

By the middle of 1912, the price of oil has increased to 70¢ a barrel. There has been active drilling in the proved territory during the entire year of 1912. The discovery of a deeper sand in the Cleveland Pool has made that one of the most attractive in the state. Individual wells with initial production of 10,000 barrels a day have already been reported. The Cushing Field is one of the latest surprises. Discovery of gas at Coalgate, Ada, and Duncan materially extends the fields of the state. Recent reports at Gotebo are encouraging. Of 7 wells so far completed, all are producers. The production for 1912 should far exceed that of 1911.

Oklahoma entered the list of natural gas producers in 1902. A small amount was produced at Red Fork in the Creek Nation, and used for domestic purposes. In 1903, on November 26, the first gas well in the Osage Nation was brought in, at Pawhuska. Also in 1903, the first well was brought in at Lawton, Comanche Co., and a small gasser was discovered near Newkirk, Kay Co., while looking for oil. The Red Fork wells continued with small production, but from the beginning of 1904, the development was rapid. At the end of 1904, there were 45 gas wells in Oklahoma, but only 24 were being used. In 1904, gas was piped into Tulsa, Bartlesville, Ochelata, Pawhuska, and Red Fork, and used for domestic purposes. The first gas to be used for manufacturing in the state, so far as the writer is aware, was by the brick plant at Red Fork in 1904. During 1905 and 1906, the gas development was phenomenal. The Gotebo Field was added to the list. In the northeastern part of the state, pipe lines were laid to Muskogee and Wagoner. By the close of 1907, there were 315 producing gas wells in Oklahoma. The state advanced to 7th place in production of gas in the United States in 1907, and many wells were shut in. A smelter at Bartlesville began to use gas that year, and Ardmore and Oklahoma City were added to the list also in 1907. In 1908, the price was 1-1/2¢ to 15¢ a thousand cubic feet. Early in 1909, the U. S. Supreme Court annulled the Oklahoma law prohibiting the pipage of gas out of the state, resulting in a spectacular development of the gas business in Oklahoma. There is rumor of failure of the gas supply of the state. It is falling. Some gas fields have passed their zenith. However, new fields are constantly being discovered. At the close of 1910, there were 502 producing gas wells in Oklahoma. During 1911, 364 new gas wells were brought in, an average of one a day. In the first 8 months of 1912, 267 new wells were added to the list, or 1,133 gas producing wells at present

p. 6. Personal Mention. G. T. Ledbetter, of the Union Oil Company of Philadelphia, Pa., is taking leases in the Cushing Field for his company. J. M. Critchlow, general manager of the same company, reached Cushing last week, and the Union Company will probably start a well in the near future in that field.

p. 8. Oil Prospects in New Mexico. A gentleman from Artesia, New Mexico, writes that oil men from all parts of the United States have been here. It is the consensus of opinion of the geologists that this is an extensive field, as oil is found in at least 50 artesian wells. The geologists think that by going deeper, plenty of oil will be found. At present there are two producing wells, the largest being 25 barrels a day. It is 25 gravity. Two companies are now drilling, about 10 miles apart. Many leases are being secured. Mr. Doheny, of Tulsa, and Mr. Fisher of the U.S. Geological Survey are here looking over the field.

p. 8. The Anglo-Persian Refinery. The Anglo-Persian oil refinery at Abadan, Persian Arabistan, has started operations, according to Consul Emil Sauer, of Baghdad, Asiatic Turkey, in a report to the Bureau of Foreign and Domestic Commerce. Abadan is 44 miles below Bassorah, on the Persian side of the Shat-el-Arab. Oil was discovered several years ago above Awaz, about 140 miles inland from Abadan, and wells were sunk, and a pipe line laid to Abadan. The work was delayed for a long time on account of local conditions in Persia, and more recently on account of strikes in England, which prevented the company from getting necessary supplies. The present daily capacity of the refinery is said to be 24,000 gallons, which will be increased as the market for oil expands. Gasoline and naptha will be produced. It is predicted that the product of this refinery will displace American petroleum, the consumption of which has gone up by leaps during the last two years. During the first half of 1911, 58,976 gallons of oil were imported from the United States, and during the second half of 1911, 221,312 gallons were imported. In the Spring of 1912, the large warehouse in Baghdad, in which was stored Russia oil, burned down, and since that time the American oil has had almost complete control of the market. The importation from the United States at present is about 56,000 gallons per month.

The Abadan refinery will mean cheaper oil for the district, and this may increase the use of oil (kerosene) engines, and create a market for gasoline and naptha engines. The company said that it would be able to retail crude oil at Baghdad at 40% of the present price of kerosene from the United States, probably resulting in the introduction of crude oil engines. An English engineer who installs kerosene engines at Baghdad said that if the price of crude oil is 60% less than kerosene, a net economy of 50% in cost of fuel will be effected by substituting crude-oil engines for kerosene engines.

p. 16. Oklahoma. Stephens County. Several wells are being drilled within a 20 mile radius of Duncan. Only a few wells have been completed in this area.

In Sec. 8-1N-5W, Beckett & Eisman are down 1,100 feet, on the Little Tract, about 18 miles east of Duncan.

In Sec. 30-1N-5W, about 15 miles east of Duncan, Hosford & Story have a fishing job at 740 feet, on the Walter Payne Tract.

In Sec. 6-1N-5W, on the Jones Farm, the Big Horizon Oil Co. is rigging up.

In Sec. 12-1N-6W, W. G. Skelly No. 1 is drilling on the Colbert Farm.

Galloway has made a location about 22 miles southeast of Duncan.

The Deep Red Oil Co. will start a well near Grandfield, eastern Tillman Co., in the next ten days, projected to go to 1,900 feet. Other operators in the area are also preparing for tests.

p. 27. Gas Notes. The Poteau gas field will be thoroughly developed during the coming season, according to the new owners of the plant. The Poteau Light and Ice Co., which held the franchise for heat, light, and power, has disposed of its holdings to a syndicate of New York and Eastern capitalists, represented by Messrs. Castell & Spurk, of New York City. The new company will be known as the LeFlore County Gas & Electric Co., and it expects to deal extensively in gas. The wells that have been brought in at Poteau have been good producers and are now supplying

the town. The new company will sink a number of new wells to determine the extent of the field, with a view to supplying Fort Smith and other cities in this area, as good wells are brought in.

Vol. 11, No. 30, Jan. 2, 1913, p. 2-4. The Small Refiner in the Southwest. By A. V. Bourque. In Jan. 1912, most of the small refineries were running on a small scale or were shut down, but now there are 24 refineries running at capacity, a number of new plants are under construction, and several more are planned. This has been caused by recent large demands and higher prices for refined products. The refiner does not have to seek a market; the market is now coming to him. The production of the Mid-Continent fields is estimated at 160,000 barrels a day, with small refineries taking 27,000 barrels a day, an increase of more than 100% over last year. The small refiners are paying premiums of 2 to 10 cents a barrel more to the producers, and are competing with the large pipe lines. The large pipe line companies have been seeking lighter oils and have left the heavier oil in the shallow pools to the small refiners. In the past 6 months, there was a 25,000 bopd increase in the Mid-Continent, which helped the small refiners.

The Prairie Oil & Gas Co. still manages to run about 90,000 barrels a day. The Texas Co. has increased its runs by several thousand barrels a day in the past few months. The Gulf Pipe Line Co. maintains an even average each month. They all have ample stocks. Most of the small refiners can take the oil promised and can pay for it promptly.

There are 10 small refineries in Kansas and 14 in Oklahoma, with Kansas handling 15,500 bopd and Oklahoma handling 11,500 bopd. In addition, the Ponca City Refining Co. is ready to start, the Cleveland Petroleum Refining Co. is under construction, a refinery at Sand Springs is being started, and three new refineries are planned at Cushing. The National Refining Co. at Coffeyville is the largest, taking about 6,500 bopd. The Petroleum Products Co., owned by Armour Packing Co., at Independence, Kansas, handles 3,000 bopd. The Cudahy Refining Co., owned by the Cudahy Packing Co., runs 2,250 bopd. The Alluwe Refining Co., an English concern, at Coffeyville, is taking 1,250 bopd. The Chanute Refining Co. is running 1,200 bopd. Other Kansas refineries are the Uncle Sam Oil Co., at Cherryvale, 300 bopd, the Kansas Crude Refining Co., at Coffeyville, the Kansas Co-Operative Refining Co., at Chanute, and the Great Western Refining Co., at Erie, the last 3 of which total about 100 bopd. The Humboldt Refining Co., with 175 bopd, and the Miller Brothers at Niotaze, Kansas, run 450 barrels. The Kanotex Refining Co., at Caney, Kansas, takes about 650 bopd.

There are 14 active refineries in Oklahoma, not counting The Texas Co. plant at West Tulsa. The Vinita Refining Co. handles most of the oil at 3,500 bopd. The Chelsea Refining Co. runs 1,100 bopd. It was rumored that Cudahy was going to combine with the Petroleum Products Co. and lay lines to all of the small refineries, and supply them on a large scale. National Refining, with headquarters at Cleveland, Ohio, may compete with Cudahy. Two refineries at West Tulsa are the Tulsa Refining Co., taking 125 bopd, and the Uncle Sam Oil Co., taking 350 bopd. The Sapulpa Refining Co., with 2,250 bopd is the second largest in Oklahoma of the small refineries. There are 3 refineries at Muskogee, the Producers Reduction Co., at 100 bopd, the Oneida Refining Co., at 150 bopd, and the Muskogee Refining Co., with 750 bopd. At Okmulgee, is the American Refining Co., handling 950 bopd, and the Indiahoma Refining Co., with 350 bopd. The Southwestern Oil Refining Co., in Osage Co., takes 600 bopd. The Oklahoma City Refining Co. uses 250 bopd. The Dewey Portland Cement Co. at Dewey, uses 450 bopd.

The Ponca City Refining Co. will handle about 600 bopd. The Cleveland Petroleum Refining Co. will handle 500 bopd. The Phoenix Refining Co. (March Oil Co.) at Sand Springs will handle 2,000 bopd. At Cushing, C. B. Shaffer is building a 2,000 barrel a day refinery, Frank Brown of Independence, Kansas, will build a 500 bopd refinery, and the Ponca City people are proposing a 500 bopd refinery. The Chanute Refining Co. intends to build their own lines into the Cushing Field.

The tremendous demand in foreign lands for refined products has kept the larger companies busy leaving domestic demands to the smaller refiners. In Germany the Reichstaag has introduced a bill giving the government control of

the distribution of oil and oil products in Germany, causing some foreign concern about high prices to Germany.

The best stability for refiners is to own their own production. Most of the big companies have done this, so they do not have to worry about going to an open market for pricing. Many of the smaller refiners are also doing this. The price of oil goes up when many refiners compete in the same area, but the final product goes down with price-cutting in order to sell the product, thus making the business unpredictable.

p. 5-6. Personal Mention. White & Sinclair have opened offices in the National Bank of Commerce Building at Tulsa, having moved from Independence, Kansas, where Mr. Sinclair has made his home for many years. E. B. Houston and Paul Konz, both of Independence, have removed from that city and are in charge of the offices of White & Sinclair.

John H. Rebold, a successful operator in the Morris Field, was married to Miss Anna Elizabeth Bricken, of Morris, at the Hotel Tulsa, on Christmas day, leaving for Kansas City, and the to California. Mr. Rebold entered the oil game in Butler Co., Pa., coming to Oklahoma some years ago, where he has been successful, recently selling his company, the Pine Creek Oil Co., to the Canadian-South American Co., Ltd., and last week sold the Musgrove Oil Co. of the Morris Field to the Gypsy Oil Co. and R. S. Sterling.

p. 6. Trade Notes. Two companies have incorporated this week at Columbus, Ohio, to drill for oil and gas in Oklahoma, each with $10,000 capital stock, and both connected with the law firm of Brown, Hahn, Sanger & Froehlich of Toledo, Ohio. The Western Oil & Gas Co. consists of Walter F. Brown, Sigmund Sanger, and Fred H. Kirtley. The Clauss, Brown & Wolfe Co. was incorporated by the same people.

The Boston Osage Oil Co. has some production and undeveloped properties in Oklahoma. The Texas Co. has submitted a proposal to further develop their properties.

p. 10. Oklahoma. December Wells. In December 1912, there were 567 wells completed, 466 with oil at 27,145 new bopd, 29 gas, and 72 dry holes, with 724 new wells being started. The Cushing Field leads with 32 completions with 6,015 barrels of new oil per day, and 123 new rigs starting. The Cherokee Deep-sand District, including Ramsey, Copan, Dewey, Bartlesville, Hogshooter, Bird Creek, and Skiatook Fields had 252 completions, with 7,195 barrels of new oil per day, with 173 new wells starting. In the Cherokee Shallow-sand District, of Nowata, Delaware, Childers, Coody's Bluff, Chelsea, and Alluwe Fields, there were 75 wells completed, with 1,130 barrels of new oil per day. Osage County had 35 new completions, with 1,205 bopd new production. The Cleveland Field had 30 wells, with 2,260 bopd new production. Creek County had 138 completions, with 9,280 bopd new production and 278 new rigs drilling. The Glenn pool had 38 new completions for 2,499 bopd new production. Near Tulsa, 18 wells were completed, for 250 bopd new production. The Morris Field had 26 completions, for 3,310 bopd new production, and 76 new rigs up. The Schulter Field had 18 wells completed, for 2,085 bopd new production, with 66 new rigs up. Sapulpa had 7 completions, Mounds had 5, and Ponca City had 3, with one at Bristow and one near Duncan.

p. 12. Oklahoma. New Fields Opened. In 1912, new fields were opened: The deep sand at Schulter, the Cushing, Adair, and eastern extension of the Glenn Pool, the Bartlesville sand in the Cleveland Field. A number of new gas pools were opened. Calvin Payne and S. S. Bryan purchased the Sapulpa and Okmulgee franchises, and Treat & Rowland formed the Creek County Gas Co. for Cushing and nearby towns. The Kansas Natural Gas Co. purchased much gas also. The Pierce-Fordyce Oil Association, with a refinery at Fort Worth, Texas, is trying to buy 7,000 bopd from the Cushing Field, mainly through C. J. Wrightsman. The oil is 45°gravity and commands a high price.

Vol. 11, No. 31, Jan. 9, 1913, p. 6. Personal Mention. Calvin H. Payne, of Titusville, Pa., the well-known gas man, was at Tulsa, after a business trip to Okmulgee and Sapulpa, where he, together with S. S. Bryan, also of Titusville, have the gas franchises.

S. K. Warrener, vice-president of the Humble Oil Co., which recently purchased a half interest in the Musgrove Oil Co. in the Morris Field, has moved from Houston, Texas, to Tulsa, and in the future will make his home in the latter city.

C. N. Haskell, ex-Governor of Oklahoma, and C. J. Haskell, his son, both of Muskogee, and L. G. Niblack, of Guthrie, were at Tulsa last week. They have formed a company known as the Haskell Oil Co. and have a number of tests under way.

Frank Brown, of Independence, Kansas, who is starting a refinery at Cushing, was at Tulsa last week, Mr. Brown recently disposed of his interests in the Jane Oil Co. in the Schulter Field, netting a splendid profit.

George O'Hara, formerly with the Home National Bank of Caney, Kansas, has quit the banking business and entered the oil business, and has moved to Tulsa, associating himself with Barney Rabinovitz, a prominent producer.

R. M. McFarlin, H. B. Gooch, and J. W. Gilliland, of Holdenville, and B. B. Jones, of Bristow, and H. N. Bartlett, of Mannford, were at Tulsa last week attending a meeting of Cushing producers relative to selling their production to companies other than the established pipe line companies.

George H. Barnes, of Muskogee, operating southeast of the Schulter Field, was at Tulsa this week. He and his associates have a 30,000,000 cfgpd well in the upper sand in their second test on the Cumberlidge Farm in Sec. 17-11N-14E, having a gasser also in their No. 1, but no oil in the deep sand.

James King Duffy, of New York City, vice-president and general manager of the March Oil Co., and president of the Phoenix Refining Co. at Sand Springs, E. C. Benedict, of Greenwich, N.Y., a banker, and Clifford B. Harmon, of Greenwich, N. Y., a real estate man, were in Tulsa. They are building the 2,000 bopd refinery at Sand Springs.

p. 6. In the Courts. The Arkansas Refining Co., operating the only refinery in the state, was placed in the hands of receivers A. N. Cicard and C. J. Jewett last week by order of Chancellor Bourland. The action was taken by some stockholders to avoid suits by unsecured creditors for judgments totalling $19,214. It is alleged that the company is solvent and if not harassed by stockholders and small creditors it will soon free itself from financial difficulties.

p. 30. Arkansas. The natural gas industry in Arkansas was about the same in 1911 as in 1910. No new developments have been reported. Most of the gas in Arkansas comes from wells in Sebastian Co., but there is some small production in Scott County, with Fort Smith, Mansfield, and Van Buren being supplied from these sources. In 1911, the Arkansas Natural Gas Co. began to supply consumers from the Caddo Field and adjacent areas of Louisiana, supplying gas to Hope, Prescott, Arkadelphia, Malvern, and Benton. Five producers were completed in Sebastian Co., two wells were dry, and one gas well was abandoned in 1911.

Vol. 11, No. 32, Jan. 16, 1913, p. 14. Texas. Shackelford County. The Texas Co. has completed a test on the Matthews Tract, located about 10 miles north of Albany, and it is estimated at 4,000,000 cfgpd. No other wells have been drilled in this section, and another well will probably be started.

Brown County. The Winchell Oil & Gas Co. is down about 130 feet with a test located about 4 miles east of Winchell, and 1-1/2 miles north of the Colorado River, where a small showing of oil was encountered. C. G. Hamill, of Bay City, Texas, is the contractor.

Baylor County. Russell Brothers are down 1,600 feet with a test on the Stevens Tract, 10 miles west of Megargel, where a good showing of gas was struck.

p. 21. Oklahoma Incorporations. The Keystone Oil & Gas Co., of Oklahoma City, capitalized at $50,000, was incorporated by J.B. Rone, J.M. Hines, D. R. Morris, F. J. Aufficht, John W. Peoples, C. B. Gillis, F. J. Mahan, Richard

Herrick, and R. L. Hitt, all of Oklahoma City. An earlier Keystone Oil & Gas Co., of Tulsa, was formed some time ago and has producing properties, and they have filed a notice with the Secretary of State because there will be future confusion. Also, there is a Keystone Oil Co. at Bartlesville.

The Mississippi Oil & Gas Co., of Muskogee, with capital stock of $10,000, was incorporated by J. E. Bramlett, Clarksdale, Miss., and C. T. Burns, Frank Stroup, and J. H. Mobley, all of Muskogee, Okla.

The Bernice Oil Co., of Chelsea, capitalized at $10,000, was incorporated by A. E. Paulzer and Inez Paulzer, of Chelsea, and John F. Milliken of St. Louis, Mo., and E. M. C. Corah, of Vinita, Okla.

The Spanish Peak Oil Co., of Tulsa, with capital of $125,000 was incorporated by W. M. Babcock and George M. Canterbury, of Tulsa, and R. S. Sterling, of Houston, Texas.

The Dustin Oil & Gas Co., of Dustin, Okla., with $100,000 capital, was incorporated by J. H. Swafford, A. G. Liston, B. E. Swafford, and W. P. Sparks, all of Dustin.

The W. T. Fields Oil, Gas, Coal & Development Co., of Cushing, with $25,000 capital, was incorporated by W. T. Fields of Guthrie, and William W. Cuthyberson of El Reno and Peter Hanraty of McAlester.

The Lucky Oil & Gas Co., of Oklahoma City, with capital stock of $16,000, was incorporated by W. A. Darby, of Frederick, Okla., and LeRoy Paddock and J. R. Keaton, of Oklahoma City.

The Oklahoma Mutual Oil & Gas Co., of Oklahoma City, with $50,000 capital, was incorporated by William Ribble, M. L. Goddard, C. F. Sloans, and B. E. Burkhart, all of Oklahoma City.

p. 21. Then and Now. In 1877, the oil production of the United States was obtained from 7 counties in Pennsylvania, one county in New York, and a small quantity in West Virginia and southeastern Ohio. The only known foreign oil field of any importance in 1877 was that at Baku, Russia, with a production of 3,425 barrels a day. Today, oil is being produced in 17 states of the United States, and 17 foreign countries, with foreign production now at 347,000 barrels a day. In the United States, in 1877, the average daily production was 36,050 barrels and now it is 593,000 barrels a day. In 1877, foreign consumers paid 16 cents per gallon, for illuminating oil, lubricating oil, residuum oil, and gasoline. In 1912, the price was 6-1/2 cents a gallon, and they still complained that the price was too high.

p. 24. Gasoline from Natural Gas. In 1911, in the United States, there were 176 plants producing gasoline from natural gas, owned by 131 producers, recovering 37,100 gallons per day, or 7,425,839 gallons from 2,475,697,263 cubic feet of gas, at an average price of 7.16 cents a gallon. In Oklahoma, there were 10 plants, recovering 4,800 gallons a day, or 388,058 gallons from 144,629,000 cubic feet of gas, at an average price of 5.40 cents per gallon. The plants are: Alluwe Oil Co., Nowata County; Blair Oil & Refining Co., Muskogee County; J. G. Bradstreet & Co., Muskogee County; Franchot & Co., Creek County; Gasoline Refining Co., Muskogee County; Hogan, Coe & Co., Creek County; Oklahoma Natural Gasoline Co., Creek County; Producers Pipe Line Co., Nowata County; Standard Oil Co. of Oklahoma, Creek County; and White Turkey Oil Co., Okmulgee County.

Vol. 11, No. 33, Jan. 23, 1913, p. 10, 12. Personal Mention. W. G. "Bill" Skelly is at Tulsa from Wichita Falls, Texas. Bill is a mover and has something on all the time. He is wildcatting for a living in the lower country and reports good progress.

E. W. Sinclair, of Independence, Kansas, has removed to Tulsa, and in the future will be connected with the Exchange National Bank of Tulsa as vice-president, replacing M. Hughes.

G. A. Most, of Owasso, Okla., superintendent of operations of The Sutton Co. in the Owasso-Collinsville Fields, was at Tulsa last week, conferring with Paul Johnson, general manager of the company.

J. P. Gilmore, attorney for many years with the Santa Fe Railroad at Kansas City, has removed to Tulsa, and will open an office in the First National Bank Building. He is a cousin to Dr. S. G. Kennedy, of Tulsa.

J. S. Cosden, general manager of the Southwestern Refining Co., of Tulsa, returned to Tulsa last week from a visit to Philadelphia and Titusville, Pa., attending a meeting of small refiners.

L. Appleman, of Marietta, Ohio, a brother-in-law of B. M. Bloch, of Cleveland, Ohio, and a brother of Hyman Appleman, secretary-treasurer of the Uncle Sam Oil & Gas Co., is at Tulsa and will probably locate here.

W. N. Sill, a well-known producer in the shallow-sand fields, who has been living at Nowata for years, is going to move to Tulsa, adding to the large list of producers who have moved to Tulsa within the past few months.

William Hoffman and wife, of Syracuse, N.Y., have arrived at Tulsa, the guests of Mr. and Mrs. Arthur Hull. Mr. Hoffman was one of the originals in the Nowata shallow-sand pool, and came out with flying colors. He will winter in Tulsa.

D. A. Bartlett, of Marietta, Ohio, who has been in Oklahoma for some weeks looking over his valuable property in the Schulter Field, returned to Marietta, Ohio. He and F. M. Selby will shortly leave for a trip to the West Indies and Panama.

M. L. Ransom, of Muskogee, was at Tulsa visiting his nephew Fred Letcher. Mr. Ransom has production from a number of old wells at Wagoner, with the Prairie Oil & Gas Co. having recently set a big tank to care for the oil.

J. L. and J. A. Murphy, sons of Mike Murphy, president of the Pure Oil Co., were in Tulsa last week. They were looking after the estate of their brother, James Murphy, who was killed in an automobile accident near Vincennes, Ind., a few months ago.

Mr. and Mrs. Frank Phillips have left San Francisco for Cuba, on their trip around the world. Mr. Phillips is the president of the Bartlesville National Bank and is one of the largest producers in Oklahoma.

Calvin N. Payne, of Titusville, Pa., left for home last week. He has been looking after his gas interests in Okmulgee and Sapulpa, and has both plants in splendid shape and is prepared to take care of these places in the coldest weather.

E. J. Lambert, an attorney and producer, of Independence, Kansas, has moved to Tulsa to live. He has opened offices in rooms 202 and 204 of the Central National Bank Building and will devote his time to the oil business.

The Southwest Oil Co., operating in the Cushing Field, is composed of men not well-known to the oil business. All partners reside in Holdenville, Okla., who are H. B. Gooch, J. W. Gilliland, M. E. Brison, and L. C. Parminter. They have a 60-acre tract in Sec. 5-17N-7E, with production of nearly 2,000 bopd, with 8 more locations on the farm. These gentlemen got in early when the Layton sand was found to be trending southward. T. E. Tucker, a well-known production man of Texas, Louisiana, and Oklahoma, is superintendent and manager.

p. 12. Pure Oil Company. The directors of the Pure Oil Co. met in Pittsburgh last Friday, January 17. The company earned $1,700,000 for 1912. Out of town officers and directors were T. B. Westgate, of Titusville, Pa.; Thomas Phillips, Jr., of Butler, Pa.; W. C. McBride, of Mercantile Trust Co. of St. Louis, Mo.; and Michael Murphy and N. H. Weber, of Philadelphia.

Vol. 11, No. 34, Jan. 30, 1913, p. 2. Producers Oppose Additional Tax. A mass meeting was held at Tulsa last Saturday night by a committee of 15 oil producers to fight a bill before the Legislature to introduce a 3% gross production tax on oil and gas. There is already a gross receipt tax, an ad valorem tax, a corporation tax, and Federal excise tax being paid. The ad valorem tax is now about 6 to 23 dollars per $1,000 assessed value. The corporation tax is 50 cents on each $1,000 capital stock. The internal revenue tax is assessed at 1% of the net income earned over $5,000. The gross receipt tax is 0.5% of gross revenue of oil and gas sold.

p. 16. Oklahoma. Weleetka. New Pool. The Monitor Oil Co. a Homer Preston

concern owned by the Union Petroleum Co. of Paris, has completed a discovery well in Sec. 1-10N-11E, on the Hawkins Farm, about 2 miles northeast of Weleetka, in Okfuskee County. The sand was found at 2,290 feet, with about 50 bopd. A gas sand was found at about 1,200 feet also.

p. 39. Recent Incorporations. The Boudinot Oil & Gas Co., of Ft. Gibson, Oklahoma, with $10,000 stock, was incorporated by Frank J. Boudinot, R. M. Mountcastle, and Eustace A. Hill, of Ft. Gibson.

The Western Oklahoma Oil Co., of Oklahoma City, with $100,000 capital stock, was incorporated by Howard C. Tate, A. J. McCarthy, and W. T. Hassett, all of Oklahoma City.

The Pole Creek Oil & Gas Co., of Oklahoma City, with $25,000 stock, was incorporated by Clint C. Steinberger, K. M. Scoville, and J. D. Chastain, all of Oklahoma City.

The Progressive Oil & Gas Co., of Bartlesville, with $6,000 capital, was incorporated by C. S. Leidecker, C. R. Geddes, and J. M. Leidecker, all of Bartlesville.

The Bess Oil & Gas Co., of Tulsa, with capital of $10,000, was incorporated by P. L. Thurman of Tulsa, Bess Thurman of Tulsa, and W. H. Whitford, of Independence, Kansas.

The Sulphur Oil & Gas Co., of Sulphur, has been incorporated by O. B. Beckham, L. C. Renfro, W. J. Williams, and Ida M. Williams, all of Sulphur, with capital stock of $25,000.

The Monroe Oil & Gas Co., of Wimer, Okla., has been incorporated by L. L. Calussen, Henry Flanders, and W. A. Oldaker, of Wimer, and L. Freeman of Centralia, and John Cunningham of Nowata.

The Constantine Refining Co., of Tulsa, with capital of $75,000, was incorporated by E. Constantine, E. W. Goebel, and Melodia Constantine, all of Tulsa.

Logan-Payne Oil & Gas Co., of Guthrie, with $25,000 capital stock, was incorporated by T. J. Woods, Oklahoma City, Perry A. Ballard, Coyle, Charles S. Olsen, Guthrie, and Charles S. Reed, F. E. Houghton, and Arthur W. Pettit of Coyle.

Vol. 11, No. 35, Feb. 6, 1913, p. 3. Oklahoma Company Titles. The similarity of the titles of various oil companies incorporated in Oklahoma is causing some confusion and will result in entanglement of accounts. There are 2 Progressive Oil Companies, 3 Keystone companies, and 2 Uncle Sam Oil Companies. The Secretary of State should do something about this.

p. 5. Heywood Oil Company. The Heywood Oil Co., of the Gulf Coast region, will go out of existence this month, and the holdings sold in Texas and Louisiana. The Oklahoma holdings will be transferred to the Pulaski Oil Co., and offices will be transferred from Beaumont to Tulsa, where H. C. Tyrrell has been in charge for some time.

p. 5. Denton Oil Co. The Denton Oil & Development Co., of Denton, Texas, with stock of $28,000, was incorporated by Isaac Canfield, J. D. Bell, and J. S. Darnell.

p. 6. Book of Standards. The National Tube Co., of Pittsburgh, Pa., has compiled a Book of Standards. It is 550 pages, on India paper, bound in leather, with gold lettering and gold-leaved, and sells for $2.00. It was in preparation for 4 years. It has complete information on tubing weights and measurements, and information on water, gas, steam, and air as applied to tubing products.

p. 6. Trade Notes. The Independent Torpedo Co. has opened offices in the Hotel Tulsa, officing with the Oklahoma Iron Works. W. W. Gregory will be in charge of the new office.

The Riverside Western Oil Co., with principal offices at Pittsburgh, Pa., has been incorporated in West Virginia, to develop oil lands in Oklahoma, with stock of $750,000, by O. D. Robinson, E. D. Robinson, and C. L. Kerr, of Pittsburgh, and M. D. Robinson and C. W. Coughenor, of Coraopolis, Pa.

The deep well near Bradford, Pa., was 4,810 feet deep on last Friday,

and was still caving.

p. 8. Personal Mention. J. M. and M. S. Critchlow, of Titusville, Pa., were at Tulsa this week.

G. R. Roudebush, of Syracuse, N.Y., and S. E. Twentier and S. H. Malarkey, of Cleveland, Okla., were in Tulsa last week. Mr. Roudebush is a member of the S.R. & K. Co., one of the pioneers in the Cleveland Field.

Joe Cochran, of Parkersburg, W. Va., and F.O. and T.H. Funk, of Moundsville, W. Va., are at Tulsa, and will look at the Oklahoma fields. Their company is Cochran & Funk, and they are prominent operators in the West Virginia fields.

E. W. Sinclair, formerly of Independence, Kansas, but now of Tulsa, has been elected to the directorate of the Exchange National Bank, serving as vice-president. He will probably build a new house in Tulsa.

p. 8. Recent Deaths. Josiah Barrett, aged 66, of Pittsburgh, Pa., an inventor and the founder of the Duff Manufacturing Co. of Pittsburgh, died suddenly on Tuesday, Jan. 28, at Jacksonville, Florida. He was born in Harrisburg, Pa., on Feb. 20, 1846, the son of Oramal Barrett, who was the first editor of the Pittsburgh Post and later connected with The American Manufacturer. Josiah went to Pittsburgh shortly after the Civil War, when about 18 years old. He learned the machinist trade at the Pittsburgh Locomotive Works, and after several years, he engaged in the river coal business. He is familiar to the old rivermen, as he built and operated the James Caldwell, the first tugboat ever floated in the Pittsburgh harbor. After a few years, he entered the machine business, and founded the Duff Manufacturing Co. He invented and patented several valuable devices, including the Barrett Lifting Jack, the Barrett Oil-well Wrenching Jack, and the Barrett Swivel Wrench. These products are used in almost every part of the world. Four sons and one daughter survive.

p. 14. Oklahoma. Leonard. Robert Galbreath, who opened the Glenn Pool, had a good test in the making at Leonard in Sec. 35-17N-14E, with a 50 bopd well. This is probably a new field and will put Leonard on the map.

Vol. 11, No. 36, Feb. 13, 1913, p. 1. Artesia, New Mexico. A 30-barrel well is reported 12 miles south of Artesia, New Mexico, in the Pecos Valley country. An account appears elsewhere in this issue.

p. 8, 10. Tillman and Cotton Counties, Oklahoma. In 1912, there was a co-operative agreement with the U. S. Geological Survey and Oklahoma Geological Survey to make a geological survey of Tillman and Cotton Counties, Oklahoma, for oil and gas possibilities, across from the Electra, Petrolia, and Burkburnett Fields in Texas. The area covered 360 square miles in T. 3-5 S., R. 12-15 W., and was studied by M. J. Munn, of the U.S.G.S., and J. B. Newby, for the O.G.S. They had an anticline on the Red River in the SW-1/4-Sec. 32-5S-12W. They had a structural high a short distance north of Randlett. There may be a dome in Sec. 24-4S-12W. Exposures are poor and structures are indefinite. The complete report has not been issued as yet.

p. 14. Independent Producers Oil and Gas Association of Oklahoma. About 100 producers met Wednesday afternoon at the Commercial Club at Tulsa and formed the above association. The intent was to supplant the Oklahoma Oil and Gas Association, which is practically obsolete. Officers were, Robert Galbreath, president; J. J. Moroney, vice-president; A. E. Watts, Secretary; and J. E. Crosby, Treasurer. Other directors were, F. A. Gillespie, B.B. Jones, John Smith, M. C. French, J. J. Shea, C. J. Wrightsman, Cyrus Avery, M. L. Lockwood, and G. C. Stebbins. The object of the group was to fight the legislature of Oklahoma. The membership fee is $1.00.

p. 14, 16. Oklahoma. Duncan area. Big Horizon Oil & Gas Co. is shut down at 900 feet on the Jones Tract in Sec. 6-1N-5W. This is one mile north of the original well completed several months ago for a 5,000,000 cfgpd producer, at 860 feet. Greenlees Brothers are rigging up in the NW-1/4-Sec. 36-1S-6W, about 1/4 mile east of Harrisburg. J. A. Galloway is down 700 feet in Sec. 15-3S-5W. Also

he is rigging up in Sec. 6-3S-5W, two miles west of Loco.

Tillman Co. Two wells are being drilled near Frederick. The Frederick Oil and Producing Co. will drill near Burt's Switch, 6 miles northwest of Frederick in the NE-1/4-Sec. 28-1S-18W. John Dyson of Mannington, W. Va., has the contract for 2,500 feet. A local company of Frederick capitalists are down 750 feet on the Maple Farm south of town.

Carter County. The J. M. Guffey Petroleum Co. is down 950 feet on the Gypsy-Kimball Tract, about a mile from Fox.

Canadian County. A local company of El Reno is down 3,000 feet on a city lot in the northeastern part of the city. Howard Roberson, the well-known contractor of Vincennes, Ind., has finished his contract, but the company may drill deeper.

Vol. 11, No. 37, Feb. 20, 1913, p. 6. Personal Mention. C. G. Kiney and A. W. Neal, of Nowata, Okla., were Tulsa visitors last week. They are both shallow-sand producers. Mr. Neal also has charge of that district for the National Supply Co.

Thomas J. Redd has been placed in charge of Gunsburg & Forman's interests in the Mid-Continent, with offices in the Jankowsky Building. Mr. Redd will move in as soon as the building is completed.

D. Q. Brown, president of the Okla Oil Co., with New York headquarters, and C. N. Haskell, general manager of the Associated Producers Co., with Robinson, Ill., headquarters, and Robert McKelvy, of Titusville, Pa., with the Tide Water Pipe Co., Ltd., are at Tulsa and will remain for about a week. The companies are associated.

Some prominent Chelsea producers were at Tulsa last week, among them being R. W. McIntosh and J. A. Gamman, of Gamman & McIntosh, and S. H. Mott, of the Hohman Oil Co. Gamman & McIntosh have kept two strings of rigs busy for a long time and have a number of companies operating in the shallow fields. Mr. Mott had a 17,000,000 cfgpd well at Haskell in Sec. 14-15N-15E last week.

Mr. and Mrs. Thomas Gavin, of Independence, Kans., have purchased a home at 802 South Cheyenne Ave. in Tulsa. They lived in Independence for 6 years, having come from Ohio, where he was in the oil business for many years. Mrs. Gavin has some oil interests in Mexico. Mr. Gavin has laid many miles of gas lines in the Eastern fields, and was one of the large producers in the shallow fields of Oklahoma some years ago. They have 2 girls and 2 boys, one of whom, Margaret, being an accomplished pianist, who has studied in europe for 2 years.

E. M. Riese, veteran oil producer of Oklahoma for more than 20 years, and a stockholder of the Oil Well Supply Co., will move from Tulsa to Los Angeles. He previously came to Oklahoma in 1893 after working in Ohio, West Virginia, and Pennsylvania. From 1893 to 1895 he had a large lease on Creek County. He returned again in 1903 and remained, until now. He will be in the oil business in California.

p. 8. John E. Schell Honored. Mr. Schell, the man who opened the Cleveland Pool in 1904, was honored on Feb. 11 at the Elks Club in Tulsa, where 49 people gathered. He is not a resident of Oklahoma, but up to last week made his home at Bellevue, Pa., removing now to Hollywood, Beverly Hills, California. He has been in the oil business since 1895 in Ohio and Monroe Co., Pa. fields. In 1904, he opened the Cleveland Field, drilling a well on the Lowery Farm for 75 bopd. This was 35 miles in advance of production. He is now general manager of the Minnetonka Oil Company in Oklahoma, which mainly operates in the Cleveland Field. He is a modest unassuming man, of unfailing courtesy.

p. 10, 12, 14, 16. Comprehensive Story of Wyoming Oil Developments. by George A. Whitney, Jr. Development work for oil has been made in every county in Wyoming exclusive of the National Park. The Salt Creek Field is the leading pool in Natrona County. Next are the Dallas and Plunkett Fields near Lander in Fremont County, the Cody Field between Cody and Cowley in northern Big Horn County, the Brenning, LaBonta, Isabel, and Irving Fields in western Converse County, the Moorcroft Field in Crook County, southern Albany County, the Thermopolis Dome in Big Horn County, and the Wind River Valley west of Lander in Fremont County, which are now being developed. The Salt Creek District is divided into the Salt Creek Field, Shannon Field, Dugout Creek Field, and Teapot Dome. Thirty one terms are defined for

geographic places and rock formations in the Salt Creek District. The Pierre Shale is generally at the surface. The town of Shannon was named after P. M. Shannon who drilled the first well in the Salt Creek District in the 1880's. Approximately 123 wells have been drilled to date by 11 companies, in the Salt Creek District. Each structure and its geology is discussed, and each company and its officers are listed. There are 102 producing wells at present. About 2,500,000 barrels of oil have been produced to date, and the average daily production capacity is 12,000 bopd if all the wells were opened for production in the Salt Creek District. Most of the oil occurs from 800 to 2,000 feet deep, from the Shannon and Wall Creek sands. The Teapot Dome has not been drilled because it is protected under the U. S. Conservation policy.

p. 38. Oklahoma. Wells. Miscellaneous. Sec. 20-4N-11E, Unknown No. 1.; Sec. 26-3N-12E, Test & Moran No. 1. (These would be in Hughes and Pittsburg Counties.). Fallis, Oklahoma Flats oil Co. No. 1.

Vol. 11, No. 38, Feb. 27, 1913, p. 2. James A. Moffett Dies. James Andrew Moffett, vice-president of The Standard Oil Co. of New Jersey, died at palm Beach, Florida, Wednesday, Feb. 26, 1913, after a brief illness. He was born at Marlinton, Pocahontas County, W. Va., on April 12, 1851. His father was George B. Moffett, a physician, who was a surgeon of the 49th Virginia Regiment in Gen. Robert E. Lee's army, of Scotch-Irish descent, his ancestors settling in Augusta County, Virginia about 1725-1732. James's mother was of English descent, and her ancestors settled in Botetourt County, Virginia, about the same time as her husbands family settled. His maternal great-grandfather was George Skillen, a colonel in the Provincial Army. James followed farming at home until 18 years of age. He then went to Parkersburg, W. Va., working for J. N. Camden & Co., producers and refiners of petroleum, in 1869. He later became superintendent of the Pratt Manufacturing Company at New York. Later he was on the manufacturing committee of the Standard Oil Co., advancing to vice-president of Standard Oil Co. of Indiana, then a director of the Standard Oil Co. of New Jersey, advancing to president of Standard Oil Co. of Indiana, advancing to vice-president of Standard Oil Co. of New Jersey. He was president of all the Eastern subsidiary pipe lines of Standard. He worked on the Trenton Rock oil fields of northwestern Ohio and Indiana, and built up the refined and fuel oil trade in that area. He directed the pipe line system east of the Mississippi River for Standard, covering more than 10,000 miles, with as many miles of gathering lines, and found a market for the products. He leaves a widow, two sons, and one daughter.

p. 2. Tax On Oil Leases Valid. In the injunction suit brought by the Producers Oil Co. and the Corsicana Petroleum Co. to prevent the collection of taxes on oil leases in the Electra Field, District Judge Martin, at Wichita Falls, Texas, refused the injunction, and the case will now go to the higher court. The Judge reasoned that the lease has value just the same as the land, and should be taxed. Judge John, of Houston, argued that if the leases were taxable, the money should be collected at the headquarters of the company that has the lease, where the actual ownership is held, and the money would go to the county in which are the headquarters.

p. 10. Oklahoma. Southern Oklahoma. In Love Co., 5 miles east of Marietta, J. L. Jordan has a showing at 1,850 feet in Sec. 33-6S-3E. Four miles northeast, the Union Oil Co. has a test down 1,900 feet, and another down below 300 feet, 200 yards southeast of Marietta, and another in town, and another 2 miles west of Marietta.

At Berwyn, Okla., the Union Oil Co. is down 1,400 feet.

At Fox, the Gypsy Oil Co.'s Molly Eastham test is below 1,000 feet.

At Homer, Okla., there is a test 500 feet down, by unknown parties. (11-1S-2W).

The Santa Fe Railroad has completed its 19 mile line 6-inch pipe line from Oil City to Ardmore, the field lying 4 miles north and 16 miles west of Ardmore, and is now running oil to Ardmore. The Santa Fe has been drilling there for 7 years or more, and has drilled 65 wells, 55 of which are producing 450 bopd of 20° gravity oil. The company has about 1,000,000 barrels in earthen storage.

In Stephens Co., Beckett & Eisman completed No. 1 Little in Sec. 8-1N-5W, getting a dry hole. There are 5 drilling wells and one rig up in this county.

In Canadian Co., on a town lot in El Reno, one well is drilling.

In Tillman Co., a Frederick company has a rig up. On the Maple farm, a company is drilling.

In Cotton Co., on Cabalka, the Electra and Oklahoma Oil Co. is shut down at 1,530 feet.

p. 18. Texas. New Companies. The Tioga Oil & Gas Co. has been organized, by Fort Worth and Tioga parties, with $25,000 stock, by J. S. Morris, R. G. Leake, and C. K. Bullard.

A charter has been granted to the Texlahoma Oil Co., with headquarters at Houston, with capital of $12,000, by W. B. Armstrong, C. E. Barrett, and W. W. Fondren, all of Houston. They will operate in Texas, Louisiana, and Oklahoma. The first well will be at Homer, Claiborne Parish, Louisiana.

Texas. Wichita Falls area. About 30 wildcat wells are being drilled in adjacent counties to Wichita Falls, with little luck. The Electra Field is producing about 17,210 bopd, the Petrolia Field 930 bopd, and the Burkburnett Field 400 bopd. Lone Star Gas Co. has more than 100,000,000 cfgpd and is supplying Dallas, Fort Worth, Denton, Wichita Falls, and other cities in north Texas.

p. 20. Texas. Grayson Co. The Howe Oil & Gas Co. will put down a test in the next 3 or 4 weeks, near the town of Howe. The company was recently organized with capital of $10,000 by P. W. Bean, president, F. L. Dunn, vice-president, and J. L. Blackburn, treasurer, and W. W. Ferguson, treasurer. They will drill to 3,000 feet.

Cottle Co. Leasing has been going on near Paducah, by the Paducah Oil & Gas Co., where they have about 20,000 acres. A well is to be drilled shortly.

p. 27. Recent Incorporations. The St. Charles Oil Co., of Cleveland, Okla., with stock of $150,000, has been incorporated by Charles B. Guinn, Carthage, Mo., Charles T. Orr, Webb City, Mo., and W. O. Childs, Cleveland, Okla.

The Gardner Oil Co., of Tulsa, with stock of $18,000, was incorporated by J. K. Gardner, Ridgeway, Pa., Howard McMahan, Bartlesville, Okla., and E. D. Avery, Ellia M. Avery, and Cyrus S. Avery, of Tulsa.

The Treese Oil & Gas Co., with capital of $12,000, located at Cushing, was incorporated by A. L. Treese, Jennings, Okla., C. A. Boucher, and E. A. Smith, of Cushing.

The Hillock Oil & Coal Co., of Weleetka, Okla., with $100,000 stock, was incorporated by Robert F. Turner, Indianola, Okla., M. H. Sharpe, Mena, Ark.; and J. H. Bynum, Indianola, Okla.

Vol. 11, No. 39, March 6, 1913, p. 2. Magnolia to Enter Cushing. Some time this year, Magnolia Petroleum Co. will build an 8-inch line into the Cushing Field, and the line will be 220 miles long and connected at Alvord, 94 miles south of the Electra Field, costing $2,000,000. Magnolia is the largest producer and purchaser of crude in the Electra Field, but 17,000 barrels a day is not enough for Magnolia's refineries at Corsicana and Beaumont. The line will go through Oklahoma City. The line from Alvord or Electra to Beaumont is 499 miles long, with 5 stations between those points. There are several lines south of Beaumont to Sabine, a deep-water port on the Gulf of Mexico.

p. 5. Sun Company Enters Oklahoma. The Sun Company has opened offices in the Boston Building in Tulsa. N. H. Cole, in charge of leasing in Texas and Louisiana, will have charge of that end of the business in Oklahoma. Sun is one of the largest producers, purchasers, and refiners of oil, with interests in Pennsylvania, Ohio, Texas, and Louisiana.

p. 8. Personal Mention. James Byron, of Bartlesville, stopped off at Tulsa on his way to southwestern Oklahoma, where he intends to blaze a trail for new oil developments. He will take up leases in Comanche and Tillman Counties in advance of operations. He is well known in Ohio and Colorado, and now Oklahoma.

Vol. 11, No. 40, March 13, 1913, p. 2. Million-Dollar Deal at Cushing. The biggest deal in the history of the Cushing Field was consummated on March 10, when the Hi-Grade Oil Co. sold its entire holdings in that field to the Prairie Oil & Gas Co. The property consisted of 2,000 bopd production, 3 gas wells with capacity of 70,000,000 cfgpd, and 4,000 acres of leases in T17-18N, R6-7E, for $1,000,000. Hi-Grade is composed of C. J. Wrightsman, E. Wrightsman, B.B. Jones, E. L. Jones, and T. B. Slick, with C. J. Wrightsman, president. Of these, C. J. Wrightsman is the best known, having drilled the second well in the Cleveland Field 9 years ago, his first venture in the oil business. Prior to that time and for 7 years later, he practiced law, especially oil litigation. He was born at Dayton, Ohio, and came to Oklahoma 23 years ago, in 1890, and has been prominent in political and business circles. He has produced oil in the shallow sand fields, the Tulsa District, Cleveland Field, and Cushing Field, and was a leader in the new Independent Oil & Gas Producers Association, and was the prime mover to bring the Waters-Pierce Oil Co. into Oklahoma.

B. B. Jones got into the oil business a year ago when the company's first well was completed at Cushing. Earlier he was engaged in making farm loans and handling big transactions in farm lands, making his home at Bristow. Several years ago he acquired a lot of acreage in western Creek Co. About 2 years ago, he and T. B. Slick drilled a well in Sec. 28-18N-7E, which had some oil in the Layton sand. Some time after, he induced C. B. Shaffer and T. B. Slick to drill the discovery well of the Cushing Field, and as a result, in addition to his large interest in Hi-Grade, his personal interests are worth $300,000. While working with Shaffer, he formed a co-partnership with C. J. Wrightsman, forming Hi-Grade Oil Co. on March 8, 1912. Prior to living in Bristow, Mr. Jones was employed by the Illinois Central Railroad as chief train dispatcher.

E. L. Jones, a younger brother to B. B. Jones, is cashier of the First State Bank at Bristow, and joined Hi-Grade.

The Hi-Grade Oil Co. still has a lot of acreage which they did not sell, and they will continue to prospect on this.

p. 10. Personal Mention. Rev. J. M. Critchlow, of Titusville, Pa., has earned the title of champion wildcatter of the Mid-Continent. He is drilling several tests near Ralston, and is preparing for a wildcatting campaign northwest of Cushing.

R. W. Castle has moved his family from Robinson, Ill., to Tulsa. The Grey-Castle Oil Co. is the name of his company, now drilling in the Bald Hill District.

p. 12. Oklahoma. Prairie Oil & Gas Co. Deals. In addition to the purchase of the Hi-Grade Oil Co. holdings in Cushing, the Prairie Oil & Gas Co. has purchased the production of the Northwestern Oil Co. in the Osage Nation in Secs. 11-12-21N-8E and Sec. 7-21N-9E, consisting of 700 bopd from 60 wells for $300,000. The Northwestern Oil Co. is composed of H. F. Sinclair, E. W. Sinclair, and P. J. White, and was organized in 1910. In addition, Prairie has purchased property of the Renfrow Oil & Gas Co. in the Dewey Field and a half-interest in the Wichita Oil & Gas Co. with Bartlesville production.

Waters-Pierce Oil Co. The Waters-Pierce Oil Co. has located at Sand Springs, and is laying a line to the Cushing Field. They have an office and suite of rooms in the Robinson Arcade in Tulsa, their Mid-Continent headquarters, with C. D. Martin as manager. He recently resigned as president of Roxana Petroleum Co. The Cushing Field is now producing 27,000 bopd, with 115 wells drilling, and 40 rigs up. The Texas Co., the Gulf Co., and C. B. Shaffer all have lines into the Cushing Field.

p. 12. Recent Deaths. Hiram B. Everest, former president of the Vacuum Oil Co., and an inventor of note, died at Los Angeles, California, March 6. He was 82 years old.

Vol. 11, No. 41, March 20, 1913, p. 2. Companies Incorporated. The Buena Vista Gas & Oil Co., Muskogee, with capital of $5,000, was incorporated by W. K. Callahan, H. C. Kruse, and Thomas Duncan, all of Muskogee.

The Washunga Oil & Gas Co., of Bartlesville, with $25,000 capital, was incorporated by L. A. Rowland, J. D. Talbott, and Peter Q. Nyse, all of Bartlesville.

The Richard Oil & Gas Co., of Davenport, Okla., with capital of $15,000, was incorporated by W. W. Groom, N. P. Myers, J. H. Taulbee, O. B. Burgess, Irving Stack, and G. N. Hopkins, all of Davenport.

The Fairfax Oil & Gas Co., of Manchester, Okla., with $15,000 stock, was incorporated by J. M. Simmons, T. W. Peter, H. W. Reneau, F. H. Smithhisler, and A. Luceman, all of Manchester.

p. 3. Briefly Mentioned. Leonard V. Dalton, an eminent English geologist, has written a book on Venezuela. There are abundant indications of oil there. The asphalt deposits are of petroleum origin, and he concludes that in the future Venezuela will be noted as a great oil-producing country.

The El Paso Herald estimates that the great oil gusher at Juan Casiana, in the State of Vera Cruz, Mexico, has a capacity of 100,000 bopd. The oil is 22° gravity Baume.

From San Francisco comes the story that certain English barons, of the Shell Syndicate, under the name of American Gasoline Co., will compete with the American market by importing gasoline and benzine from Sumatra and Borneo. Sir Marcus Samuel, the head of the Shell Syndicate, is behind the proposal.

p. 10-11. Oklahoma, Okmulgee County. The first oil that was found in Okmulgee County was in the Morris Field in 1906, to be followed by the Bald Hill Field, Hamilton or Hamilton Switch Field, and Schulter Field, within the next 4 years. Several wells, at 200 to 400 bopd, have come in, in separate areas. In Sec. 30-13N-13E, the Devonian Oil Co. and King Bros. completed a test for 400 bopd on the Green Hodge Farm, falling off to 250 bopd steady. In NW-1/4-NW-1/4-Sec. 13-12N-12E, White, Sinclair, and Rider completed a test for 100 bopd. Joe Burns, who with Lou Caton opened the Bald Hill Field, got a 200 bopd well in the NE-1/4-SE-1/4-SE-1/4-Sec. 6-12N-12E, on the James Palmer Farm.

Okmulgee is a town of 6,000. The Parkinson Hotel is a 4-story brick building, built 5 years ago, and that is where the oil men are staying.

In the Winter of 1904-1905, Joe Evans, who made a killing in the Cherokee District, came to Okmulgee County and leased 60,000 acres at less than 2¢ an acre. This was 5 months after John E. Schell drilled the first producer in the Cleveland Field. The Interior Department made him give most of the leases back. Mr. Evans, together with M. S. Wilson, O. E. Finney, and W. E. Wood, were the four pioneer oil men in the county. Last week, the four met at Okmulgee and had their picture taken, and the Journal hopes to present the picture to the readers. Mr. Evans retained a few leases and drilled the first test in Okmulgee Co. about 4 miles west of Hamilton Switch, but it was a dry hole. Later, L. S. Skelton drilled a number of gas wells at a depth of 800 feet, to start the excitement anew. Dr. Skelton drilled his wells near Morris in the Spring of 1906, getting a franchise to supply Okmulgee with gas.

A Mr. Arbuckle, representing the Tulsa Fuel Supply Co., drilled a well on the Bucyrus Doyle allot. in the SE-1/4-Sec. 20-13N-14E, and got 250 bopd in a sand at 1,600 feet. This was the first oil found in the county, opening the Morris Field.

A. J. Steel drilled the second well in the Morris Field, across the line to the south on the Major Wiley Farm in NE-1/4-Sec. 29-13N-14E, getting a 600 bopd well.

The Tulsa Fuel Supply Co. completed its second well one location west of the discovery well.

The Brown Oil Co., composed of Morris and Okmulgee men, then drilled its first test on the Nimrod Doyle Farm in Sec. 28-13N-14E, an offset to the discovery well to the southeast, and got a genuine gusher for 2,000 bopd. The Hill family farms in Secs. 27 and 34-13N-14E brought fabulous prices. About this time, Tumps Bass and other producers from the Gulf Coast came into the Morris Field.

Bald Hill. Early in 1907, Joe Burns and Lou Caton completed a well for 400

bopd on the Drew Farm in NE-1/4-Sec. 6-14N-14E, in the Bald Hill Field. A gas well was brought in prior to that well on the Severs Ranch in Sec. 32-15N-14E, and the Bald Hill Field was mainly in Secs. 5-6-14N-14E and Secs. 31-32-15N-14E. W. H. Roeser started real excitement on the Roberts Farm in the SE-1/4-Sec. 29-15N-14E., where the famous "Twin Hills" are located. A gasser on the Rebecca Jefferson Farm in Sec. 32-15N-14E was one of the largest drilled in the state. The Bald Hill Field was then extended to Secs. 20-22, 27-29, and 32-33-15N-14E.

Schulter Field. In 1909 and 1910 the Morris Field was again active, and wells were being drilled farther south. Earl Sheets, of Muskogee, completed a big gasser on the Elizabeth Drew Farm in Sec. 10-12N-13E, which started the talent southward. In the Spring of 1910, Smith & Swan drilled a well in Sec. 21-12N-13E, to a deep sand, and got some oil. This well was known as the famous "picnic" well because of a celebration for the day the well was to be shot. Later, a shallow sand at 1,300 feet was found to be better, by the Stevirmac Oil Co. in Sec. 26-12N-13E. The "Picnic" well is cited as the discovery of the Schulter Field. In the Spring of 1910, Earl Sheets completed another well on the Elizabeth Barnett Farm in Sec. 31-13N-12E, for 100 bopd. He drilled two more.

Tiger Flats Field. In 1907, the Tiger Oil Co., a Barnsdall concern, drilled a test on the Celia Freeman Farm in Sec. 11-12N-12E, with a small show. In early 1910, the Copan Oil Co. drilled a test in Sec. 23-13N-11E, also with some shows. The Prairie Oil & Gas Co. brought in the first producer a little later on the Tobler Farm in Sec. 25-13N-11E. The Tiger Flats Field was practically confined to Secs. 24-26-13N-11E.

Hamilton Switch Next. On Aug. 15, 1910, Alex Preston, of Okmulgee, drilled a well on the Duff Farm in Sec. 11-14N-12E, for 500 bopd, opening the field. Early in 1911, the Producers Oil Co. got a well at 4,200 bopd. Later tests fell off, and this field was disappointing.

French Field. West of Henryetta about 4 miles, M. C. French completed a well in the Fall of 1912 in Sec. 8-11N-12E, which was the discovery well. Approximately 15 producers have been completed to date, the wells averaging 15 bopd each, from a 1,000-foot sand.

Unnamed Field. H. H. Galbraith, of Independence, Kansas, has a 30,000,000 cfgpd gasser in Sec. 33-15N-13E, on the Ethel Roberts Farm, but is drilling deeper.

p. 14,16. Heywood Oil Co. The Heywood Oil Co., of Beaumont, Texas, was liquidated. Of the thousands of oil companies organized in 1901, following the discovery of Spindletop, Heywood was one of the three that survived. It was organized in April 1901, and has always been under the direction of Capt. W. C. Tyrrell, of Beaumont. They operated at Spindletop, Sour Lake, Batson, and Jennings. They sold their production in the Illinois fields about 2 years ago. They sold about 300,000 barrels of oil last year, stored in Oklahoma, to the Texas Co. Capt. Tyrrell paid the stockholders $400,000 and purchased the company, confining his new operations to Oklahoma. The Texas and Louisiana holdings were sold. The new company will be called the Pulaski Co., under the management of Harry C. Tyrrell, a son of Capt. Tyrrell, who has had charge of the Oklahoma operations since 1908. The head offices of Pulaski will be at Tulsa.

p. 26. Ponca May Have Deeper Sand. According to a recent report of the Oklahoma Geological Survey, the region around Ponca City should have prolific deep sands, judging from productive sands found south of town. The sands should be expected from 2,550 to 3,700 feet.

Vol. 11, No. 42, March 27, 1913, p. 2. The Carr Gas Bill Becomes A Law. Governor Cruce, of Oklahoma, has signed the bill, making gas pipe lines common purchasers or common carriers, as they may elect. The Governor announced that he will veto the Curry bill, which gives cities the right of eminent domain to condemn gas property for public use.

p. 4. Briefly Mentioned. C. T. Lambert, of Elmer, Okla., visited Tulsa this week. He hopes to open up a big oil field near Elmer. Elmer is in southeastern Jackson County.

At Kelham, near Newark, Nottingham County, England, petroleum has been discovered at a depth of 2,440 feet. Operations of an experimental nature have been in progress there for some time. This is the first oil find in England's history, and although the showing is light, it has aroused much interest.

Everett DeGolyer, an Oklahoma young man, graduate of the University of Oklahoma, is an expert geologist. He is in the service of the Pearson Oil syndicate, and it was under his direction that the Pearson's wonderful gusher, in Mexico, was drilled, breaking all records as a producer of petroleum. Mr. DeGolyer's aptness as an expert was rewarded promptly by the Pearson people, who raised his salary to $12,000 a year, after the gusher had been brought in.

The drilling tools used in Colonel Drake's original oil well near Titusville, Pa., weighed 150 pounds. According to R. D. Fletcher, of Titusville, the original tools were lost, but were replaced by a facsimile set made by Drake's driller, a Mr. Smith. The duplicates were preserved as museum curios, causing much surprise to oil people.

p. 4, 6. Trade Notes. In 1907, Mexico's oil production amounted to 1,000,000 barrels. In 1912, the output was 16,500,000 barrels.

Concessions have been granted to British capitalists to engage in petroleum operations in the Farsan Islands, by the Ottoman Government.

Citizens of McAlester, Okla., will vote on granting a new franchise to the Pittsburg Gas Co. to furnish gas to North Town, annexed some time ago to McAlester.

Eight U.S. battleships and 28 destroyers will use fuel oil during the coming fiscal year. This is a 500% increase in the use of fuel oil by the Navy.

The Gulf Oil Corporation, controlled by the Mellon interests of Pittsburgh, increased its capital stock from 15 to 60 million dollars.

The Forest Oil Co., of Wichita Falls, Texas, has been organized, by W. W. Johnson, of Mineral Wells, president; G. E. Wilson, of Electra, vice-president; T. W. Owen, of Electra, secretary-treasurer. Directors are J. T. Overby, of Iowa Park, Tex., George W. Overwood, of Mineral Wells, and J. M. Hartsfield, of Fort Worth, Texas.

The International Association of Recognized Automobile Clubs is offering a prize of $100,000 for the best substitute for gasoline.

The Rothschilds, Lazard Brothers, Seligman Brothers, Baron Emile d'Erlanger, the Banque Imperiale in Paris, and Banque d'Outremer, and the Banque de l'Union Parisienne, are among those being the big foreign operations in the Mid-Continent according to the New York American.

p. 6,8. Personal Mention. R. D. McCully, G. H. Ernest, and B. C. Kennedy, of the Frick-Reid Supply Co., and L. M. Hutchinson, all of Okmulgee, have purchased a moving picture show in Okmulgee and report a splendid business.

T. F. Lundy, of Cushing, gauger for the Prairie Oil & Gas Co., was at Tulsa this week. He worked on the first iron tank in the Cushing Field, going scouting when it was completed, later to take charge of the gauging of the field.

John E. Schell, of Pittsburgh, Pa., the discoverer of the Cleveland Field in Oklahoma, was at Tulsa for a few days this week, leaving later for Pittsburgh. Later, he will go to California to live.

C. B. Shaffer, owner of the discovery well of the Cushing Field, and one of the most prominent oil producers in the country, is at Tulsa, and will return to his home in Chicago after a few days. He is building a 3,000-barrel refinery at Cushing. He said that oil from the Wheeler sand cannot be produced at a profit at 88¢ a barrel.

p. 14. Oklahoma. Duncan, Stephens County. So far only two producing wells have been found in Stephens County, both gassers. One well of W.G. Skelly & Co. on the Reilly & Frensley Tract in Sec. 12-1N-6W is making 15,000,000 cfgpd. The other well, the initial well of the field, of the Big Horizon Oil & Gas Co. is making about 4,000,000 cfgpd and this well has been purchased by J. McDowell of Kansas City, and he will use this to supply gas to Duncan and Marlow. A 6-inch main line is being laid to Duncan, 15 miles from the well, and 10 mi. of 4-inch line will be laid to Marlow, 10 miles north of Duncan. Other towns nearby will probably be connected to the Skelly well. At the present time, all the wells

drilling are east of Duncan, which is the largest town nearby, with operators making Duncan their headquarters. Leases are scarce and bring $5.00 an acre for those close to the drilling wells. Five strings of tools are running. In Sec. 12-1N-6W, about 15 miles east of Duncan, W. G. Skelly & Co. found a showing of crude oil at 918-922 feet, this being the first signs of oil in the area. A second location is now being made on the Reilly & Frensley Tract by Skelly, in the NW-1/4-Sec. 12-1N-6W, about 1,500 feet northeast of the No. 1, 15,000,000 cfgpd well. Hosford & Story are down 870 feet on the Walt Payne Farm in Sec. 30-1N-5W. J. A. Galloway is down 520 feet on the Blake Farm in Sec. 6-3S-5W, about 5 miles west of Loco. J. A. Galloway is also down 1,250 feet on the Lewis James Tract in Sec. 15-3S-5W, a few miles west of Loco. Greenlees Brothers are about to start a test in the NW-1/4-Sec. 36-1S-6W, about 900 feet east of Harrisburg.

Cotton County. In Cotton County, the Electra & Oklahoma Oil Co. is cleaning out a test on the Cabalka Farm, near Devol. This was started the past year, but was shut down for lack of funds. It was started by Ed Morgan who turned the contract over to Howard Robson, of Vincennes, Indiana.

Tillman County. The Frederick Oil & Producing Co. is down 680 feet near Burt's Switch, about 6 miles northwest of Frederick, in the NE-1/4-Sec. 28-1S-18W. It is being drilled by John Dyson and Harry Patton, well-known Texas contractors. The Deep Red Oil Co. is down 750 feet on the southeast corner of the Maple Farm, in the SW-1/4-Sec. 9-4S-15W. The North Fork Oil Co. is down 115 feet on the McClure Tract, in the NW-1/4-Sec. 35-3S-19W. The Northwest Electra Oil & Gas Co. is down 1,650 feet on the Finley Tract in the NW-1/4-Sec. 8-4S-17W.

Cotton. Comanche. Near Randlett, the Basin Oil & Gas Co. is down 510 feet in Sec. 30-4S-11W. A test is also being drilled near Sterling, in the SE-1/4-NW-1/4-Sec. 28-4N-9W.

p. 28. Natural Gas in Texas. Natural gas in fast supplanting coal and wood for fuel in Texas. In 1911, the average price was 18.44¢ per 1,000 cubic feet. The following cities now have gas: Albany, Alvord, Arlington, Bellevue, Bowie, Bridgeport, Byers, Dallas, Dalworth, Decatur, Denison, Denton, Fort Worth, Gainesville, Grand Prairie, Henrietta, Irving, laredo, Marshall, Moran, Petrolia, Roma, Sherman, Sunset, and Wichita Falls.

p. 31. New Incorporations. The Calvin Oil & Gas Co., of Calvin, Okla., with capital stock of $15,000, was incorporated by John W. Hundley, Owen M. Murray, and W. T. Anglin, all of Calvin.

The Washunga Oil & Gas Co., of Bartlesville, with $35,000 capital stock, was incorporated by L. A. Rowland, J. D. Talbott, and Peter Q. Nyse, all of Bartlesville.

Blackhawk Oil & Gas Co., with $10,000 capital stock, was incorporated by R. V. Anderson, J. A. Anderson, and D. E. Albright, all of Muskogee.

Buena Vista Gas & Oil Co., of Muskogee, with $25,000 capital stock, was incorporated by Q. K. Callahan, H. C. K. Kruse, and Thomas Duncan, all of Muskogee.

England Oil & Gas Co., of Oklahoma City, with $45,000 capital stock, was incorporated by Charles E. King, J. H. Stewart, M. T. Terman, all of Oklahoma City.

The Richmond Oil & Gas Co., of Davenport, Okla., with $15,000 capital stock, was incorporated by W. W. Groom, N. P. Myers, and O. C. Burgess, all of Davenport.

The Cushing Oil & Gas Development Co., of Cushing, with $40,000 capital stock, was incorporated by T. J. Green, of Cushing, Ellen N. Parker, of Oklahoma City, and E. T. Burgett, of Chickasha.

(end of microfilm roll # 7).

Vol. 11, No. 43, April 3, 1913, p. 2. (beginning of microfilm roll # 8). Bottled Natural Gas. Pittsburgh is now bottling natural gas in commercial quantities. It is an excellent illuminating gas in liquid form and is called gasol. It is made by a process discovered by Walter O. Snelling, PhD, formerly connected with the U. S. Bureau of Mines at Pittsburgh and is patented. The process takes from natural gas its constituents of highest heating power and condenses them in steel bottles. Gasol can be used also for welding and brazing metals. Gasol is a clear transparent liquid when under 500 pounds psi pressure. With reduction in pressure, gasol changes into gas and at atmospheric pressure it is dry, not leaving any liquid condensate in the pipes. All of the hydrocarbons have been condensed

out previously, going into the gasoline product. One volume of liquid gasol produces about 350 volumes of gas upon release of pressure, and the gas has a heating value of about 22,000 calories per liter, or about 2,400 B.T.U. per cubic foot.

p. 2. Panama Canal Control by U. S. Government. The Panama Canal Record states that the U. S. Government will keep control of terminals, water frontage, and transportation by land and water across the Isthmus, and will control the transportation of oil by pipe lines across the Isthmus. One line may be all that is needed, and ownership will rest with the Government, and the line will be of equal use of all, at a common price.

Vol. 11, No. 44, April 10, 1913, p. 4. Briefly Mentioned. Drumright, Okla., in the Cushing oil field, has a newspaper and it is called The Derrick. It is Democratic in politics.

Mr. Smith, of the Oklahoma Legislature, is of the opinion that leases located in the beds of certain streams will not hold water.

Fifteen farmers at Bliss, Okla., in northeastern Noble County, leased several thousand acres to oil prospectors. (Bliss was changed to Marland in 1922).

p. 8. Trade Notes. The Southside Oil & Gas Co., of Petrolia, Texas, has been organized, with $12,000 capital stock, by E. P. St. Clair, president and manager; E. H. Short, vice-president; F. H. Gohlke, secretary-treasurer; and directors, G. W. Byers, E. P. St. Clair, E. H. Short, B. J. Bean, and R. W. Perkins, of Petrolia, August Revering, of Charlie, and Sam Scaling. They have a well down on the old gin lot in Petrolia. Pink Hammond is drilling the well.

p. 8. Personal Mention. H. J. Critchlow, of Bartlesville, who is drilling a number of wildcat tests in Oklahoma, was at Tulsa last week.

Mortimer Stillwell, of Bartlesville, vice-president of the Indian Territory Illuminating Co., was at Tulsa last week. He is a prominent banker of Bartlesville.

Mr. and Mrs. Frank Brown, of Independence, Kansas, were Tulsa visitors last week, en route to Cushing where Mr. Brown, with J. S. Cosden and the Jane Oil Co., is building a refinery. It was Mr. Brown's first visit to the Cushing Field.

Calvin N. Payne, of Titusville, Pa., one of the most familiar figures in the history of the oil business, was in Tulsa last week. He is president of the Lone Star Gas Co. of Texas, and is also interested with S. S. Bryan in the Central Light & Fuel Co. at Sapulpa and the Okmulgee Gas Co. at Okmulgee.

W. H. McFadden, one of the owners of the 101 Ranch Oil Co. of Ponca City area, was elected mayor of Ponca City. He was formerly in the steel business, being vice-president and general manager of a subsidiary of the United States Steel Corporation. His health failed, and three years ago he came to Ponca City, going into the oil business. He is past president of the Steel Founder's Society of America, the American Foundrymen's Association, the Manufacturers' Association of Pittsburgh and the Pittsburgh Foundrymen's Association.

p. 12. Oklahoma. Southern Oklahoma. Murray County. The Kumfort Oil & Gas Co. is drilling a well several miles north of Davis, in Sec. 19-1N-2E. Jameson & Roudebush are drilling a test about 1-1/2 miles north of Sulphur in Sec. 23-1N-3E.

Carter County. Union Oil Co. got a dry hole near Berwyn, and will not drill the next three planned tests near Berwyn. The rig has been moved 3 miles west of Overbrook, in Love County.

Carter County. A well is being drilled at Fox in Carter County.

Love County. Four wells are being drilled near Marietta, by Union Oil Co., and another by J. L. Jordan, near Marietta.

p. 31. Charters Granted. Hackney Oil & Gas Co., of Oklahoma City, with stock of $10,000, was incorporated by A. H. Kramer, J. K. Wells, and W. W. Terry, all of Oklahoma City.

Sanger Oil & Gas Co., of Tulsa, with $10,000 stock, was incorporated by J. R. Sanger, Paul Sanger, D. Koening, and Ira Johnson, all of Tulsa.

The D.J.N. Oil Co. of Oklahoma City with $50,000 capital was incorporated by J.J. Dillard, James L. Jones of Farwell, Texas, and A.L. Neal, Oklahoma City.

The Oil & Gas Co. of Thomas, with capital of $10,000, was incorporated by C. D. Haynie, E. E. Huff, Charles E. Shaw, N. A. Nichols, J. W. Cornell, and G. J. E. Moser, all of Thomas, Okla.

Lacey Oil & Gas Co., of Durant, with capital of $20,000, was incorporated by J. B. Smith, J. W. Work, James E. Downen, of Durant, and D. C. Lacey, of Kiowa, and Amos K. Bass, of Caddo.

Merchants Oil & Gas Co., of Oklahoma City, with capital of $20,000, was incorporated by Lester B. Gum, J. M. Campbell, and Newton Avery, all of Oklahoma City.

Garland Oil Co., of Oklahoma City, with $23,000 capital, was incorporated by George E. Black, O. S. Kelly, A. S. Garland, and M. L. Johnson, of Oklahoma City, and C. G. Kiskaddon, of Tulsa.

The Belmont Oil & Gas Co., of Tulsa, with stock of $20,000, was incorporated by W. E. Hancock, George W. Rose, and W. A. Stanburrough, of Tulsa.

The Verden Oil & Gas Co., of Verden, with $15,000 stock, was incorporated by J. R. Osborne, R. E. Dodson, J. M. Phillips, W. H. Helm, and A. B. Allen, all of Verden, Okla.

Dunn-Swart Oil & Mineral Co., of Guthrie, with capital of $45,000, was incorporated by J. L. Dunn, of Dunn's Station, Pa., and John M. Dunn and James I. Bronson, of Washington, Pa.

Denton Oil & Gas Co., of Denton, Texas, with $5,000 stock, was incorporated by C. F. Evans, C. F. Witherspoon, and John A. Hamm, all of Denton.

Vol. 11, No. 45, April 17, 1913, p. 3. (picture). The original leasers of Okmulgee County, Oklahoma. Sitting: J. E. Evans. Standing: (left to right), E. O. Fifley, M. S. Wilson, and W. E. Wood.

p. 3. Panama Canal and Union Oil Company. On March 4, the Secretary of War approved the extension of the contract with the Union Oil Co. of California for supplying the crude oil used by The Panama Canal Commission and Panama Railroad, which would have expired on March 31. The extension will be until June 30, 1914. The Union has been supplying oil there since August 1907, with the pipe line completed across the Isthmus on November 14, 1907. The revocable license was granted originally on January 10, 1906. The price is still 90¢ a barrel, and the maximum amount that can be purchased is 100,000 barrels a month.

p. 4. Trade Notes. The Oklahoma Mutual Oil & Gas Co. thinks that Oklahoma City may be on an oil or gas belt. A large tract of land has been leased, and tests will be conducted.

The Pittsburgh Natural Gas Co. has incorporated, with powers to drill, market, or produce oil and gas in the United States, Canada, and Mexico, and to lease pipe lines and any other method of transportation.

p. 12, 14. Oklahoma. Mayes County. A well is being drilled in Sec. 2-20N-18E, near Chouteau on the Hayes Allotment, and oil was struck at 254 feet in an 8-foot sand.

Rogers County. E. Collinsville. The Hohman, Sticklebar & others well in the SW-1/4-Sec. 12-22N-14E struck oil at 1,148 feet, for 150 bopd, in 10 feet of the sand. This is near the Brown well in Sec. 14 which recently discovered oil in this area. Previous wells were gas only. In a previous issue of April 10, 913, p. 12, the first oil well is mentioned as coming in at 200 bopd and settling down to 40 bopd, by Brown & Boling on the Polson Farm in the NW-1/4-NE-1/4-Sec. 14-22N-14E, but previous small shows were found in other wells where gas was produced.

Stephens County. The Big Horizon Oil & Gas Co. has made a location for a second test on the Jones Tract in the NE-1/4-Sec. 12-1N-6W.

Canadian County. The city of El Reno is starting a second test on the Grammercy Lake Addition in northeast El Reno. It is being drilled by Howard Robson. A previous test was abandoned at 3,350 feet.

Cotton, Comanche Co's. Basin Oil & Gas Co. is down to 800 feet on the Pfeifer Tract near Randlett in Sec. 30-4S-11W. Another rig is near Sterling in the SE-1/4-NW-1/4-Sec. 28-4N-9W.

Carter County. Near Fox, the J. M. Guffey Petroleum Co. is past 1,700 feet

on the Gypsy-Kimball Tract. The Santa Fe Railway Co. has drilled almost 70 wells in the Wheeler Field about 20 miles west of Ardmore, and has about 500 bopd production.

p. 30. Recent Incorporations. The Delphos Oil & Gas Co., of Tulsa, with stock of $5,000, was incorporated by A. Ernsberger, George C. Probst, David M. Hammet, of Tulsa, and James E. Morrison, of Wayne, Pa.

The Rio-Tan Oil Co., of Tulsa, with $10,000 capital, was incorporated by G. C. Spillar, Sep Hall, and Charles L. Hall, of Tulsa.

The Virginia Oil & Gas Co., of Oklahoma City, with $10,000 capital, was incorporated by C. J. Bowman, E. E. Stafford, D. V. Lackey, C. R. Hoffer, and Paul Westfall, all of Oklahoma City.

The Mulberry Oil Co., of Austin, Texas, with $8,000 capital, was incorporated by W. E. Berry, O. O. Condor, and W. R. Dean.

Vol. 11, No. 46, April 24, 1913, p. 4. Briefly Mentioned. In 1912, Oklahoma has produced one-fourth of the oil in the United States.

The Hardware Trade Journal says that electrically-driven automobiles in England are now much cheaper to run than gasoline-driven engines. A 9-horsepower engine will go 42 miles on one gallon of gas at 43¢ a gallon, whereas the same engine for the same miles on electricity would cost 22¢.

During the past winter there have been persistent reports of the discovery of gold and other valuable ores in the vicinity of Albion, Pushmataha County, Okla., some finds being reported as exceeding $60 a ton of rock, and some approaching a value of $600 per ton. It has been known in the Interior Department that several "mining companies" have been or are being organized on the basis of these assertions, and that many men have been induced to invest in the stock. A report on the subject, issued by the U. S. Geological Survey, states that no such mineral in paying quantities is likely to be found in Oklahoma. There are gold deposits in some of the banks, but not in the alleged mines.

A simple invention by Arthur O. Brooks, a Kansas City automobile man, has made possible the substitution of 7-cents-a-gallon coal oil for 24-cent gasoline for the operation of motor cars. A patent is pending. The invention consists of a pipe which runs the coal oil through the exhaust, heating the oil until it expands and becomes gas, and thus carburetting the same explosive qualities as gasoline. A small flow of gasoline from an auxiliary tank is necessary to start the engine, but once started, the motor does the same work with coal oil at a power increase of 25% and a saving of 62-1/2 percent. His experiments have been proclaimed a success by those who have ridden in his coal-oil propelled car.

p. 6. Trade Notes. There are 8 producing sands in Oklahoma oil strata. The Dewey, 200-300 feet deep; the 450-foot sand; Peru, 500-800; Oswego lime, 800-1,100; Squirrel Creek, 1,015-1,215; Bartlesville, 1,175-1,300; Burgess 1,130-1,390; and Mississippi 1,400-1,450 feet deep.

p. 6. Personal Mention. J. M. Critchlow, of Titusville, Pa., visited Tulsa this week. He and his business associates are running 10 strings of tools, all in undeveloped territory.

A late visitor in Tulsa was Charles N. Gould, of Oklahoma City. He was the former Oklahoma state geologist, but is now identified with the oil affairs of certain English capitalists in Oklahoma.

Senator Johnson, formerly State senator from eastern Kansas, is in Tulsa. He is now in the oil business with the firm of Clark & Johnson. It is expected that he will locate his headquarters in Tulsa.

p. 20. New Incorporations. Blue Bird Oil Co., of Muskogee, with $5,000 stock, was incorporated by H. Van Smith, T. K. Simmons, Rees Evans, all of Muskogee.

Velvet Oil Co., of Bartlesville, with capital of $10,000, was incorporated by James A. Veasey, J. P. O'Meara, and L. G. Owen, all of Bartlesville.

Garland Oil Co., of Oklahoma City, with $28,000 stock, was incorporated by George E. Black, O. S. Kelly, A. S. Garland, and H. L. Johnson, of Oklahoma City, and C. G. Kiskaddon, of Tulsa.

p. 37. Oklahoma. Wells Drilling. Miscellaneous. Sec. 24-9N-10E, B. B. Jones No. 1 Winters, Sec. 31-9N-12E, Dustin Oil Co. No. 1 Riley.

Vol. 11, No. 47, May 1, 1913, p. 4. Gulf People in New Quarters. The Gulf Pipe Line Company has vacated the Central National Bank and moved to the Clinton Building at Boston Ave. and Fourth Street in Tulsa, on the 6th, 7th, and 8th floors. The company's operations in Oklahoma date back to 1907. In 1906, the Gulf Pipe Line Company, a Texas corporation, was organized. On April 1, 1907, they began building an 8-inch line from Port Arthur to the Glenn Pool south of Tulsa, completing the line on September 1, 1907. In 1909, the Gulf Pipe Line Co. was incorporated also under the laws of Oklahoma, taking over the Oklahoma operations. They now have lines in Creek, Nowata, Okmulgee, Osage, Payne, Tulsa, and Washington counties, Oklahoma. In April, they completed a 6-inch line from the Cushing Field to the Glenn Pool. The Oklahoma office force consists of 85 people, who reside in Tulsa.

p. 4, 6. Briefly Mentioned. Galveston, Texas, is to have oiled streets this summer. It is hoped that this will eliminate the dust nuisance.

The Arkansas Valley Oil Co., with $50,000 capital, has been organized, to test the Pond Creek area in Oklahoma. This is in Grant County.

T. A. Latta, formerly editor of The Oil & Gas Journal, is being congratulated on his new newspaper, The Weekly Tulsan. The first number under new management appeared last week. It is an 8-page paper. Its advertising patronage is already large, and there is no doubt that The Tulsan will be a big success.

p. 6. Trade Notes. The Scottish-Oklahoma Oil Co. is registered in Glasgow, Scotland, with capital of 35,000 pounds, and is authorized to acquire leases, and engage in refining and marketing of oil.

p. 15. Oklahoma. Cushing. About 20,000 barrels of oil a day is now being produced at Cushing. The first tank of oil has finally been run from the Cushing Field to the new refinery of the Jane Oil Co., which is the producing and pipe line end of the Colonial Refining Co., owned by Brown, Cosden & Co., in Cushing.

p. 16. Oklahoma. Wicey Pool. The original well in this field, drilled by Straughan & Edwards Brothers, on the Wicey Farm, in Sec. 35-16N-13E, is still making 300 barrels a day. The pool is two months old and producing 700 bopd. Foley, McClintick & others have just completed a far step out in Sec. 18-16N-14E, and the well is making 100 bopd and 10,000,000 cfgpd at 1,422 feet to 1,480 feet or more, probably from the Red Fork sand. This opens up a lot of territory many miles from production.

p. 30. Recent Incorporations. The Richardson Oil Co., of Vinton, Texas, with $40,000 capital stock, has been incorporated by C. A. Richardson, president; J. G. Sutton, vice-president; and J. A. Kiplinger, secretary-treasurer. The company has heretofore been operating as C. A. Richardson & Co.

Vol. 11, No. 48, May 8, 1913, p. 4. Trade Notes. A person in St. Louis wrote to The Journal that if leasers working in Lake Providence, La., would go farther north to Lakeport, Chicot County, Arkansas, or across the river from Lakeport to Wayside of Lake Lee, they would find strong evidence of oil and gas.

The Riverside Oil & Development Co., of Childress, Texas, with $10,000 stock, was incorporated by C. E. Crews, president; S. T. Cheatham and John R. Scott, vice-presidents; and John P. Fleming, secretary-treasurer. They will drill their first well on the Cheatham Farm, 8 miles northwest of Childress.

p. 6. Personal Mention. John Deitrich, a successful oil man of Tulsa, has become interested in aviation. He is manufacturing an aeroplane that will be equipped with a 20 horsepower motor. He opened the Cogley Pool near Oil City, Pa.

Henry Leschen, of St. Louis, Mo., president of A. Leschen & Sons Rope Co., is in Tulsa visiting his son. He is looking after the interests of the Leschen Oil & Gas Co.'s interests in the new Wicey Pool, where the company has much acreage.

H. E. Bell, a well-known oil man, was in Tulsa from Kiefer. He was a resident of Bradford, Pa., in the early 1880's, and for a year or two personally conducted the horse car between Bradford and Tarpot, using two horses. He guided the horses

over the uneven plank road with one hand and took the passenger's nickels with the other. He later quit and took a job with the South Penn Oil Co., as field foreman, working in the West Virginia fields for 18 years. He is now in charge of the gasoline plant at Kiefer, which is owned by the Oklahoma Gasoline Manufacturing Co.

p. 18. Oklahoma. Southern Oklahoma. A report from Hobart, Kiowa County, is that Bennett & Tomlinson struck a small show of oil at 480 feet on the J. W. Prough Farm, about 14 miles southeast of Hobart, in Sec. 29-6N-16W.

Also in Kiowa County, Ward & Sherman are about 400 feet down on the Givens Farm, south of Mountain View. They are also spudding in a test east of Hobart.

In Seminole County, near Wewoka, the Langonda Oil & Gas Co. is underreaming at 1,600 feet on the Betty Brown Farm in Sec. 17-8N-8E, east of Wewoka. About 7 years ago, the Wewoka Trading Co. completed a well in the NW-1/4-Sec. 19-8N-8E, striking a sand at 1,598 feet.

In Stephens County, near Loco, a report was sent out several weeks ago that a small showing of gas was struck at 629 feet, with some oil.

In Tillman County, a well will be started on the J. A. McGinnis Farm, about two miles south of Manitou. The Big Pasture Oil & Gas Co. will resume drilling on the Loveland Farm, after being shut down for several months at 700 feet. The Frederick Oil & Producing Co. is at 1,370 feet at Burt's Switch in the NE-1/4-Sec. 28-1S-18W, and is being drilled by John Dyson and Harry Patton. The Deep Red Oil Co. is at 950 feet on the Maple Tract in the SW-1/4-Sec. 9-4S-15W, near Grandfield, and is contracted for 1,900 feet. The North Fork Oil Co. is close to 600 feet on the J. A. McClure Tract in the NW-1/4-Sec. 35-3S-19W. The Northwest Electra Oil & Gas Co. recently completed a dry hole on the Finley Tract in the NW-1/4-Sec. 8-4S-17W, and will probably start another test nearby.

In Cotton County, the Basin Oil & Gas Co. is at 1,050 feet on the Pfeifer Tract near Randlett in Sec. 30-4S-11W. A rig is up near Sterling in the SW-1/4-NW-1/4-Sec. 28-4N-9W. It is reported that a well will be started 4 miles south of Devol. (Sterling is in Comanche County)

p. 30. Recent Incorporations. Sirocco Oil Co., of Bartlesville, with $5,000 stock, was incorporated by L. A. Rowland, James D. Talbott, and Peter Q. Nyce, all of Bartlesville.

Vol. 11, No. 49, May 15, 1913, p. 1. The Use of Mud-Laden Fluid. J. A. Pollard, of Bakersfield, Cal., who at present is in the employ of the Bureau of Mines, was in Tulsa with Dr. Rutledge of McAlester who is in charge of the oil and coal industry of Oklahoma, and A. G. Haggem of Pittsburgh, Pa., office of The Bureau of Mines. They have been working on the Yarhola Farm in the Cushing Field, to demonstrate the wet-hole system of drilling through gas sands up hole, sealing off the gas, while drilling deeper for oil, without a blow out. They seal off the upper gas sand with heavy mud.

p. 3-4. Mid-Continent Reviewed. by H. G. James. The Cherokee deep sand area includes everything from the Kansas line to Tulsa, and includes the following fields: Bartlesville, Bird Creek, Canary, Copan, Curl Creek, Dewey, Flat Rock, Hogshooter, Ochelata, Ramsey, Skiatook, and Turley, with daily production of 53,014 barrels of oil. The next largest producer is the Glenn Pool, with its extensions named North Glenn Field, Taneha Field, and Mounds Field, with 25,557 bopd. Third is the Osage Nation area with 20,708 bopd. Cushing is 20,000 bopd. The Cherokee shallow sand area is fifth with 15,795 bopd, and about 20 wells a month are being abandoned in these fields of this area, and this has been going on for the past 3 years. Next is the Cleveland Field with 12,144 bopd, including Pawnee County. Then comes Morris, 7,901 bopd; Schulter-Henryetta, 4,268 bopd; Bald Hill, 2,887 bopd; Hamilton, 2,557 bopd; Red Fork-Jenks, 1,906 bopd; Ponca City, 1,800 bopd; Muskogee, 1,221 bopd; and Wagoner, 25 bopd.

The real hope for more fields are farther southward. In southeastern Okfuskee County, northwest of Weleetka, the Monitor Oil Co. in Sec. 1-10N-9E, had a small well of 6 bopd. Burr Oil Co. is drilling at Weleetka. The Warren Co. and the Test Oil Co. are drilling west of McAlester, where gas and oil shows have been encountered. The West venture at Wetumka is another test that is being watched.

p. 4. Trade Notes. An American oil company has built a pipe line from Jaffa to Jerusalem, making the Holy City the chief distributing point in that region.

Drilling operations began last week on two test wells near Oil Springs, on the Adair and Cherokee County line. Indications of oil have been noticeable in that locality for some time, say the well owners.

George J. Wright, Commissioner of the Five Civilized Tribes, is selling practically all of the unallotted land of the Choctaw and Chickasaw reservations in eastern Oklahoma. In Stephens County, the land was sold for from $6.25 to $55 an acre.

A contract has been awarded to Charles Roeser and his father, of Tulsa, to drill a well at Enid, 5 miles north of town. The city has 5,000 acres under lease.

p. 11-12. Oklahoma. Southern Oklahoma. The Santa Fe Railroad Co. has completed more than 75 wells for 505 bopd in the Wheeler Field 19 miles west of Ardmore, in Carter County. They have a million barrels in storage. The oil is about 20 gravity, and they have completed a 6-inch line to Ardmore. The Humble Oil Co. and a Mr. Lacy are doing some work in this area.

One well is to be drilled in Pottawatomie County, after three previous tests failed. A few years ago, two tests were drilled at Sacret Heart, but both were abandoned at 1,500 feet. Another was drilled east of Tecumseh.

Two wells will be drilled in Seminole County.

In Comanche County, near Lawton, the Epstein Oil Co. will put down a test 5 miles northeast of Lawton north of the old Marple test. The old derrick on the Cunningham Tract is being razed and used on the new location.

In Grady County, a well will be drilled by the Henry Oil Co. & Gormely on the James Wareheim Farm west of Rush Springs, to a depth of 3,000 feet. Mr. W. P. Henry is from Tulsa, and M. C. Gormely is from Chicago.

In Love County, D. Skillen is down 1,900 feet in Sec. 33-6S-3E. The Red River Oil Co. is at 1,000 feet in Sec. 13-7S-2E, and at 655 feet in Sec. 25-7S-1E, and is rigging up in Sec. 16-6S-1E, and another in Sec. 35-6S-2E. Stratford abandoned its test in Sec. 4-7S-3E, at 1,900 feet.

In Carter County, near Keller, Colcord is down 834 feet in Sec. 1-4S-2W. The Hewitt Oil & Gas Co. has a rig near Hewitt in Sec. 26-4S-2W. Powell is at 1,234 feet in Sec. 9-1S-2W.

In Stephens County, east of Duncan, about 7 wells are operating. W. G. Skelly & Co. is at 1,850 feet on the Colbert Tract in Sec. 12-1N-6W, and had a showing of 8 to 10 barrels of oil in a sand. They have a second test on the Reilly & Frensley Tract in Sec. 12-1N-6W, about 1,500 feet northeast of the initial test of 15,000,000 cfgpd. J. A. Galloway is drilling on the Blake Farm in Sec. 6-3S-5W, at 690 feet, which had a gas show at 629 feet for 225,000 cfgpd, with some oil, and this is 2 miles west of Loco. Leases are about $5.00 per acre in this area.

p. 27. Recent Incorporations. The New Hope Oil Co., of Muskogee, with $4,000 capital, was incorporated by F. A. Whitaker, G. W. Walter, and Ben Watt, all of Muskogee.

The Alice Oil & Gas Co., of Oklahoma City, with $7,500 capital, was incorporated by W. D. Cardwell, Albert Spencer, and W. A. Ledbetter, all of Oklahoma City.

The McDonell Drilling Co., of Tulsa, with $7,500 stock, was incorporated by Alexander McDonell, A. H. McDonell, George B. McDonell, and A. S. McDonell, all of Tulsa.

LeFoy Oil & Gas Co., of Okmulgee, with $16,000 stock, was incorporated by W. T. Foley, Lee A. Voorhees, F. E. Dietrich, W. H. McClintock, and J. T. Hall, all of Okmulgee.

Vol. 11, No. 50, May 22, 1913, p. 4. Of Trade Interest. At Purcell, Oklahoma, gas was struck near the Oklahoma Central Depot, on city property, by I. Williams. He was engaged in drilling a well for the waterworks company, when he found the gas.

p. 8. Recent Deaths. Henry M. Flagler, a prominent figure of the oil industry, died on Tuesday, May 20, at his home in West Palm Beach, Florida, at the age of 83 years. Some time ago he fell from the Veranda of his home, and had injuries which later resulted in his death. He was born in Canadaigua, N.Y., the son of a Presbyterian minister. At an early age, he moved to Saginaw, Michigan, where he became interested in the salt business. Later he went to Cleveland, Ohio, where, with John D. Rockefeller and others, he organized the concern of Rockefeller, Andrews & Flagler. From this beginning, the Standard Oil Company was born, a corporation with which Mr. Flagler was connected until his death. In 1885, he visited Florida, and started converting Florida into a vast winter resort. He built the East Coast Railroad and erected the Ponce de Leon and Alcazar Hotels at a cost of $3,000,000. His greatest achievement was the extension of his railroad from Miami to Key West, and was ridiculed and called "Flagler's Folly". It is listed as an engineering triumph of the age. He was vice-president and director of the Standard Oil Co., president and chairman of the Florida East Coast Railway and Jacksonville Terminal Co., director of the Western Union Telegraph Co., Morton Trust Co., and other corporations. He will be buried in a mausoleum at St. Augustine in the yard of the memorial church which he gave to the Presbyterians. At his bedside were his son Harry and the Rev. George Morgan, his pastor, who also conducted the funeral services.

p. 10. The Drake Memorial Museum. The museum is in the western suburbs of Titusville, Pa., and now consists of a brick building 16 x 30 feet, with 2 stories and basement, and an adjoining building and two lots donated by R. D. Fletcher and the late Dr. George W. Barr. Edwin C. Bell, the trustee, has received many contributions. A reference library is being housed there also.

p. 10, 12. Oklahoma. Wicey Field. Okmulgee County. The discovery well was made several months ago in the NE-1/4-Sec. 35-16N-13E, on the Wicey Farm, by Straughan & Edwards Brothers. The sand is at 1,660 feet and the oil is 35 gravity. About 12 wells have now been completed, with production of 1,650 bopd. Thirty wells are now going down. The closest town is Bixby, about 9 miles to the north, in Tulsa County. The contracting price is 90¢ a foot, with fuel and water furnished. Drillers get $6.50 a day, and tooldressers get $5.50 a day. Work teams get $5.00 a day. Pumpers and roustabouts get $75 a month. At present most of the drilling is in Secs. 14, 25-26, 35-36, -16N-13E, with some in Sec. 31-16N-14E, and Sec. 18-16N-14E. The Foley, McClintick & Co.'s well in Sec. 18-16N-14E on the Oscar McGuire Farm is holding up at 150 bopd.

Coal County. Dr. J. F. Wolford and associates, of Coalgate, have leased 10,000 acres in Coal County, and a first test will be drilled, out of 9 or 10 proposed tests. The first test will be near the gas wells completed by the Test Oil Co. in Pittsburg County.

Atoka County. About 12 miles northeast of Atoka, Newman et al will start a test on their large holdings in that area. Pittsburg County is in the throes of a drilling boom, and some new work is being started.

Pittsburg County. The Checotah Oil & Gas Co. has leased about 10,000 acres on the south side of the Canadian River, and will drill in T. 7 N.-R. 13E., about 22 miles northwest of McAlester. This company was recently incorporated for $150,000 by H. C. Hitchcock and J. E. Ferrington of Kansas City, Mo., and a number of others from Checotah and McAlester. They will also drill near Scipio in 7N-13E. Near Ashland, the Tiger Oil Co. has a rig up in the NW-1/4-Sec. 30-3N-12E, an offset to their No. 5 gasser, about one-half mile southwest of the gasser.

Hughes County. Near Calvin in Sec. 35-6N-10E, Murray et al struck some gas at 900 feet.

Pushmataha County. About 15 miles northwest of Antlers, a rig is being built.

Alfalfa County. Near Jet, leasing has been going on for several weeks. A

well is to be drilled to 3,000 feet in the next few months near Jet.

Kiowa County. Near Hobart some new work is being started. Several years ago, some oil was found in the county. Four rigs are now running. (The Revenue Oil Co. is drilling on the Bruner Farm in 32-9N-8E in Seminole County.) Bennett & Tomlinson are drilling in Sec. 29-6N-16W. South of Mountain View, Ward & Sherman are down 350 feet on the Givens Farm.

p. 20. Oklahoma. Southern Oklahoma. Stephens County. The Galloway & others Lewis well got 5 bopd at 407 feet. Their No. 1 Blake struck a gas sand at 692 feet, and after drilling 10 feet, they had 7,500,000 cfgpd. The Lewis is in the NW-1/4-NE-1/4-SW-1/4-Sec. 11-3S-5W. The Blake is in the NE-1/4-Sec. 15-3S-5W.

Many wells are now drilling in Carter, Murray, Love, Cotton, Comanche, Tillman, and Stephens Counties. (detailed locations are given for each).

Vol. 11, No. 51, May 29, 1913, p. 2-3. Gas Known in Ancient Times. Natural gas has been known in foreign countries since ancient times. Before and during the time of Julius Caesar, there was a famous "fontaine ardente", or burning fountain, near Grenoble, France. In China there were gas wells in early centuries, resulting from being struck while drilling for salt, as much as 2,000 feet deep. The gas was transported in bamboo pipes to the place of consumption. In Japan, gas wells were known as early as 615 A.D. The region of eternal fires, in the Apsheron Peninsula, on the shore of the Caspian Sea, where flammable gases issued from rock fissures, were known at least as early as the others. These latter fires were worshipped by the Parsees. At an early date, the city of Genoa, Italy, was lighted by gas brought from the wells at Amniamo, in Parma.

The first recorded instance of natural gas used in the United States was in 1821, at Fredonia, New York, where a well only 27 feet deep supplied enough gas for 30 burners, and the hotel was illuminated from this well on the occasion of the visit by General LaFayette in 1824. The first use of natural gas for manufacturing is believed to have been in 1863, at East Liverpool, Ohio. The first natural gas pipe line was built in 1876 to supply Titusville, Pennsylvania, from a well 786 feet deep, and also in 1876, gas was brought to Pittsburgh from a field 19 miles away in Butler County, for use in a rolling mill. During succeeding years, the Pennsylvania, Ohio, New York, and West Virginia fields were developed, and these states still produce much gas.

In the Indiana-Ohio Trenton Rock Field, natural gas was discovered in 1884 at Findlay, Ohio, and the Clinton Sand Field of central Ohio was discovered in 1887 at Lancaster. In 1911, pipe lines in Ohio were still being built, and although the Trenton Field has fallen off, the Clinton Field is still one of the largest gas producers in Ohio.

In Kansas, the first paying gas wells were drilled in 1882, but important developments did not take place until 1894. In 1912, the Kansas gas supplies were waning fast.

In Oklahoma and Louisiana, no important natural gas developments took place until about 1906.

In Texas, the development of gas was coincident with the search for oil, the principal discoveries being made from 1901 to 1903.

In California, natural gas was utilized near Stockton as early as 1890, but the big producing wells have been drilled in connection with oil developments beginning in 1903. (This was published in a recent bulletin of the U. S. Bureau of Mines, by Ralph Arnold and Frederick G. Clapp).

p. 3. Of Trade Interest. A contract has been let by the Berlin Oil & Gas Co. of Oklahoma City to Addington, Oklahoma, to drill a test near Addington. Machinery is on the ground. This is in a direct line between Loco, Okla., and Electra, Texas.

Assistant Secretary of the Navy, Franklin D. Roosevelt, says that it now costs 3-1/2 times as much to drive a ship with oil as with coal if the oil is obtained on the Atlantic seaboard. Oil is cheaper on the Pacific coast. The Navy will require 30,000,000 gallons of oil this fiscal year. In 1914, the Navy will have 8 oil-burning battleships, 28 destroyers, and 8 submarines.

Oil exists in great quantities in Siam, but the methods of securing it are

very crude. The wells are less than 60 feet deep, and are dug by hand, and the oil is bailed with dippers on bamboo poles. It is sold to natives who live within calling distance of the wells.

Prof. Vivian B. Lewes, in a lecture before the London Society of Arts, said that E. C. Standford distilled 7 gallon of oil from a ton of seaweed, showing that this is another possible source for oil.

p. 6. Personal Mention. The directors of the Cimarron Valley Oil Co. have signed a contract with J. H. Sneider, of Bartlesville, to drill a 3,000-foot well on the Enoch Carter land, 6 miles northeast of Guthrie. Mr. Sneider will ship drilling machinery immediately.

W. M. Swart, of the Dunn-Swart Oil Co., will soon drill a well in Logan County, north of Guthrie, where the company has 13,000 acres under lease, especially in Lawrie Township. He has gone to Pennsylvania to get machinery.

Vol. 11, No. 52, June 5, 1913, p. 1. Geology in College Courses. Henry Kendall College, of Tulsa, has a new field of study this Fall, the study of oil fields. Science rooms will be equipped to show the oil sands of the Mid-Continent. Oil men can place their sons in this college, where they can have a practical working knowledge of the oil business. This is one of the first schools of the Southwest to initiate a study in the oil business.

p. 1. Mexico's Oil Production. In 1912, Mexico produced 16,704,734 barrels of oil. This will probably be increased by 100% in 1913.

p. 1. The Indiahoma Refining Co., of Okmulgee, is laying a 3-inch line to the Pine-Mission Field, and will have a good share of that prolific district.

p. 12. Personal Mention. William Roeser left Tulsa for a visit to his old home in Marietta, Ohio. Later he will go to Philadelphia to visit his father, William Roeser, Sr., who is 90 years old. William, Jr. is 63, and his son "Bill", the well known Tulsa oil man, is 36. The latter's son, William the Fourth, is 11 years old.

Robert Watchorn, former treasurer and financial manager of the Union Oil Co. of California is visiting in Tulsa with J. M. Critchlow, who has considerable interest in the Cherokee shallow sand Field. Mr. Watchhorn resigned his position because of health, but continues as a director and assistant to the president of Union.

p. 12, 14. Of Trade Interest. The Purified Gasoline and Oil Co., of Texarkana, Texas, was organized last week, with $60,000 capital stock. The company proposes to build a refinery at Texarkana, with daily capacity of 50,000 gallons.

M. B. Van Ness, of Jefferson Davis Parish, La., a machinist and inventor, has devised a generator for his gasoline engine that enables him to run on kerosene. It is a heater through which the kerosene is passed, being heated by the exhaust of the engine until the kerosene is a combustible gas. A barrel of refined oil costing 8 cents a gallon will do one-fifth more work when used with the generator than a barrel of gasoline costing 18 cents a gallon.

p. 14. Noted in Passing. The Magnolia Petroleum Co. has completed preparations for an oil station to be located at Enid, and an office and storage houses. The company is placing 36 stations in Oklahoma, this being their first operation outside of Texas.

The Ponca Refining Co., of Ponca City, is rapidly completing their $100,000 refinery. E. L. Donahue, of Ponca City, F. H. Ewing and W. H. Evans, of Kansas City, Mo., and Robert Solhberg, of Denver, Colo., are directors.

T. B. Slick gazed on the Cushing, Tiger Township Field last week for the first time since all of the recent drilling activity. Owing to failing health and upon advice of physicians last Sept. 24, he left on a trip to the Orient and remained abroad for about 6 months, returning to Bristow, Okla., two weeks ago. About a year ago, Mr. Slick, in the employ of C. B. Shaffer of Pittsburgh, Pa., and associated with C. J. Wrightsman of Tulsa and B. B. Jones of Bristow, went into Tiger Township of the Cushing area, Creek County, and picked out a spot for a test well. They blocked up a lot of leases and the first test was in Sec. 28-

18N-7E, which had a small showing of oil and was abandoned. Their second test in Sec. 32-18N-7E was a success, bringing in about 100 bopd, and this was the discovery well of the Tiger Township Field or now called the Cushing Field. Shortly after, the next well in Sec. 34-18N-7E came in t 30,000,000 cfgpd. But, not until the B. B. Jones No. 1 Ollie London came in for 300 barrels in Sec. 5-17N-7E, was the Cushing Field established, and the rush was on. Just before leaving for the Orient, the property of Slick, Jones, and Shaffer was divided, and they separated their interests. When the Hi-Grade Oil Company's share in Cushing was sold for $1,000,000, Mr. Slick received $250,000. Mr. Slick's home is really in Sharon, Pennsylvania, although he has lived in Bristow for the past 5 years.

p. 14. In the Courts. At McAlester, on Monday, Judge Ralph H. Campbell, of the U. S. District Court, handed down a decision on the case of the Creek Nation vs. Cyrus Avery and the Waterside Oil Co. of Tulsa, which was in favor of the defendents. He held that the bed of the Arkansas River, between the usual high-water lines, is the property of the State of Oklahoma, and under State control, thereby establishing the right of the State to make oil and gas leases on the river so long as they do not interfere with navigation in any manner. The decision also defined Creek ownership of the bed of the river, holding that such was the property of the United States until transferred to the State of Oklahoma. The Waterside Oil Co. secured a lease from an Indian allottee and put down some wells, with production of 1,000 bopd at present. During the last session of the Legislature, an investigative committee brought out sensational developments, and after reporting the facts, a bill was passed canceling the lease made by the School Land Commission, but which was later vetoed by Governor Cruce.

p. 14. Recent Deaths. F. T. Davis, of Bradford, Pa., well-known in the oil regions, died at his home Monday, June 2, at age 85 years. Death was due to infirmities of old age. He had resided in Bradford for many years, and he had been engaged in the oil business for 40 to 50 years. He is survived by several children, among them being: A. R. Davis, of the Bovaird Supply Co. of Tulsa; A. L. Davis, of Atchison, Kansas; Hamilton Davis of Parkersburg, W. Va.; Miss Mayme Davis of Bradford, Pa.; and Mrs. W. J. Bovaird, of Independence, Kansas.

p. 19. Kendall College. (picture). Henry Kendall College, Tulsa, Okla., College of Liberal Arts, Domestic Science, Business Academy, Normal, Music, Art, Expression, Special courses in the study of geology of the oil fields. Science rooms equipped to show the oil sands of the Mid-Continent fields. President, Frederick W. Hawley, D.D.

p. 20. Oklahoma. Southern Oklahoma. Many wells are being drilled in Love, Carter, and Stephens Counties. (Detailed locations are given). Only 3 wells have production, one near Loco and two east of Duncan, previously mentioned.

Vol. 12, No. 1, June 12, 1913, p. 1. Natural Gas for Motor Cars. Natural gas as a fuel for automobiles is being experimented within West Virginia, where the largest gas wells in America are located. The gas is compressed in seamless tanks, holding from 300 to 2,000 cubic feet, at a cost to the user of about 15 cents per 1,000 cubic feet. A well-known car using natural gas recently made 100 miles on 20¢ worth of natural gas, whereas the same car went 20 miles on 20¢ worth of gasoline, on the same track.

p. 1. San Antonio Reports Gusher. A new oil field was discovered last Saturday at Somerset, Texas, 18 miles southwest of San Antonio. The Somerset Oil & Gas Co. brought in a well on the C. Kurz Farm, one mile southeast of Somerset, with a 5-inch stream spouting 140 feet high.

p. 1. Wells Spoiled in Shooting. It is a general fact that many wells have been ruined or spoiled by shooting with a large charge of nitroglycerine. Some wells are shot into water, but more frequently, the sand is stirred up, causing many days of cleaning, and placing the well as a small producer. A well shot with half the recommended charge in half of the sand does much better.

p. 4. Of Trade Interest. C. B. Shaffer's refinery at Cushing has begun

taking oil last week from F. M. Wheeler, George Jones, and J. W. and H. L. Fulkerson. The plant will start handling about 1,000 bopd.

Local capitalists of Rockdale, Texas, recently organized a company, with $6,000 stock, and will put down a well on the C. A. Doss Farm, 6 miles west of Rockdale. This is a result of the discovery of gas in a water well.

The Mexia Oil & Gas Co. has increased its stock from $30,000 to $50,000. Manager J. T. Leech has gone East to purchase 12 miles of pipe. Another company has made application for a franchise to supply gas to a number of cities along the right-of-way of the H. & T.C. Ry., including Bryan, and expects to supply the towns with gas from the Mexia Field, Texas.

p. 4. Personal Mention. U. S. Rhodabarger, manager of the Milliken Oil Co., visited Tulsa from Cleveland, Okla. He is credited with bringing in the largest well ever drilled in Oklahoma, the No. 2 Williams in Sec. 30-21N-8E, which started off at 7,500 barrels a day.

p. 17-18. Oklahoma Southern Oklahoma. Many wells are being drilled in Stephens, Cotton, Love, Carter, and Tillman Counties. (details are given).

In Bryan County, near Durant, citizens of that town are trying to raise $10,000 to drill a test to 2,000 feet near Durant.

p. 39. Recent Incorporations. The Bunch Creek Oil & Gas Co., of Billings, Okla., with $15,000 capital, was incorporated by D. C. Frazier, J. M. Miller, Oliver Potter, Frank Wright, and O. W. Long, of Billings.

North Texas Oil & Development Co., of Ft. Worth, Texas, with $30,000 capital, was incorporated by W. F. Baird, H. B. Harleas, and W. A. Schuller, all of Ft. Worth.

Vol. 12, No. 2, June 19, 1913, p. 8. Of Trade Interest. The Brownwood Oil & Development Co., of Brownwood, Texas, got a dry hole near there, and will start a new well 12 miles northwest of Brownwood where a strong gas well was brought in recently. The old rig is now being moved.

p. 8. Personal Mention. J. S. Tetly, a contractor from Ft. Smith, Arkansas, visited Tulsa. He had the contract for the drilling of the gas wells which now supply Ft. Smith with gas.

It is said that drilling operations will be resumed near Floresville, Texas. The Wilson & Cunningham Oil Co. of Waxahachie has just taken a lease on 1,000 acres of land nearby and will begin operations soon.

M. V. Cadman, the assistant cashier of the Liberty National Bank of Tulsa, has resigned, and accepted a position with his brother-in-law, T. B. Slick. He will be located at Drumright.

p. 19. Oklahoma. Southern Oklahoma. Many wells are being started in Tillman, Comanche, Carter, Stephens, Love, and Murray Counties. (details are given).

In Murray County. Jameson & Co. abandoned a test on the Carr Tract at 1,150 feet in the SW-1/4-Sec. 23-1N-3W. The Sulphur Oil & Gas Co. had a dry hole at 560 feet on the McCarthy Tract in the NE-1/4-Sec. 33-1N-3E. The Kumfort Oil & Gas Co. No. 1 on the Wolfe Tract is shut down at 1,270 feet, in C-NE-1/4-Sec. 19-1N-2E. Hartman & Co. is at 850 feet on the Harris Tract in Sec. 13-2S-3E.

p. 41. Oklahoma. Wells Drilling & Completed. Southern Oklahoma and Miscellaneous. There are 70 wells in Stephens, Cotton, Tillman, Carter, Canadian, Murray, Love, and Kiowa Counties, and miscellaneous counties, listed in detail.

Vol. 12, No. 3, June 26, 1913, p. 6. Of Trade Interest. A 27,000,000-foot gasser was recently brought in south of Wann, Nowata County. The rock pressure was 550 pounds. The field is an old one, long ago drilled over, but all wells were stopped at the 1,000-foot sand.

p. 19. Bradford's Deep Well. The deep well at Derrick City, Bradford, Pa., is 5,445 feet deep and in a hard limestone, and they are still searching for the Medina sand.

p. 19. Rothschilds Reaching Out. It is reported from St. Louis, Mo., that the Rothschilds of London furnished funds to purchase the Standard Oil Co. stocks in the Waters-Pierce Co. early this year, and will now make the Waters-Pierce Co. a part of the Rothschilds holdings. For 30 years the Rothschilds have been competitors of the Standard Oil Co. in the oil fields of Europe and the Markets of the world. Their establishment of a larger company in America is only a broadening of their field of operations. Their appearance in this country is a confession of the failure of the oil fields of the Empire to supply European demands.

p. 28. Warner Uplift. Muskogee and McIntosh Counties. (advertisement). Just Discovered! We have, through the assistance of one of the best oil and gas geologists in the country, located what seems to be one of the most prominent and largest structure in the State of Oklahoma, located in Muskogee and McIntosh Counties, just northwest of Porum. We have let the contract for 4 wells upon this acreage, to be drilled to a depth of 2,500 feet, beginning July 1. We will offer to the public a few scattered tracts, and the prices will be reasonable. The chances of production should be better than 20 out of 25. This acreage will only be on the market for a few days. Write us at once. The Grenola Oil & Gas Co., State National Bank Bldg., Oklahoma City, Oklahoma.

Vol. 12, No. 4, July 3, 1913, p. 1. Socialistic Oil Plan in Minnesota. George R. Smith, representative of Minnesota, is preparing a speech on the attitude of the Minnesota Legislature for the development of the oil resources of Minnesota. The Legislature has declared in favor of U. S. Government ownership of the oil lands in Minnesota and U. S. Government development of the oil industry in Minnesota on some socialistic plan. The Minnesota Legislature has asked Mr. Smith to ask the U. S. Congress to pass necessary legislation to carry out its views. Congress is so fully occupied at this time with pressing matters that it is not likely they will pay attention. The plan is so radical that it will have practically no support in Congress.

p. 1. Oil Men Indicted for Bribery. The U. S. Grand Jury at Enid has indicted H. H. Tucker and other officials of the Uncle Sam Oil Co. on a charge of bribing certain members of the Osage Tribal Council who were removed by former Secretary of the Interior Fisher. This concerns 800,000 acres of the Osage Reservation in a blanket lease, twice approved by the Osage Council and since rejected by the Department of the Interior. The indictments were against H. H. Tucker, president, Uncle Sam Oil Co.; Albert L. Wilson, chief counsel of Uncle Sam Oil Co.; W. C. Plumb, Kansas City; Wesley M. Dial, of Foraker, member of the removed Osage Council; and 6 people from Pawhuska: John Leahy, prominent Democratic politician, W. T. Leahy, his brother, John Palmer, prominent Indian lawyer, A. W. Comstock, Eugene Scott, attorney, W. S. Matthews, and Ed Brown.

p. 4. Mesopotamia Oil Concession. According to a Constantinople correspondent of the Frankfurter Zeitung, an English syndicate, in which the Rothschilds are interested, is negotiating with the Turkish Government for important oil concessions in Mesopotamia. The syndicate is reported to have offered $2,500,000 together with a royalty on the output.

p. 4. Of Trade Interest. It is reported that a pipe line will be built to Waco, Texas, from Mexia, a distance of 40 miles, at a cost of $300,000, to supply natural gas to Waco.

S. Pearson & Son, Limited, the British concern that has developed oil lands in Mexico on a mammoth scale, now contemplates developments in Ecuador and Colombia. The Pearson syndicate has signed contracts with both Governments for exploration and development of their oil lands.

p. 4. Personal Mention. Charles Griffith, of Bradford, Pa., who is running tools at Skiatook, Okla, has gone to Claremore, Okla., for a week's treatment of radium water.

C. J. Wrightsman, of Tulsa, will move to San Francisco, permanently, about the middle of July. He disposed of his residence last week, with its contents, to J. A. Campbell who recently moved to Tulsa from Lawrenceville, Ill. Mr.

Wrightsman will keep his office here and will maintain his oil interests as in the past.

p. 6. Mexican Oil Fields and The Revolution. Within the past few days, no less than 1,000 refugees from Mexico have landed in Gulf ports of the United States, 500 of which are oil workers and their families from Tampico and Tuxpan. Apart from delayed freight and mail deliveries, there are now reports of robbery, rape, and murder. The Red Cross is helping. The Doheny interests have been compelled to shut down work on wildcats, the East Coast has shut down at Panuco, and the Waters-Pierce interests have shut down all development work and laid off 71 men. Durango has been taken by the rebels, and San Luis Potosi and Tampico will be next in the hand of the Constitutionalists. One match and $1,000,000 worth of oil will go up in smoke. Conditions are not going to improve soon. About 1.7 million barrels of Mexican oil was imported in the United States in May 1913.

p. 18. Recent Incorporations. Hue Oil Co., of Sapulpa, with $10,000 stock, was incorporated by R. J. Hill, John S. Baldwin, and A. F. Hill, Jr., of Sapulpa, B. Neal Harris, of Atlanta, Ga., and Paul M. Pope, of Oklahoma City.

The Midday Oil Co., of Tulsa, with $10,000 capital, was incorporated by Henry Leschen, St. Louis, Mo., and William F. Leschen and H. Steinberger, of Tulsa.

Walton Oil Co., of Muskogee, with $60,000 capital, was incorporated by Charles H. Walton, J. J. Harman, and J. E. Walton, of Muskogee.

The Alene Oil & Gas Co., of Bartlesville, with $25,000 capital, was incorporated by P. L. Bucy, Annette Bucy, R. L. McKibbens, all of Bartlesville, and R. Heimbaugh, of Sedan, Kansas.

Branigar Oil Co., of Okmulgee, with $30,000 capital, was incorporated by Marshall Beck, Noline, Ill., F. W. Branigar and J. Belford, Okmulgee.

p. 23. Recent Incorporations. Mid-Western Oil Co., of Oklahoma City, with $25,000 capital, was incorporated by Joseph O. More, C. O. Fowler, and Charles C. Ingram, of Oklahoma City.

Oklahoma-Tennessee Oil & Gas Co., of Oklahoma City, with capital of $150,000, was incorporated by J. M. Condit, H. N. Raupe, and H. F. Stone, of Oklahoma City, and T. E. Johnson and L. M. Ball, of Memphis, Tenn.

Vol. 12, No. 5, July 10, 1913, p. 4. Of Trade Interest. Rocky Arroya, 25 miles south of Artesia, New Mexico, will have some oil tests in about 3 weeks. The Dayton Oil Co., a Doheny concern, now drilling near Dayton, under direction of Dan McFarland, general field man, will do the drilling. They have taken over 4,000 acres from the Seven Rivers Oil Co., about 15 miles from Dayton, upon which the wells will be drilled.

p. 4. Personal Mention. George F. Getty, president of the Minnehoma Oil Co., visited the Cleveland Field and returned to Los Angeles. He has drilled 60 wells, with only 6 dry holes. He wanted to witness the completion of his test in Sec. 31-21N-8E, said to be good for 150 bopd natural.

p. 4. Noted in Passing. Another big gasser was struck near Mexia, Texas, about 1.5 miles farther west from the field. It is on the Rogers Farm, 3-1/2 miles southwest of Mexia.

p. 10, 12. Oklahoma. Southern Oklahoma. In Pittsburg and Coal Counties, several small gas wells are being found, and the gas is being used to supply towns in that area. In Caddo County, the Cement Oil & Gas Co. has made a location on the Funk Farm in Sec. 21-5N-9W. Capitalists from Chickasha have 1,000 acres under lease and expect to drill a well 2,000 feet deep.

In Stephens County, the Washita Oil & Gas Co. struck about 2,000,000 cfgpd at 611 feet on the Williamson Farm in the E-1/2-W-1/2-Sec. 12-1N-6W, and struck more gas at 780 feet, and the well is now making 10,000,000 cfgpd. This was their second test on the Williamson Farm.

In Pontotoc County, near Stonewall, the Algonquin Oil Co. has a rig 5 miles north of Stonewall, in Sec. 28-3N-7E.

In Coal County, George C. Priestley, of Bartlesville, has leased several thousand acres and will drill in the next 3 months.

In Kiowa County, Ward & Sherman have a small well on the Kreiger Farm in Sec. 1-6N-16W, in a 20-foot sand from 492 to 512 feet deep. Many more wells are being drilled in the county, with 8 rigs up. (Details are given).

In Seminole County, the Prairie Oil & Gas Co. is at 800 feet on the Nicey Farm in Sec. 11-9N-6E, about 3 miles northeast of Seminole. The Revenue Oil Co. #2 is at 500 feet on the Bruner Farm in Sec. 12-9N-8E, in Hughes County. The Vanna Oil Co. is at 750 feet on the Deer Farm in Sec. 13-12N-8E, in Okfuskee County. The Commercial Oil & Gas Co. has acreage 3 miles northeast of Konawa. C. F. Colcord & Co., of Oklahoma City, will have a test in Sec. 36-6N-7E, and the Sasakwa Oil Co. will have one in Sec. 27-6N-7E. The Tennessee & Oklahoma Oil Co. has a location in Sec. 27-7N-7E. C. B. Shaffer and T. B. Slick have much acreage in Secs. 6-7-7N-7E.

There is much leasing in Logan County, near Guthrie, and in Payne County, near Stillwater, and many rigs are starting. (Details are given).

p. 41. Oklahoma. Wells. Completed and Drilling. Details are given on 74 wells in southern Oklahoma, in Carter, Canadian, Murray, Love, Kiowa, Stephens, Cotton, Tillman, and miscellaneous Counties, such as Seminole and Coal.

p. 43. Recent Incorporations. Sand-Mac Oil Co., of Tulsa, with capital of $5,000, was incorporated by G. A. Sanderson, J. M. McElhinney, and C. R. Thurwell.

The Pelham Petroleum Co., of Tulsa, with $500,000 capital, was incorporated by Robert H. Childs, Thomas P. Melvin, Charles A. Guy, and E. D. Forquer.

Vol. 12, No. 6, July 17, 1913, p. 6. Publications on Oil and Gas. "Hand Book of Natural Gas" has been published by the Metric Metal Works of Erie, Pa. Henry P. Wescott is the author. It is 520 p., 160 illustrations, and 188 tables. Many of the tables were by the late F. H. Oliphant.

"A Treatise on Petroleum" has been published by J. B. Lipppincot Co., of Philadelphia. Sir Boverton Redwood, of England, is the author. It is in 3 volumes and costs $15, and has many illustrations, plates, and maps. It is replete in historical facts, covering origin, production, transportation, and refining of petroleum.

p. 8. Personal Mention. W. D. Gillette, of Findlay, Ohio, will move with his family to Cleveland, Oklahoma, where he will engage in the oil business.

Joseph F. Guffey and E. N. Gillespie, of Pittsburgh, Pa., have opened an office in the Hotel Tulsa Building, and are associated with E. W. McCrary, a geologist, and C. F. Farren.

William C. McBride, of St. Louis, Mo., formerly of Washington, Pa., has given his daughter $50,000 as a wedding gift. He is probably one of the largest individual operators in the country, holding large interests in the Pure Oil Co., and operates in Oklahoma, Illinois, Ohio, and Pennsylvania. He is reputed to be worth several million dollars.

"Manny" Wilson was in Tulsa last week. He has property in the Bird Creek Field. He is a veteran in the oil business, having worked east and west. Years ago, in the Pennsylvania oil towns, he played the violin for dances.

Charles J. Wrightsman, the Oklahoma Senator, and president of the hi-Grade Oil Co., is moving from Tulsa to San Francisco this week.

Capt. W. C. Tyrrell, owner of the Heywood Oil Co., the Pulaski Oil Co., the Kansas City Refining Co., thousands of acres of rice lands in Louisiana, and a gold mine in California, was visiting his son H. C. Tyrrell in Tulsa. He lives in Beaumont, Texas.

p. 8. Noted in Passing. Peru produced 1.5 million barrels of oil in 1912.

The Pierce Oil Co., of Virginia, capitalized at $21,000,000, was licensed to do business in Missouri. It will take over the Waters-Pierce Oil Co. Clay Pierce, of St. Louis, is president of the new concern, and H. Clay Pierce, his father, is a heavy stock holder. It is said that a large part of the capital came from the English and German Rothschilds.

P. J. White, H. F. Sinclair, and associates, of White & Sinclair, have taken over the Tulsa street railway system. They are supposed to go into an interurban scheme between Independence, Kansas, and Tulsa, costing millions of dollars. Capitalists from New York supposedly are backing the scheme.

According to reports from New York and London, the Huerta Government in Mexico has confirmed all of the grants given the Mexican Eagle Oil Co. of Pearson interests, and all of the oil deposits of the public domain are pledged as a security for the loan of $100,000,000 just raised abroad for war purposes. It is reported that the Pearsons, Rothschilds, Shell-Royal Dutch, and Waters-Pierce are all to combine in making world markets for Mexican oil.

p. 19. Recent Incorporations. The San Antonio Oil & Gas Co., of Tulsa, with $50,000 capital, was incorporated by J. W. Hocker, C. S. Walker, of Tulsa, B. A. McFarland, Joe Harris, of Vinita, and D. A. McDougal, of Sapulpa.

The Cherry Oil Co., of Bartlesville, with $10,000 capital, was incorporated by S. E. Bell, H. J. Gibner, and A. H. Boles, Jr., of Bartlesville.

Western Oil & Gas Development Co., of Enid, with $15,000 capital, was incorporated by H. H. Houston, J. P. Cook, H. K. Banks, and H. A. Dillon, of Enid.

Ora Lee Oil Co., of Oklahoma City, with $10,500 capital, was incorporated by W. C. Brissey, R. A. Carson, and F. R. Wehmeyer, of Oklahoma City.

Watonga Oil & Gas Co., of Chandler, with $50,000 capital, was incorporated by Fred B. Hoyt, John Wagner, A. E. Mascho, of Chandler, John A. Mascho, of Cushing, and H. Brown and M. E. Clewell, of Watonga, Oklahoma.

Vol. 12, No. 7, July 24, 1913, p. 4. Personal Mention. Robert Galbreath, who first went into Red Fork more than 10 years ago, has gone back with 3 strings of tools where his well was drilled.

J. M. Critchlow, the well-known oil producer of Titusville, Pa., is acquiring more property in the Mid-Continent. He has an orange grove in Florida.

Frank A. Gillespie, chairman of the execuive committee of the Oklahoma Oil and Gas Producers Association, has rented a summer camp 200 miles north of Minneapolis, Minnesota. He has 35 guests, including family and lease men. He has two boys, Lester and Bernard, who drove the distance in 4 days.

S. J. Slade, of Amarillo, Texas, connected with the Amarillo Oil & Gas Co., was in Wichita Falls. He signed a contract to furnish Henrietta, Texas, with gas from his wells in the Petrolia Field.

p. 8. Oklahoma Oil Valued at A Million Per Week. According to D. W. Ohern of the Oklahoma Geological Survey, about 180,000 barrels of oil are produced each day in Oklahoma. At 98¢ a barrel, this is an annual value of $64,000,000 or $175,000 a day.

p. 10, 12, 14. Oklahoma. by R. H. Whitney. McIntosh County. J. P. Flanagan got a 10,000,000 cfgpd well on the Estes Farm in Sec. 26-11N-15E, at 962-980 feet deep. Mr. Flanagan has 2,600 acres under lease, and the new well is between Checotah and Eufaula. Some time ago, the Gladys Belle Oil Co. drilled a gas well in Sec. 29-10N-16E, which was shut in. H. F. Sinclair has acreage near the Estes Farm area.

Okfuskee County. The first oil well has been found in Okfuskee County by Christian & Cott, in a test on the Smith Farm, in the NE-1/4-Sec. 11-11N-11E, in a sand at 1,188 feet.

Pittsburg County. The Long Prairie Oil & Gas Co. will drill a well west of Kiowa. This company has 5 gas wells in Sec. 23-3N-11E, and is trying to get a franchise from the nearby cities.

Jackson County. From Altus; a small producer was completed by the Creta Oil, Gas, and Development Co., 16 miles west of Creta. The strike has caused much excitement and new companies are being organized.

In the first 6 months in Oklahoma, 4,001 wells were completed, of which 268 were gas wells and 485 were dry, with new production of 142,918 barrels a day.

p. 16. Texas. Jack County. In Jack County, a little oil has been found in shallow sands, but it is 10 miles from civilization. The wells would never pay out.

Wildcats. Much drilling is being done in the following counties: Archer, Baylor, Brown, Childress, Coleman, Denton, Grayson, Hall, Hardeman, Haskell, Knox, McCulloch, Shackelford, and Stephens. (Details given in each area).

p. 16. Recent Incorporations. The Brown Fox Oil & Gas Co., of Tulsa, with $50,000 capital, was incorporated by George T. Brown, of Tulsa, and W. W. Fox, J. R. Privett, and W. Z. Dozier, of Bixby.

The Hardin Oil Co., of Tulsa, with $20,000 stock, was incorporated by J. H. Thomas, G. C. Simmons, and B. H. McLaughlin, of Tulsa, and S. B. Holmes, of Muskogee.

The Western Pacific Oil & Gas Co., of Oklahoma City, with $25,000 capital, was incorporated by A. E. Bell, M. G. Addington, A. L. Versaw, all of Oklahoma City.

p. 29-31. Wyoming Oil Fields Passed in Review. By John J. McLaurin. Facts and Figures that tell the Whole Story Concisely. Salt Creek is the Center. Past and Present Operations in Natrona, Fremont, Park, and Uinta Counties and Throughout the Entire State.

Oil seepages were known in Wyoming in one half of its 21 counties by Indians, trappers, hunters, and emigrants. In 1833, Washington Irving described "Tar Spring" in Fremont County, in the northwest part of the Lander Field in the Little Wind River area, about 30 miles northwest of Lander. The Washakie Oil Spring, 6 miles north of Lander, and the Little Popo Agie Oil Spring, 9 miles southeast of Lander, both also in the Lander Field, were also well known, especially after 1869 when the Union Pacific Railroad was completed. In 1881, Dr. George B. Graff and Michael Murphy, of Omaha, Nebraska, purchased claims around the Little Popo Agie Oil Spring, digging holes 6 to 10 feet deep, and drilling one well 27 feet deep. In 1883-1884 they drilled 3 wells; No. 1; 300 feet deep, at the spring; No. 2; 400 feet deep; No. 3; 750 feet deep. (The name Popo Agie is an Indian word meaning headwaters). The town of Dallas sprang up there. Dr. J. M. Henderson paid Graff-Murphy $100,000 for their wells and local 500 acres plus 4,000 acres close by, in 1901, and drilled 11 wells from 1901 to 1903, 697 to 1,520 feet deep; and others drilled 19 more wells from 1903 to 1911, to 2,812 feet deep. At present there are 17 producers, yielding 10 to 50 bopd, and it is piped in a 6-inch line to Wyopo one mile north of Lander, a distance of 10 miles. The oil is 22° gravity, and asphaltic. In 1906, Col. Richard E. Plunkett leased the Washakie Oil Spring about 5 miles north of Wyopo, and turned it over to the Lander Oil Syndicate and some California interests, who struck oil in 1909 at 275 feet in the Mowry Shale. The oil is 42° gravity, and is sent to Wyopo through a 2-inch line, with production being a few barrels a day. Drilling at Tar Spring, 23 miles northwest of Lander, has not been very successful. About 51 wells in all have ben drilled in Fremont County. The Lander Field is about 39 miles N-S, by 11 miles E-W in size.

In Uinta County, the Brigham Young Oil Spring was well-known in 1847 by the Mormons who camped there and used the oil for lubricating and healing purposes. They hauled the oil with them to Salt Lake City area. The oil occurs in the Mowry Shale, like that in the Washakie Oil Spring. In the 1870's, a Judge Carey built his home near one of these oil springs in southwestern Wyoming. The Judge and his neighbors commenced to drill 6 or 8 wells, 100 to 200 feet deep, near the Judge's house and at Hilliard's Flats about 12 miles northeast of Evanston, using the oil as a lubricant and for healing and dipping. They used the pole method of drilling. About 20 years ago, the wells and pole derricks were abandoned, now rotted by the elements, and the walls of the Carey House are crumbling. The wooden conductors in the holes are clogged with dirt and water, and the spring is covered by a thin shell of asphalt. In 1902, at Spring Valley, the Union Pacific Railroad drilled a 1,000-foot well for water, and struck oil, and since then, 30 or more wells have been drilled from 700 to 2,000 feet deep. There were two small refineries, at Spring Valley and at Evanston, but the oil fell off, and what is produced now is shipped to Utah.

In Natrona County, the largest production occurs in Wyoming, in the Salt Creek region about 45 miles north of Casper. Oil seepages in Sec. 13-40N-79W first attracted attention to the area. These were well known especially after the Union Pacific Railroad came through in 1869. About 1884, the late William L. Lay, of Oil City, Pa., prepared a diagram of Salt Creek, and as a result, Mr. P. M. Shannon started drilling in November 1889, in Sec. 36-41N-79W, on the north end of the dome. The dome is about 5 miles long NW-SE by 3 miles wide, covering about 6,000 acres, and has 3 parts, the Shannon Field on the north, the Salt Creek Field in the middle, and the Teapot Dome on the south. The town of Shannon and the Shannon Field were named after Mr. Shannon, who had 4 wells started from 1889 to 1892. His first well, started in Nov. 1889, was not completed until August 1900, at 1,030 feet, in the Shannon Sandstone, for 3 to 4 barrels a day, of a 23° gravity paraffine oil. The other three wells were completed before 1895, and the oil hauled to Casper and sold at $6 to $8 a barrel. Mr. Shannon organized the Pennsylvania Oil & Gas Co., with help from friends from Bradford, Pa., and they erected a refinery at Casper. They drilled 13 more wells by 1902. In 1905, Joseph H. Lobell, of Chicago, bought the lands, wells, and refinery, selling the same to 3 foreign companies: Ascos; Petroleum Maatschappij-Salt Creek; and the Franco-Wyoming oil Co. In 1911, these were merged into the Wyoming Oil Fields Co. and the Natrona Pipe Line & Refining Co. In March 1913, these were taken over by the Franco Petroleum Co. In 1911, a 6-inch line was laid to the refinery, east of Casper, and by then they could handle 2,000 bopd. The central part of the dome, Salt Creek Field proper, also had seepages, in a sandstone lower than the Shannon. The Iba Oil Spring in the bed of Salt Creek is in the SW-1/4-Sec. 13-40N-79W. In 1907, J. E. Stock of Franklin, Pa., organized the Stock Oil Co., and drilled an oil well in Sec. 22, 2/3 mile south of the Iba Oil Spring. He also drilled in Sec. 25. In 1906, an Italian geologist, Dr. Casaro Porro, visited this same area for the Petroleum Maatschappij Co., and in 1908 they drilled a well in the SE-1/4-Sec. 23, to 1,068 feet, getting 500 bopd of paraffine oil, being called the "Dutch Well" and was really the first gusher, stimulating further development. In 1910, the Midwest Oil Co. entered the scene, acquiring large tracts and drilling numerous wells in the Salt Creek Field proper. This field is in the Wall Creek Sandstone and the oil is 37° to 42° gravity. Midwest is building a refinery and has a 6-inch line from Salt Creek to Casper, and Franco Petroleum and Midwest can handle 17,000 bopd. The fields to date, Shannon and Salt Creek proper, yield about 6,100 bopd. About 3,000,000 barrels have been produced so far from these two fields. In 1909, President Taft withdrew large tracts of land for conservation purposes in here, and the Teapot Dome portion is part of this area and remains undrilled. Franco Petroleum Co. has 33 producing wells in the Shannon Field. In the Salt Creek Field proper, Franco Petroleum Co. has 10 producing wells and 5 shut in, and Midwest Oil Co. has 14 producing wells and 28 shut in. In Natrona County, there are 57 producing wells, 52 shut in, 42 abandoned, and 12 drilling at present, or 164 wells total.

Other areas of Big Horn, Park, Converse, Niobrara, and Crook Counties have been drilled since 1886. (These are discussed, with some locations).

Vol. 12, No. 8, July 31, 1913, p. 10. Wildcat at Lawton. In Comanche County, the Epstein Oil Co. has a well 5 miles northeast of Lawton, producing 15 bopd at 50 feet. This is the first oil well to be found in the area, and there is a rush for leases.

p. 10. Wildcat North of Porter. In Wagoner County, the Conservative Oil & Gas Co. struck oil at 1,200 feet in Sec. 20-17N-17E, about 4 miles north of Porter. The hole filled up 300 feet with fluid. This is many miles in advance of production.

Vol. 12, No. 9, Aug. 7, 1913, p. 6. Pithole Grows Crops of Oats. The old town of 17,000 that grew up in less than six months is now covered with grass and oats. Less than 6 ruins of the old townsite are left, and they have been converted to barns. Oil Creek Valley is like it was before. In Venango County, Pa., the operation of wells does not interfere with farming operations. Pithole has reverted to what it was before the great United States well was drilled, and set

the country wild with its flow of wealth, after the Drake well was completed.

p. 6. The Death of Amos Steelsmith. Wichita Falls, Texas, August 1. Amos Steelsmith was killed at Electra, Texas today, being crushed by a portion of a rig which collapsed while he was pulling the casing on the Flannighan Russel Farm.

He was born near Edenburg, Clarion Co., Pennsylvania, Sept. 15, 1851, and was the son of Mr. and Mrs. Michael Steelsmith. When he was 7 years old, his parents moved to Mercer Co. where he grew to manhood. On Aug. 15, 1873, he was married to Miss Elizabeth Davidson, of Emlenton, Pa., who, with one daughter, survives. He began his career in oil in the Spring of 1875. His first pumping job was with Jacob Haun, and his first venture as a producer was on the Jerusalem Farm, which had 40 bopd but never paid for itself.

From Edenburg, Mr. Steelsmith moved to Sandy Point, Butler Co., where he contracted several wells for Dr. Crawford and B. B. Campbell. About this time, he was induced by Samuel Phillips and Harvey Porter to take an interest on the Crawford Farm. It flowed 90 bopd and this was his first start as a producer.

In 1885, he moved to Findlay, Ohio, and operated at Cygnet, where he was very successful, completing a well for more than 5,000 bopd. In 1899, he returned to Butler Co., operating in Glade Run, afterwards the famous Water Station District. He developed property there and sold it for $125,000.

In 1892, he began refining oil, forming the Pittsburgh Refining Co., Ltd. He remained in this business until 1895, and then bought out his partners, owning the entire business.

In 1889, he leased 60,000 acres below Red Fork in Oklahoma, including all of the Glenn Pool area, but that was Indian Territory at the time and most leases were invalid. He released it after 3 or 4 years, not wanting to fight the regulations.

About 6 months ago, he went to Texas as field man for the Corsicana Petroleum Co., in Archer County, and was employed in this capacity until death. He leaves a wife, one son Amos Steelsmith, Jr., a daughter, 5 sisters, and nieces and nephews in Butler and other towns in Pennsylvania. The body was interred at Wichita Falls.

p. 12, 14. Oklahoma. Okmulgee. One of the most promising sections of the state is now near Okmulgee, including the Pine, Morris, Hamilton Switch, Mounds, Schulter, Bald Hill, and Muskogee Fields. There is also a large area to be tested in McIntosh, Hughes, and Okfuskee Counties. The Morris Field, south of Morris, was the first field to be opened in this area, when the first well was completed early in 1906. Bald Hill was discovered next in 1907, when Burns & Caton drilled on the Drew Farm in Sec. 6-14N-14E, for 350 bopd, this being the first oil well. Previously a gas well had been discovered. The Hamilton Switch and Schulter Fields were found in 1910. The Pine Pool is the latest discovery, and about 20 wells have been completed, all in Secs. 26-27, and 34-14N-13E, at 1,985 feet. In the Morris Field, the oil is 37-1/2° gravity from the Glenn sand at 1,650 feet, and production is 6,354 bopd. In the Schulter Field, the oil is 37° gravity from a sand at 2,100 feet, and there is a black oil of 31° gravity at 1,300 feet. The production of Schulter and Tiger Flats together is 3,539 bopd. At Bald Hill a green oil is found at 1,650 feet, and at Hamilton Switch the oil is at 2,000 feet.

The average contracting price is $1.00 a foot, water and fuel furnished. Drillers get $5.50 to $7.00 a day, and tooldresser $5.50 a day. Roustabouts and pumpers get $75.00 a month, and work teams get $5.00 a day.

Weleetka. The Monitor Oil Co. in Sec. 1-10N-11E completed a test to 2,572 feet, with 13 feet into the sand, with 2,000 feet of fluid in the well. This has been a slight shallow sand producer for the past few months, and was recently drilled deeper. This is in Okfuskee County.

Porum. Muskogee County. The Grenola Oil & Gas Co. has a rainbow of oil at 1,500 feet, near Prairie Gap north of Porum in Sec. 32-11N-19E. This is on the southern edge of the Warner Uplift.

Shattuck. Ellis County. The Shattuck Oil & Gas Co., with $100,000 stock, has been incorporated, and will drill 3 wells to 3,000 feet. F. C. Smith, of Cushing, will have charge of the operations.

Stillwater. Payne County. The Stillwater Oil & Gas Co. and V. Von Tackey, are past 750 feet in a test in the NE-1/4-Sec. 11-19N-1W, 10 miles west of town.

Porter. Wagoner County. The Conservative Oil & Gas Co.'s test in Sec. 20-17N-17E, north of Porter, has been placed on a pump, and is making 5 to 10 bopd. There is some gas also.

Lost City. Tulsa County. The Gladys Belle Oil Co. has a test at Lost City, 4 miles southwest of Tulsa, on the A. Berry Farm in the SW-1/4-SW-1/4-Sec. 8-19N-12E, and pumped 300 barrels of oil in ten hours. This is the discovery well.

p. 23. Coody's Bluff - Chelsea Fields. Alexander Warner and J. H. Caldwell of Titusville, Pa., last week purchased the production of the Devonian and Kerr oil properties in the Coody's Bluff and Chelsea Fields, for $100,000. Involved was 1,000 acres, and 100 wells, with 100 bopd production.

p. 23. Recent Incorporations. Ben Hur Oil & Gas Co., of Chickasha, with $50,000 stock, was incorporated by R. W. Murray, Olin Brashear, Ernest Fidwell, O. B. Hart, Kendall Calloway, all of Chickasha, and O. E. Thomas, of Hobart, and N. E. Dale and O. S. Davis, of Oklahoma City.

The National Products Co., with a West Virginia charter, and capital of $100,000, has been incorporated to do business in Pawnee County, Oklahoma, by Frank W. Finley, Henry S. Cohen, and Perry O. Loughner, George W. Baum, and John E. Schell, of Pittsburgh, Pa.; and E. M. Hand and Charles A. Cooper, Coraopolis, Pa.

p. 23. Henry Kendall College, Tulsa. A new course in Oil Geology will be inaugurated this fall by Prof. Forrest L. Rees, an instructor of several years' experience in the oil fields of Pennsylvania, Oklahoma, and West Virginia.

p. 25. Recent Incorporations. The Hennessey Oil & Gas Co., of Hennessey, with $30,000 stock, was incorporated by M. A. Mitchell, W. T. Parks, W. R. Blackburn, Charles Pepin, and Dr. H. G. Barker, all of Hennessey, Oklahoma.

The Hutchinson Oil & Gas Co., of Tulsa, with $20,000 stock, was incorporated by A. D. McDonell, of Tulsa, and P. W. Johnson and P. H. Hostutler, of Hutchinson, Kansas.

The Loco Oil & Development Co., of Waurika, with $30,000 stock, was incorporated by J. A. Heeman, Charles Phile, and J. L. Morgan, all of Waurika.

The Oklahoma-Arkansas Oil & Gas Co., of Oklahoma City, with $25,000 stock, was incorporated by Ray Colcord, E. G. Bedford, of Oklahoma City, and C. H. Smith, of Fort Smith, Arkansas.

Vol. 12, No. 10, Aug. 14, 1913, p. 2-4. Geology of the Mid-Continent Field, by Charles N. Gould. At the 12th meeting of the International Geological Congress in Toronto, C. N. Gould of Oklahoma City delivered an address "The Occurrence of Petroleum and Natural Gas in the Mid-Continent Field", which is given fully below. The Mid-Continent field is 200 miles long N-S by 100 miles E-W, mainly in southeastern Kansas and eastern Oklahoma, from Paola, Kansas, about 50 miles southwest of Kansas City, to Coalgate in Coal County, and from Blackwell to Fort Smith, Arkansas, covering some 20 counties in Oklahoma and 11 counties in Kansas, or about 20,000 square miles. The rocks containing the hydrocarbons are entirely Pennsylvanian in age, above the Boone Chert, or Mississippi lime. In the northern part of the area, the beds dip about 50 to 20 feet per mile westward, and in the southern part the rocks are folded into anticlines and synclines. The Pennsylvanian beds have many limestones in Kansas, which thin southward, where thicker shales and sandstones prevail in Oklahoma. The beds below the Fort Scott limestone in Kansas, called the Cherokee shales, are 450 feet thick in Kansas, but the equivalent beds in Oklahoma, roughly below the Calvin sandstone, near McAlester, are more than 10,000 feet thick. The hydrocarbons occur in the sandstones, with overlying shales being caprocks. All of the sands are more or less lenticular, and some like the Bartlesville and Wayside are widespread, while others are limited. Each sandstone has much variation in thickness. The term "pool" is applied to a small area from which oil or gas has been produced. The Flat Rock Pool is 2 miles long and 1 mile wide. The Glenn Pool is 12 miles long an 5 miles wide. Hamilton Switch Pool is less than 1 square mile. There are more than 80

separate pools in the Mid-Continent field, and new ones are constantly coming to light. More than three-fourths of the oil and gas has come from the Cherokee shales, from sands named Bartlesville, Tucker, Burgess, Glenn, Taneha, Dutcher, Layton, and Cleveland, to name some. In eastern Nowata County, in the shallow Cherokee sands that occur from 300 to 800 feet deep, the local names of the producing sands are taken from the names of the pools in which they were first encountered, such as Alluwe, Coody's Bluff, and Childers sands. At Bartlesville and Tulsa, these sands are 1,200 to 2,000 feet deep, and in the Cleveland Pool, they are 2,700 feet deep.

The Fort Scott limestone is known as the Oswego lime in the subsurface, and in the western part of the area, in Washington and Osage Counties, Oklahoma, and Chautauqua and Montgomery Counties, Kansas, the sandstones above the Oswego are the main producers. The Wayside and Peru sands occur from 600 to 800 feet below the surface in these areas. The Layton and Cleveland sands in the Cleveland and Cushing Pools are approximately the same as the Peru and Wayside sands. In the Blackwell Pool and Ponca City Pool, the oil and gas comes from still higher sands. In addition to the above-mentioned persistent sands, there are many stray sands. In any one particular pool, there is generally but one producing sand, but some pools have more than one producing sand. In the Glenn Pool, which has produced more than 120,000,000 barrels of oil in the past 6 years, there are 4 producing sands, known as the Red Fork at 1,300 feet, the Glenn at 1,500 feet, the Taneha at 1,700 feet, and the Dutcher at 2,200 feet. In the Bartlesville Field there are 8 productive sands: Unnamed at 250 feet, Unnamed at 400 feet, Wayside at 650, Peru at 825, Oswego at 1,000, Squirrel at 1,100, Bartlesville at 1,250, and Burgess sand at 2,000 feet. The same property may have 2 to 4 of these sands. In the Cleveland Field there are 5 producing sands, in Cushing 5, and in Ponca City, 7 producing sands. It is believed that the Bartlesville sand may now reach over a much larger area, from southern Kansas to the Bird Creek and Flat Rock Fields near Tulsa, and from Washington County to Osage County, to the Cleveland Field, covering 5,000 square miles. More drilling is needed to verify this, and at present we do not know this. It is suspected that the sand at 1,100 feet at Independence, Kansas, is the same sand at 1,200 feet at Bartlesville, and at 1,300 feet in the Flat Rock Field, and at 2,400 feet at Cleveland. The sands are 20 to 100 feet thick. The thicker sands have initial productions from 100 to 1,500 bopd, falling off to 20 to 100 bopd in about 3 years. The thinner sands have production from 20 to 30 bopd, falling off to 5 to 20 bopd later. Shallow wells less than 1,000 feet deep cost about $1,000 to $3,000 to drill and equip, and deeper wells, say to 2,200 feet deep in the Cushing Field, cost $8,000 to $12,000 to drill and equip. Experience has shown that operations in the thinner shallower sands are a safer investment. Almost all of the fields in the Mid-Continent occur on structures, some of which are subtle, and may consist of gentle reversals of dip, too low to detect in any one spot.

In the southern part of the area, there has been very little work, but where drilling has occurred, there has been much production of natural gas. The gas fields near Fort Smith and Mansfield, Arkansas, and Poteau, Spiro, Kinta, Red Oak, and Wardville, Oklahoma, are on well-marked anticlines.

Production has increased from 74,714 barrels in 1900 to 59,343,850 barrels in 1911 in the Mid-Continent fields in Oklahoma and Kansas. In 1912, there has been more development than ever before in the history of the Mid-Continent. In 1908, oil was 35¢ a barrel, and now, in May 1913, it is 88¢ a barrel. The Cushing Pool, which opened in March 1912, is now producing 19,000 bopd. There has been much new prospecting, and many of the older pools are being extended, and a number of new pools have been discovered. Five counties in southwestern Oklahoma are now being exploited. Almost 90 percent of the oil wells have natural gas. Some of the gas wells had 50,000,000 cfgpd initial production. Some extensive fields are near Iola, Independence, and Caney, Kansas, and Copan, Bartlesville, and Collinsville, Oklahoma. Recently, a new field near Loco, Stephens County, Okla., was discovered, with a gas well producing 25,000,000 cfgpd at 700 feet. Gas from the older fields is piped to Kansas City, St. Joseph, Mo., and Joplin, Mo. Casinghead gas is now being used to make gasoline, there being about 25 plants in the

Mid-Continent. Much natural gas is being wasted, and legislators are trying to stop this enormous waste. Tens of millions of cubic feet of gas per day are being wasted. No one knows the amount of natural gas available, but estimates are that 1 to 2 billion cubic feet of gas per day is now available in the Mid-Continent.

In the future, since only one-fourth of the area is drilled, there is much room for exploration and expansion. New fields are constantly being discovered. Many wells have been producing for more than 15 years, and are by no means exhausted. It will be many years before the area will be drilled and the productive areas discovered. It should be no surprise that this area will be producing oil and gas 100 years from now.

p. 4, 6. Personal Mention. C. Y. Wells, of Duncan, Okla., is in Tulsa. He is interested in the Duncan and Loco developments, in Stephens County, and is of the opinion that a field will be opened in that area capable of producing oil.

W. J. Collyer, in charge of drilling for the Washington Oil & Gas Co. in Stephens County, was in Tulsa, visiting from Comanche. He said that their well is located 16 miles east and 4 miles south of Comanche, and had a good showing at 90 feet.

H. F. Sinclair has gone to Paris, France, to float the securities of the interurban railroad proposition which he has been working on with P. J. White. The idea is to have a line from Tulsa to Kansas City, with ownership of all of the local franchises. The investment will be several million dollars.

p. 6. Noted in Passing. Last week the Central Texas Gas Co. brought in a dry gas well on the Kendrick Lease near Mexia, Texas, for 8 to 10 million cfgpd, according to Fred Allison, of Corsicana, Texas, who drilled the well.

p. 8, 10. Oklahoma. An Important Wildcat. (Healdton Discovery). According to a late report from southwestern Oklahoma, Critchlow & Co. have a good show in a test in the NE-1/4-Sec. 8-4S-3W, Carter County, about 5 miles south of Oil City, at 916 to 931 feet into rich-looking sand. The hole filled up 100 feet from the top with fluid. The oil is paraffine base and is better than the 22° gravity of the oil in the Wheeler Field. The well was drilled through 10-inch casing. It is about 5 miles in advance of production. A number of large companies have leasers on the ground.

Cleveland Field. It was just 9 years ago this month that the pioneer well in the Cleveland Field was completed by the Minnetonka Oil Co., which started off at 100 bopd. There are now 3 producing sands in the field, the Layton, at 1,350 feet, the Cleveland, at 1,625 feet, and the Bartlesville, at 2,300 to 2,350 feet. The Bartlesville is the main producer, with 38° gravity oil.

Stephens County. Six gas wells have now been completed east of Duncan and near Loco. No oil has been found. Eight wells are now being drilled.

Comanche County. Lawton. The Epstein Oil Co., 5 miles northeast of Lawton, is still drilling at 400 feet deep, on contract for 800 feet. They got 15 bopd at 250 feet, as previously reported.

Kiowa County. The Della Dean Oil Co. completed a well for 5 bopd at 500 feet in Sec. 36-7N-16W. A second well is down to 600 feet in Sec. 35-7N-16W, but did not get oil in a 500-foot sand. Several companies are drilling or plan to drill 7 wells in the area.

Loco, Stephens County. Diamond Oil and Gas Co. completed 2 gas wells near Loco. One is in Sec. 15-3S-5W, for 10,000,000 cfgpd at 720 feet, which was a second test; about 600 feet east of the initial discovery by Galloway & Co. The well was previously incorrectly reported at 25,000,000 cfgpd. The gas pressure is about 200 pounds per square inch. Diamond had a similar completion in Sec. 10-3S-5W, for 10,000,000 cfgpd at 720 feet. Diamond now is drilling at 300 feet on the L. Chase Farm in Sec. 3-3S-5W. Other companies are also drilling nearby.

Duncan, Stephens County. W. G. Skelly & Co. are down 500 feet in a second test on the Reilly & Frensley Tract in the NW-1/4-Sec. 12-1N-6W, 300 feet west of the east line of the farm and 450 feet north of the initial test which is a 15,000,000 cfgpd well. The Washita Oil & Gas Co. has decided to go deeper in a third test on the Williamson Farm in the E-1/2-W-1/2-Sec. 12-1N-6W, to 1,100 feet. The

failure of this test to strike gas in the shallower sand was a disappointment, because it is between their No. 1 on this farm and the big gasser of Skelly on the Reilly & Frensley Tract. The Nos. 1 and 2 on the Williamson Tracts were good gassers. The initial Williamson test got the gas at 780 feet, while the second well got the gas at 850 feet.

Southern Oklahoma. Many wells are being drilled in Tillman, Murray, Caddo, Love, and Comanche Counties. (Details on Tillman County given).

p. 19. Recent Incorporations. The Fremont Oil Co., of Tulsa, with $10,000 capital, was incorporated by M. A. Housey, H. C. Vandewater, S. L. Miller, and Charles L. Honkers.

The Indebar Oil Co., of Bartlesville, with $5,000 stock, was incorporated by W. E. Jones, of Dewey, and G. T. Overfield, of Bartlesville.

The Somserset Oil & Gas Co., of San Antonio, Texas, with $100,000 stock, was incorporated by J. R. Bonderaunt, El Paso; A. M. Byron and C. Kurz, Somserset; and A. J. Moore, J. G. Boles, G. W. Hazy, D. Deutsch, T. E. Moore, and John A. Kerr, all of San Antonio, Texas.

p. 45. Oklahoma. Wells. Drilling. Miscellaneous and Southwestern Oklahoma. (84 wells are listed giving section, township, range; especially in Caddo, Comanche, Pontotoc, Stephens, Murray, Carter, Tillman, Love, and Kiowa Counties).

Vol. 12, No. 11, August 21, 1913, p. 4. Plans Air Line to Cushing. Ralph Keaton, a licensed air pilot, informs The Journal that he expects to establish an aerial passenger route between Tulsa and the Cushing Field within the next 2 weeks. Keaton has a flying boat which he has christened "Oil Flyer". Next week he will make exhibition flights over Lake Michigan at Chicago, and immediately thereafter he will ship the machine to Tulsa and prepare for daily flights between Tulsa and Cushing. Keaton formerly worked in the Oklahoma oil fields and is quite well known among Mid-Continent oil men.

p. 6. Personal Mention. Charles F. Noble, of Tulsa, who has been in the oil business in Kansas and Oklahoma for 15 years, has been taking up some leases near Chanute, Kansas, recently.

George C. Priestley, of Bartlesville, is a candidate for Governor of Oklahoma, according to the Warren (Pa.) Mirror. He is back at his home in Warren, Pa., meeting his old friends, and will not return to Oklahoma for some time.

Robert Galbreath, president of the Oklahoma Oil & Gas Producers Association, is back in Tulsa. He is the Democratic National Committeeman for Oklahoma. He is running 3 strings of tools in the Red Fork Field, where he made his first venture in oil 11 years ago.

p. 12. Oklahoma. Healdton. At this time, little work will result from the wildcat well drilled south of Oil City in Carter County. The titles to the land are the hindrance. The land was secured from the Government, and 4 payments have to be made before the occupant gets a title. In most cases, only one payment has been made, and the other three will have to be paid before the settler gets full control of the property that he is now occupying. However, there is considerable excitement around Healdton. The Red River Oil Co. of Critchlow and associates in the NE-1/4-Sec. 8-4S-3W, three miles west of Healdton, got 30 bopd. A second well has been started by Critchlow & Co. on the same farm. The oil is paraffine based and better grade than that at Wheeler where 75 wells have been drilled. Lost City, SW-1/4-8-19N-12E. Gypsy buys discovery. Page #1 is 400 bopd.

Stephens County, Duncan. A telegram received in Tulsa Thursday morning reported that the Skelly No. 2 rig on the Reilly & Frensley Farm, 17 miles northeast of Duncan, has been completed at 885 feet for 16,000,000 cfgpd. No. 2 is located 500 feet northeast of Mr. Skelly's No. 1 on the same farm.

p. 28. Petrolia Gas Field, Texas. The Petrolia Field has more gas than what is needed at present. There are 31 wells in the field and the lowest estimate of yield is 150,000,000 cfgpd which goes to Dallas, Fort Worth and Wichita Falls. The pressure is about 600 psi. The rate of decline is about 5 pounds a month or 60 pounds a year. Most of the wells were found while looking for oil

and no special effort has been made to look for gas. The gas sand is generally at 1,750 feet. Recently, the Producers Oil Co. completed a well on the Byers Tract in the Petrolia Field, and got 30,000,000 cfgpd at 1,745 feet.

Vol. 12, No. 12, Aug. 28, 1913, p. 1. Venezuela. Patagonia. New Guinea Oil. An English syndicate, Venezuelan Concessions, Limited, has obtained concessions to prospect for oil on some large tracts of land from the Venezuelan Government. The syndicate has shipped a complete Canadian drilling outfit to the mainland opposite the Island of Trinidad. Canadian drillers will be in charge.

Argentina has appropriated about $7,500,000 to develop the new oil fields recently discovered in Patagonia. The largest field is near Comodoro Rivadavia, in southern Chubut, Patagonia. It is on the sea coast, 1,200 miles from Buenos Ayres. Twelve wells have been drilled and eight more are in the process of drilling. The oil is found at a uniform depth of 2,000 feet, the best well having an initial flow of 8,000 bopd.

Two different prospecting outfits report the discovery of oil in Papua, New Guinea, and the fields will probably be exploited by the British Government, in line with its recent policy to have sufficient oil lands to supply its Navy in order to make it independent of other countries in case of war. The wells were drilled with portable outfits and did not reach any great depths, the deepest test being 220 feet.

p. 10, 12. Oklahoma. Lost City, Tulsa County. The new development at Lost City, 4 miles southwest of Tulsa, contains wells of gusher size. The first well was drilled some six weeks ago. The latest well is the second test of Charles Page on the Adesta Berry Farm in the SW-1/4-Sec. 8-19N-12E, 1,000 feet east of the west line and 1,250 feet north of the south line, which started off at 90 barrels an hour. It is now making 1,200 to 1,500 barrels a day. It is one location east of the initial test which is holding up at 300 bopd. The top of the sand was at 1,662 feet. The Gypsy Oil Co. has not finished its second test on the same farm in the southwestern corner of Sec. 8-19N-12E, which already has 300 bopd at 1,673 feet. The Gladys Belle Oil Co.'s test on the Johnson Farm in Sec. 7-19N-12E is making 30 barrels an hour. Several other wells are being drilled.

Duncan, Stephens County. A fourth gas well has been completed near Duncan, but no oil production is reported. W. G. Skelly & Co. completed their second well on the Reilly & Frensley Tract at 885 feet, for 16,000,000 cfgpd, in the NW-1/4-Sec. 12-1N-6W, 300 feet west of the east line of the farm, and 450 feet north of the initial test on the same tract, which is a 15,000,000 cfgpd well.

The Washita Oil & Gas Co. has collapsed casing at 1,000 feet in a third test on the Williamson Farm in the E-1/2-W-1/2-Sec. 12-1N-6W. This is between the initial test on the Williamson Farm and the initial well on the Reilly & Frensley Tract.

Kiowa County, Gotebo Field. William Badgett & Co. No. 7 have a well for 4 bopd on the C. P. Richerts Farm in Sec. 7-7N-16W. (Four other wells are drilling; details are given).

Carter County. Healdton. The Red River Oil Co. (Critchlow & Co.) tubed their well last Thursday and made a pretty flow over the derrick. The well is west of Healdton and 5 miles south of Oil City in the NE-1/4-Sec. 8-4S-3W. The well cleaned itself out and is making 25 bopd, of 38° gravity oil. The top of the pay was found at 916 feet, with 15 feet of rich-looking sand. A second test has been started on the same tract.

Rogers County, Claremore. Numerous wells were drilled in this area in the past, but resulted in total failures. Local people from Claremore are drilling a well in Sec. 4-21N-15E, and people from Sapulpa are drilling in Sec. 31-21N-15E. (Claremore is in R. 16 E.).

p. 24. Recent Incorporations. The Refiners Marketing Co., of Bartlesville, with $7,600 capital, was incorporated by W. G. Hindman, W. B. Pricatley, and Paul R. Johnson, all of Bartlesville.

The Mansfield & Lillian Oil & Gas Co., of Mansfield, Texas, with $15,000 capital, was incorporated by J. Bratton, M. C. Cahill, J. M. Black, and others. They will drill for oil and gas in Tarrant County.

Vol. 12, No. 13, Sept. 4, 1913, p. 12-17. Drake Memorial Day. (portrait of Edwin Laurentine Drake). Titusville, Pennsylvania. Titusville is in Crawford County, but Oil City is in Venango County, northwestern Pennsylvania, south of Titusville. The Drake Memorial Committee was established at a meeting at the Opera House in Titusville on August 27, 1913, and was to be a permanent organization, to complete the building of the Drake Memorial Museum and library, and to promote knowledge of the oil business. Old time oil men came from all over the United States. William H. Hoffman, of Syracuse, N.Y., was president, Edwin C. Bell of Titusville, was secretary, and John H. Scheide of Titusville was treasurer. Mrs. Drake wrote a letter from Philadelphia, Pa., concerning her late husband..."I hold Titusville and its old friends very dear, as my dear husband lies in your midst"...Laura E. Drake. (Many letters, memorials, and tributes were published.) There is a picture of the original well. Mr. R. D. Fletcher, one of the original backers of Drake in Titusville, was present at the ceremonies, and was the only living original person in the Drake well deal. In one memorial, by Hosea Paul, he mentions that "There is in this beautiful little city a most worthy and beautiful mausoleum where rests the ashes of your most distinguished citizen. It was erected by one of the great figures of Wall Street, a man more feared than loved, who gathered millions more easily than most men do hundreds. And this fitting sepulchre of the man who made all these great accumulations possible is not only a monument to Drake, but is also a memorial to the giver." The history and discovery of oil and gas is also given, for the world, especially during biblical times.

p. 22, 24. Oklahoma. Healdton. Carter County. When Critchlow & Co. brought in their well about three weeks ago on the Apple-Franklin Farm in the NE-1/4-Sec. 8-4S-3W, there was much excitement because this was the first good oil well to be completed in this area. The sand, from 916-931 feet, had 30° gravity oil, and the well produced 35 bopd. Five new wells are being started. The Red River Oil Co. (Critchlow & Co.) will start 3 new wells: SE-1/4-SW-1/4-Sec. 5-4S-3W, on the McClure Farm; NE-1/4-NE-1/4-Sec. 17-4S-3W; and SE-1/4-W-1/2-NW-1/4-Sec. 21-4S-3W. Babcock & Co. will drill in the NW-1/4-NW-1/4-NW-1/4-Sec. 5-4S-3W. The Humble Oil Co. will drill in Sec. 9-4S-3W, on the Franklin Farm. The Crystal Oil Co. was the original leaser in the area, having 6,000 acres under lease. About half of this was turned over to Critchlow & Co. Bings & Co. are at present the largest lease holders, with 5,600 acres. The Twin State Oil Co. (Sun Co.) has some small acreage. The Criner Ranch Oil & Gas Co. will drill in Sec. 24, where they have 380 acres under lease, and where asphalt deposits occur.

Stephens County. Five gas wells have been completed in the Loco Field and 4 gas wells have been completed in the Duncan Field. Loco. The Washita Oil & Gas Co. completed a 8,000,000 cfgpd well in Sec. 15-3S-5W, on the Bowman & Hightower Farm. The Oklahoma Diamond Oil & Gas Co. No. 2, on the Allen Tract, in the same Sec. 15, also had about 8,000,000 cfgpd, and both wells are producing from a sand at 720 feet.

Pushmataha County. Near Antlers, 8 miles northwest of town, the Impson Valley Oil, Gas and Asphalt Co. is going to drill at least 4 wells.

Tillman County. The North Fork Oil Co. is drilling on the John McClure Farm in the NW-1/4-Sec. 35-3S-19W, and is at 1,710 feet. At 1,650 feet they found a rainbow of oil. They will go to 3,500 feet.

p. 29. Texas. Shackelford County. The Texas Co. made a new location near Clearfork, about 4 miles northeast of its initial test on the Mathews Ranch, which is an 8,000,000 cfgpd well.

Vol. 12, No. 14, Sept. 11, 1913, p. 12, 14, 16. Oklahoma. Newkirk, Kay County. Medius & Co. completed a well to 1,019 feet for 25 bopd on the M. Jones Farm in the NE-1/4-SW-1/4-Sec. 2-27N-3E, 2 miles south of Newkirk, and 12 miles north of the Ponca City Field. There was some work done in this area about 10 years ago, but only one small well was completed, and since that time, operations have been idle.

Duncan, Stephens County. Probably the only show of oil in this field was that by C. N. Payne & Skelly in their well on the Colbert Tract in Sec. 12-1N-6W at 916 feet, but drowned out by water. The well was abandoned past the 2,000-foot mark, a few months ago.

Cimarron County. Approximately 200,000 acres has been segregated in Cimarron County, and will be leased for oil and gas. This is school land and belongs to the State of Oklahoma. A number of the large operators are interested.

Washita County and Custer County. G. F. White & Co., of Cushing, has considerable acreage in Washita and Custer Counties, and will probably drill soon.

Muskogee County, Crekola. Foltz & Co. have a gas well 1.5 miles south of Crekola on the J. T. Newbold Farm, in the E-1/2-NW-1/4-Sec. 16-14N-17E. About 2,000,000 cfgpd was found at 425 feet.

p. 26. Artesia, New Mexico. The Pecos Valley Oil Field, between Cottonwood and Carlsbad is 45 miles long by 25 miles wide. The Cottonwood oil well is shut in, waiting for a secure Government patent on the homestead. The well is 720 feet deep. The Pecos Valley Oil & Gas Co. owns the Brown well, and is opening 3 others. The Brown well yields 50 bopd, of 34° gravity oil, with much gas at times. This well has been opened for more than 4 years, but the strong artesian flow of water has not drowned out the oil. The Pecol Oil Co., Ltd., of New York and London, has 28,000 acres 25 miles west of Lakewood, and will drill there. The Carlsbad Oil & Gas Co. is drilling 8 miles southeast of Carlsbad. Many others wells are being drilled by other companies in the area (details given).

Vol. 12, No. 15, Sept. 18, 1913, p. 12, 14, 16. Stephens County, Loco Field. The Oklahoma-Diamond Oil Co. completed a test on the L. Blake Farm, from 704 to 728 feet, with 15,000,000 cfgpd, and, after striking lime from 728 to 735 feet, a sand was encountered from 735 to 771 feet, which had 2,000,000 cfgpd. The well was completed at 776 feet, for 17,000,000 cfgpd. The rock pressure is about 330 psi.

Carter County, Wheeler Field. The Wheeler Field is also known as the Oil City Field. The Santa Fe Railway Co. has drilled about 75 wells in the field. Others there are The Humble Co., The Lacey Oil Co., and the Idaho Oil Co. The Santa Fe wells are strippers, from 1 to 5 bopd, with a total of about 300 bopd. The other producers have about 95 bopd aggregate. Most of the work has been in Sec. 21-3S-2W, with tests in Secs. 8, 16, 17, 19, 22-23, 26-28, and 33, 35. The Santa Fe has 16 miles of 6-inch line to Ardmore, where it has a loading rack. Recently Santa Fe got a 5 bopd well in the NE-1/4-SW-1/4-Sec. 19-3S-2W, and a 10 bopd well in the NW-1/4-NE-1/4-Sec. 28-3S-2W at 915 feet. Scully Oil & Gas Co. will drill 5 wells in Sec. 32-3S-2W. A number of tests are also being drilled by other companies. A 300,000 barrel tank has been erected 1.5 miles northeast of Oil City. Gas has been found near Oil City and the Ardmore Gas Co. has 16 miles of 8-inch line to Ardmore, where it sells the gas at 25¢ per 1,000 cubic feet. Wheeler was the first settlement in the area, with population of 25. After Santa Fe began development in the early 1900's, Ardmore parties laid out a townsite near Wheeler in the heart of the oil country, and named it Oil City, which now has a population of 100. It is in the corner of Secs. 21,22,27,28,-3S-2W, Carter County. Wheeler had a post office on May 8, 1896, and the name was changed on Oct. 15, 1909.

Murray County. Scott & Co. of New York will drill some tests south of Sulphur. The first will be south of Nebo in 2S-3E. The company has about 8,000 acres, and the first well will be on the Black James Ranch. There are rich deposits of rock asphalt and sand asphalt in the area.

Pittsburg County. Approximately 25,000 acres of land has been leased in this county, mostly west and northwest of McAlester, with the Greenlees Brothers having the bulk of the leases. The Choctoka Oil & Gas Co. is another leaseholder. The Gap Oil & Gas Co. has a block of leases between Pittsburg and Atoka Counties. Some gas has been discovered in this part of the county.

Coal County. The Long Prairie Oil & Gas Co. will begin drilling shortly.

Lincoln County. The Sparks Oil & Gas Co. is drilling near Sparks and is down 1,350 feet on a townsite location.

p. 42, 45. Oklahoma. Wells. Completed and Drilling. Miscellaneous and Southern Oklahoma. (91 wells are listed). In Stephens County, Diamond Oil & Gas Co. had 3 wells in Sec. 6-3S-5W, their No. 5 being listed as a gas well.

Vol. 12, No. 16, Sept. 25, 1913, p. 3-4. Possibilities of the Caddo Country (La.),

by A. J. Hazlett. The Caddo Field area is producing about 35,000 barrels of oil a day and 50,000,000 cubic feet of gas per day. The largest town in the area is Shreveport, in northwestern Louisiana. Oil and gas is being produced 30 miles north of Shreveport, and in the town, and 50 miles south to Sabine Parish. The region is about 200 miles N-S by 50 miles E-W, extending into Texas. The Caddo Field proper is about 25 miles N-S long by 15 miles wide, north of Shreveport, around Caddo Lake. Legend has it that the lake bed was at one time high land, but in the earthquake of 1812, the area dropped 8 to 10 feet and formed a lake. It is full of stumps and trunks of dead trees standing in 6 to 8 feet of water. A Government dam is now being built 3 miles below Mooringsport, which will raise the level 4 feet. The main cities are Mooringsport, Lewis, Oil City, Vivian, Monterey, Trees, and Hosston. There are no bridges over the larger streams. Ferries are used in crossing streams. Oxen, bulls, and mules are used for heavy teaming in the oil fields. Oil City was where it all started about 10 years ago. It is a typical oil camp (picture). It was asked if the filthy streets and mud and hogs was unhealthy, and a native replied "Not that anyone can notice. Them 'ere hawgs growed up in this 'ere town an I never knowed one of 'em to be sick or die a natural death." Oil City has a population of about 500, and has about 50 one-story frame buildings and many shacks and tents. There is no stability. Trees is an inland station of Standard Oil Co. of Louisiana and is a model village, with a good hotel, library, school, and amusement halls. The best wells are from 2,300 to 2,400 feet deep, and cost about $10,000 to complete. This area is for rich men and big companies. Natural gas has been wasted, with millions of cubic feet per day plugged off or flared. Lines have been laid to Little Rock and Texarkana, Ark., on the north, to Marshall on the west, and Mansfield to the south, but enough has been wasted to supply New Orleans. The Texas Company recently revamped a 200 mile line to Port Arthur.

p. 4. Personal Mention. T. H. Bass, of the Kirby Oil Co. of Batson, Texas, was in Shreveport, La., a few days, in the interests of his company.

T. W. Brown, N. A. Hemphill, C. S. Stever, and J. W. Eaver, all of pittsburgh, Pa., were in Ponca City attending a meeting of the 101 Ranch Oil Co., in which they are interested.

p. 6,8. Noted in Passing. The Standard Oil Co. of Louisiana has obtained a charter to do business in Arkansas. Its headquarters will be at Little Rock.

Central Texas Oil Co., drilling on the west side of the Berthelsen Lease in Limestone County, Texas, 3 miles west of Mexia, brought in a dry gas well at 710 feet. This makes the 13th dry gas well near Mexia.

A St. Louis person writes of an opportunity for leasers in Chicot County, Arkansas, and Washington County, Miss., on both sides of the Mississippi River, in the vicinity of Lakeport, Ark., and Wayside, Miss. He asserts that strong indications of oil and gas exist at both places.

Mr. Conrad L. Zacher was born in 1850. He was an orphan, in Ohio, and raised by foster parents. He came to Kansas in 1879, and began work for the Standard Oil Co. When oil was discovered in Montgomery Co., Kansas, he made the first shipment out of Kansas. He will retire on November 1, after 34 years with Standard, and will receive a pension of $370.50 a year. He intends to go to California.

p. 8,10. In the Courts. "Death Valley Scotty", whose real name is Walter Scott, is in action again, having recently brought suit against the Chamber of Mines and Oil of Los Angeles, alleging damage to his character, for $50,000, because of criticisms of his methods in treating mining and oil deals.

In Oklahoma, drilling a well for oil and gas is not mining according to Judge Brewer of the Supreme Court of Oklahoma. Also, there is no conflict between the State and Federal Constitutions as to the common-law doctrine of fellow servants, and where the doctrine has not been abrogated or modified, the master is not liable for an injury occasioned by such servant's co-laborers. This case was the first to come before the Oklahoma Supreme Court.

p. 14-15. Oklahoma. Newkirk Field, Kay County. With the new discovery, leases are costing $2,500 to $4,000 for 80 acres. During the past two weeks,

there has been an influx of oil people, and the hotels and rooming houses are packed. The price of meals has doubled. A new well was completed by the Ponkirk Oil & Gas Co. on the T. K. Murdock Farm in the SW-1/4-Sec. 2-27N-3E, which had 15 bopd of 40° gravity oil at 1,019 feet, but started off at 200 bopd. Many wells have been started.

Pushmataha County. The Impson Valley Oil & Gas Co. is at 400 feet in the SE-1/4-Sec. 3-2S-15E. The company has 3,000 acres under lease and expects to drill 3 wells.

Carter County, Healdton. The Red River Oil Co.'s test on the McClure Tract in the SE-1/4-SW-1/4-Sec. 5-4S-3W, one-half mile northwest of the discovery well, is making 30 bopd. There is an influx of oil people in Healdton. The offset well was at 900 feet and got 8 barrels and about 200,000 cfgpd. Many wells are now being started.

Jefferson County, Addington. The Berlin Oil & Gas Co. is down about 700 feet in Sec. 3-4S-6W.

Kiowa County, Gotebo. West & Rosser have a well at 8 bopd on the John H. Schmidt Farm in the SW-1/4-Sec. 27-7N-16W. W. B. Badgett has a 15 bopd well in his No. 5 on the S. B. Watkins Farm in the SW-1/4-Sec. 27-7N-16W. Vandersole & McJunkin have a gas well for 1,000,000 cfgpd in the SW-1/4-Sec. 6-6N-16W. Many more wells are being drilled.

p. 37. Production and Value of Petroleum in the United States, 1859-1912. Compiled by W. M. Dunham, Tulsa, from records of the U.S. Geological Survey.

Year	Yearly Production (barrels)	Daily Average Production	Cumulative Production	Total Value
1859	2,000	6	2,000	$32,000
1860	500,000	1,670	502,000	4,832,000
1861	2,113,609	5,791	2,615,609	5,867,668
1862	3,056,690	8,375	5,672,299	9,077,193
1863	2,611,309	6,332	8,283,608	17,302,856
1864	2,116,109	5,797	10,397,717	38,199,432
1865	2,497,700	6,843	12,897,417	54,659,285
1866	3,597,700	9,857	16,495,117	68,114,683
1867	3,347,300	9,170	19,842,417	76,181,676
1868	3,646,117	9,989	23,488,534	89,398,850
1869	4,215,000	11,548	27,703,534	113,129,300
1870	5,260,745	14,413	32,964,279	133,633,054
1871	5,205,234	14,261	38,169,513	156,224,234
1872	6,293,194	17,242	44,462,707	177,664,737
1873	9,893,786	27,106	54,356,493	195,765,201
1874	10,926,945	29,937	65,283,438	208,412,728
1875	8,787,514	24,075	74,070,952	215,780,861
1876	9,132,669	25,021	83,203,621	238,763,683
1877	13,350,363	36,576	96,553,984	270,552,249
1878	15,396,868	42,211	111,950,852	288,596,769
1879	19,914,146	54,560	131,864,998	305,807,477
1880	26,286,123	72,017	158,151,121	330,408,115
1881	27,661,238	75,784	185,812,259	353,920,166
1882	30,349,897	83,151	216,162,256	377,551,331
1883	23,449,633	64,246	239,611,889	403,291,583
1884	24,218,438	66,352	263,830,327	423,768,507
1885	21,858,785	59,887	285,689,112	442,962,201
1886	28,064,841	76,890	313,753,953	462,990,658
1887	28,283,483	77,490	342,037,436	481,847,264
1888	27,612,025	75,649	369,649,461	499,797,617
1889	35,163,513	96,330	404,812,974	526,760,957
1890	45,823,572	125,571	450,636,546	562,126,062
1891	54,292,655	148,747	504,929,201	579,652,615
1892	50,514,657	138,396	555,443,858	618,559,078
1893	48,431,066	132,688	603,874,924	647,491,404
1894	49,344,516	135,190	653,219,440	683,013,499

1895	52,892,276	144,910	706,111,716	$704,704,778
1896	60,960,361	167,012	767,072,077	799,223,487
1897	60,475,516	165,686	827,547,593	840,153,098
1898	55,364,233	151,710	882,911,826	884,346,457
1899	57,070,850	156,358	939,982,676	948,950,361
1900	63,620,529	174,303	1,003,603,205	1,024,703,052
1901	69,389,194	190,107	1,072,992,399	1,091,120,387
1902	88,766,916	243,197	1,161,759,315	1,162,299,297
1903	100,461,337	275,236	1,262,220,652	1,256,993,347
1904	117,080,960	320,770	1,379,301,612	1,358,168,802
1905	134,717,580	369,081	1,514,019,192	1,442,326,201
1906	126,493,936	346,556	1,640,513,128	1,534,770,936
1907	166,095,335	455,056	1,806,608,463	1,654,877,685
1908	178,527,355	489,116	1,985,135,818	1,783,956,869
1909	183,170,874	501,838	2,168,306,692	1,912,285,356
1910	209,557,248	574,129	2,377,863,940	2,040,185,044
1911	220,449,391	603,971	2,598,313,331	2,174,229,796
1912	222,538,604	609,695	2,820,851,935	2,338,317,138

Vol. 12, No. 17, October 2, 1913, p. 14. Oklahoma. Wildcats. Hughes County. Wetumka. B. B. Jones has a test on the Winters Farm one mile west of Wetumka in Sec. 24-9N-10E, and has 2,000,000 cfgpd with some oil.

p. 30. Oklahoma. In Oklahoma for the month of September 1913, 53 new gas wells were completed for 378,550,000 cfgpd new production. The largest well of the month was in the Hamilton Switch Field where the Mid-Continent Oil & Development Co. got a 48,000,000 cfgpd well on the Berryhill Farm in Sec. 18-14N-13E. In the Morris Field, the Producers Drilling Co. No. 1 Forshee in Sec. 32-13N-13E got 25,000,000 cfgpd.

Stephens County. The Ardmore Gas Co. will probably build an 8-inch line for 16 miles from the Loco Field to their line at Oil City. The wells in the Loco and Duncan Fields have about 100,000,000 cfgpd reserves, and produce from a 700-foot sand, with rock pressures from 245 to 330 psi. Seven gas wells have been completed in southwestern Oklahoma during September 1913. The Oklahoma-Diamond Oil Co. completed a 15,000,000 cfgpd well in Sec. 10-3S-5W on the Allen Tract, with 275 psi pressure, in the Loco Field. Their No. 2 well in the same tract had 10,000,000 cfgpd. They also completed a well near Loco at 728 feet on the Blake Farm for 15,000,000 cfgpd.

Creek County. The Billings Oil & Gas Co. completed a well for 1,000,000 cfgpd on the Davis Farm in Sec. 8-16N-9E, near Bristow.

Vol. 12, No. 18, Oct. 9, 1913, p. 2-4. Immense Gas Wells of Louisiana. by A. J. Hazlett (with pictures). Natural gas in Louisiana has been wasted while looking for oil. The State Conservation Commission and many of the companies now realize that this is an enormous waste of money and a loss to the companies and to the state. The State Conservation Commission has only been in existence since last January 1913. There is a monster gas well near Oil City in the Caddo Field, in a 300-foot diameter body of water. In the center there is a tower of water 20 to 30 feet in diameter, rising and falling 10 to 15 feet. The well is in Caddo Parish, one mile east of Oil City, in Sec. 7-20-15, and is known as the Dawes Well. McCann & Harper, of Shreveport, were the contractors. Drilling was started on March 17, 1908. Its history reads like a tale from the "Arabian Nights". For 5 years it has been wasting an average of 15,000,000 cfgpd. At 20¢ a thousand, this is a loss of $3,000 a day or now $5,475,000. When this well was on fire, the flame was 30 feet wide and 60 feet high, and it could be seen for 40 miles. Trees within one quarter mile were killed by the intense heat. The well was drilled to 2,065 feet, and contained 76 feet of 10-inch casing, and 954 feet of 8-inch casing. On May 11, 1908, during a heavy rain storm, when about 350 feet off bottom with 4-inch pipe, the well blew out from 1,360 to 1,420 feet. On May 13, 1908, while trying to kill the well, the derrick was destroyed by a cyclone. The 8-inch casing leaked at 780 to 852 feet, and the gas got to the 10-inch casing, and this split about 20 feet below the surface, and blew out. They tried to cap

the 10-inch with a 14-inch pipe, with concrete weights, but the well blew out laterally in crevices for 200 feet. On June 18, 1908, the well was lighted. Recent attempts to kill the well by pumping in mud into the old hole were stopped when they pumped water from the hole and found a crater 80 feet in diameter, with no casing. A relief well will have to be drilled nearby and angled into the deeper strata, and mud will have to be pumped into the producing horizon. This is one of many wells that have to be controlled. Some wells produce at 65,000,000 cfgpd. One well that blew out had cracks one-half mile long, and the gas came up in the bed of Caddo Lake. The well at Dixie has been flowing wildly since Sept. 1, 1907. A well recently completed, had 82,000,000 cfgpd at 820 psi pressure, which will give the reader some idea of the volumes involved. Many wells are completed at 780 feet deep, but some are 2,000 feet deep, with pressures from 150 to 900 psi. The district extends to 50 miles south of Shreveport, to near Mansfield in DeSoto Parish, and another 50 miles south of there to Sabine Parish. The gas in this area is 95% methane, 2.56% nitrogen, 2.34% carbon dioxide, and 0.01% hydrogen sulphide. (The Dawes well was killed on Sept. 28, costing $5,000.)

The yearly waste of natural gas in the United States is estimated to be $23,000,000. In Oklahoma, it is $7,500,000, in Louisiana, $5,500,000, and in California $8,000,000. Companies act like there is an unlimited supply.

p. 4. Another Use for Petroleum. Petroleum oil has been used as an adulterant in cream filler in wafer sandwiches. Seizure of cream wafers at Cincinnati, Ohio, has just been made by the U. S. Attorney, on report by the Secretary of Agriculture. The shipper was the Leonard Products Co. of Brooklyn, N.Y. About 20% of the cream is mineral oil, a lubricant and not a food product, and was substituted in place of butter or coconut oil. This is in violation of the Federal Food and Drugs Act. The court will decide the issue later.

p. 8. Noted in Passing. A hole was being drilled for water on the Joe Knight Farm one mile south of Dewey, in 27N-13E, Washington County, and oil was struck at 77 feet, for 20 bopd. An effort will be made to develop a shallow pool in this area.

p. 12, 14. Oklahoma. Healdton, Carter County. With two wells now completed, the town of Ardmore is busy. Oil producers, leasers, drillers, and tank builders are in the hotels, and maps are scattered everywhere. Grafters, as usual, are in the area. Leases are $200 an acre near the wells, and $15 to $50 two miles away. The Twin State Oil Co., which is the Oklahoma branch of the Sun Co., through N. H. Cole, has purchased 1,000 acres from the Crystal Oil Co. The land is just south of the discovery well. Crystal has an additional 1,500 acres. The second well by the Red River Oil Co. on the McClure Farm in the SE-1/4-SW-1/4-Sec. 5-4S-3W got 2,000,000 cfgpd from two sands at 811 and 852 feet, with oil, and seems to be better than the discovery well. It will be drilled deeper to the 900-foot pay, where the initial discovery well is producing. Many more wells are now being drilled. (Details given).

The Hewitt Oil & Gas Co. is drilling a well near Hewitt in Sec. 26-4S-2W, and has a rainbow of oil at 740 feet.

Stephens County. Duncan Field. The Washita Oil & Gas Co. had a dry hole at 1,100 feet in their third test on the Williamson Tract in the E-1/2-W-1/2-Sec. 12-1N-6W. This was in the same corner with two good gas wells on the same farm, the initial well being 6,000,000 cfgpd in the 900-foot pay, and the No. 2 being 10,000,000 cfgpd at 780 feet.

Seminole County, Wewoka. The Wewoka Oil & Gas Co., organized by local talent, has a well on Lot 10, Block 38, 200 feet north of the old well that was destroyed 4 years ago on Block 53 and which was reported as a producer. The Oklahoma-Tennessee Oil Co. has a fishing job in Sec. 1-7N-7E.

Greer County, Granite. A. T. Anderson has a 3 bopd well near Granite, at 130 feet on the Armstrong Farm in Sec. 10-6N-21W.

McClain County. The Zelma Oil Co. has an oil show at 600 feet on the Redmond Farm in Sec. 16-9N-4W, about 16 miles south of Oklahoma City. (said to be near the town of Zelma?). The well is to be drilled to 2,000 feet.

Okmulgee County. Morris Field. The Boock sand is the producing sand that has been struck in the past three months near Morris. A well of the gusher class was finished in this sand the past week. This gives Morris another good producing area. The well of Kimbley, Martin & Co. on the Hattie Colbert Farm in Sec. 35-14N-14E, had 42 feet of sand, and has settled down from 800 to 500 bopd.

p. 43. Oklahoma. Wells Completed. Stephens County. Loco Field.

Sec. 10-3S-5W,	Southwest Oklahoma Oil Co. No. 2 Allen,	gas well
15-3S-5W,	Southwest Oklahoma Oil Co. No. 1 Bohan,	gas well
15-3S-5W,	Oklahoma Diamond Oil Co. No. 3 Blake,	gas well
15-3S-5W,	Washita Oil & Gas Co. No. 1 Bowman,	gas well
15-3S-5W,	Oklahoma-Diamond Oil Co. No. 1 Allen,	gas well
3-3S-5W,	McQueen et al #1 Chase,	gas well
Kiowa County. Gotebo area.		
Sec. 27-7N-16W,	West & Rosser No. 1 Schmidt,	6 bopd
27-7N-16W,	Badgett & Co. No. 5 Watkins,	7 bopd
35-7N-16W,	Della-Dean Oil Co. No. 2 Richerts,	4 bopd
29-6N-16W,	Bennett et al No. 2 Brown,	5 bopd
2-6N-15W,	Ward & Sherman No. Gibbons,	3 bopd

p. 45. Oklahoma. Wells. Drilling. (69 wells, miscellaneous and southern Oklahoma). Wells are being drilled in Jefferson, Caddo, Comanche, Pontotoc, Stephens, Carter, Kiowa, Murray, Love, Tillman, and miscellaneous counties. (details given).

p. 47. Recent Incorporations. Par Value Oil & Gas Co., of Tulsa, with stock of $100,000, was incorporated by S. Webster, J. S. Lewis, and E. R. Perry.

Sherman Machine & Iron Works, of Oklahoma City, with $100,000 stock, was incorporated by N. W. Sherman, W. S. Sherman, and N. V. Hope.

Oil Creek Oil & Gas Co., with $10,000 stock, was organized at Tulsa, by H. H. Wilcox, F. W. Smith, W. A. Porter, and J. T. Nixon.

Vol. 12, No. 19, October 16, 1913, p. 4. Instruction in the Movies. S. A. Guy, of Shreveport, La., has had moving picture reels developed from pictures taken of the Brown Brothers' burning oil well, and has already shown them. He also has reels showing the development of a well. Through the courtesy of the Standard Oil Co. he also shows the process of refining, and the byproducts. This is the first time that movies have been used to portray the oil industry before the public.

p. 8. Noted in Passing. Standard Oil Co. of Louisiana is starting in business in Arkansas. It recently established headquarters at Little Rock and is building a number of supply stations in the State. It is now planning a large supply station at Paragould. It is also reported that Magnolia Petroleum Co. will invade Arkansas.

p. 13. Food Substitutes from Oil. Dr. Robert Kennedy Duncan, of the University of Kansas, says that he can make all kinds of things from petroleum, in the line of pie crusts, jellies, imitation lobster flakes, and the like. At the present time, more than 700 products are known to be manufactured from petroleum. Scientists can take hydrocarbons and change them to fatty acids, and, combining these with glycerine, can produce a new food.

p. 14, 16. Oklahoma. Inola, Rogers County. The pay here is at 560 to 600 feet, and centers about an area 4 miles west of Inole on the Verdigris River. This has attracted attention for the past 4 weeks. There is no pipe line to the area as yet. About 15 wells are now producing 750 bopd. Three dry holes have been drilled. The wells are mostly in 19N-16E.

Cotton County, Randlett. J. P. DeFore, of Neodesha, Kansas, has a well 2-1/2 miles northeast of Randlett, on the Blood Farm, in the NW-1/4-NE-1/4-Sec. 22-4S-12W, 900 feet east of the west line and 600 feet south of the north line. Leases are 50 to 200 dollars an acre.

Kiowa County, Roosevelt. Black & Waite are starting a test on the NE-1/4-Sec. 24-5N-18W, near Roosevelt. A well will be drilled 3 miles east of Snyder.

Blaine County, Watonga. The Watonga Oil & Gas Co. will drill a well near town. C. M. Hapgood will drill the well.

Vol. 12, No. 20, October 23, 1913, p. 2. Death Claims Another Genius. Diesel. Dr. Rudolf Diesel has died. He was born in 1858. He invented the Diesel Engine, which burns crude-oil, cutting the cost of industrial power in half.

p. 3. New Oil-Burning Battleship. The British battleship Queen Elizabeth, equipped for the use of oil for motive power, was launched at Portsmouth, England, on October 16, 1913. Details of her construction are kept secret. She has 10 15-inch guns, and other 4-inch and 6-inch guns. The substitution of oil for coal gives the ship greater economy of weight for guns. If successful, probably all the large warships of the British Navy will be so constructed.

p. 14. Oklahoma. Rogers County. Claremore. The nearest production to Claremore is about 5 miles north of town, where the New York Oil Co. has 5 wells averaging 5 bopd each. They were drilled about 3 years ago, and produce at about 985 feet. The first well drilled at Claremore was about 10 years ago. The Methodist Church is now standing over the site. The well was drilled to 850 feet, with a showing of oil at 600 feet. The second well was drilled a short time afterwards on the lot now occupied by the Maberry Implement Warehouse. It was drilled to 900 feet, with quite a showing of gas at 600 feet, the gas being used by several families for several years. The 3 radium wells, one mile northeast of town, followed next, their average depth being about 1,400 feet. The most important test drilled was the well about 4 miles west of town, just across the Verdigris River. It was drilled to a depth of 2,999-1/2 feet, with more than 200 feet of the Mississippi lime in the hole. Two wells were then drilled north of Claremore, to 700 feet, which supplied the town with gas for a year, then drowned out, but farmers still use the wells locally for some fuel. About 7 years ago, Charles Page, of Tulsa, drilled a test 3 miles east of Claremore, to 800 feet, with some gas. About a year ago, Hicks and others drilled a well one location north of the Page well, and got 6 feet of sand at 195 feet, and 8 feet of sand at 840 feet. About 5 years ago, radium water was tapped at 1,200 feet in a well due south of the Page well, and it is still flowing. Five dry holes followed in the same area, with only one, the Taylor, having a show of oil at 660 feet. Sheets Brothers drilled a dry hole on the Fortune Farm, several miles northwest of town, with an oil show at 900 feet. They also drilled a dry hole just north of their first well, in the next township. Two miles west of Claremore, Buehl and others drilled to 1,033 feet, with a showing of oil at 450 feet. A test on the Taylor Farm, west of town, had oil and gas at 550 feet. A test farther north of the Taylor, near the town waterworks pumping station, had a nice showing of oil at 550 feet. About 3 miles west of town, two dry holes were drilled. The above is only a partial list of the tests in and around Claremore that were drilled in the past 10 years. From this work, it seems that the best chance for a pool is northwest of town near the Taylor well, or east of town near the 3 gas wells.

p. 19. Mr. Ufer Sells Interest. Frank B. Ufer has disposed of his oil and gas holdings in Oklahoma and Kansas to H. F. Sinclair and P. J. White, of White & Sinclair, for several hundred thousand dollars. Mr. Ufer is retiring from the oil business permanently. He retired from the directorate of the Exchange National Bank.

Vol. 12, No. 21, October 30, 1913, p. 1. Oil Fuel in Next World War. In a recent issue of the American Review of Reviews was an article on the part that oil would probably play in the event of a world war. In a great war, such as all the European Nations are preparing for, there will be no respecting of the rights of non-belligerents who are not powerful enough to protect themselves. The oil fields of the lesser powers would undoubtedly be seized by the first Nation that felt it could further its ends by their possession, such as the fields of Roumania, Dutch Indies, Sumatra, Borneo, and Mexico. If the United States became hard pressed for oil in a war, they might seize the Mexican fields. Austria might take the Roumanian

fields. Russia has plenty of oil, but it might not allow an enemy to have the Roumanian fields. With the Japanese alliance a fact, the oil fields of the Dutch East Indies could be taken over by Great Britain, provided that their Navy is strong enough. If not, the Japanese would take possession.

p. 4. U. S. Survey Work in Osage County. Quite a lot of work is planned for the year 1914 by the U. S. Geological Survey. Men are now engaged in mapping the southern part of the Osage Reservation, under R. H. Wood, who covered the northern part last year. Parties of the Oklahoma Geological Survey will study the area west of the Pawhuska and Hominy quadrangles.

p. 4. Personal Mention. W. A. Evans, of Kiowa, Oklahoma visited Healdton. He is connected with the Reese-Evans Oil Co., which is doing some work in Pittsburg County.

E. M. Roberts, of Bliss, Idaho, affiliated with the Idaho Oil & Gas Co., is visiting Ardmore. The company has developments and production in Oil City and expects to do some work in the new Healdton Field.

W. C. McBride, of St. Louis, Mo., a well-known oil producer in the Mid-Continent, has been elected a director of the Commonwealth Trust Co. of St. Louis. He recently gave his daughter a wedding present of $100,000, and gave a like fund for building a church in St. Louis.

p. 4. Noted in Passing. Experiments with natural gas compressed in tanks for fuel for automobiles is said to be working out satisfactorily in the oil fields of West Virginia.

On October 24, the General Education Board announced that $1,950,000 in grants were given to educational institutions. The Board was founded by John D. Rockefeller nine years ago, in 1904. The grants were: $1,500,000 to Johns Hopkins Medical School, Baltimore, Md.; $200,000, Barnard College, New York City; $200,000 to Wellesley College, Wellesley, Mass.; and $50,000 to Ripon College, Ripon, Wisconsin.

p. 8, 10. Charles Page (portrait). An Oil Man Who is Philanthropic. By A. J. Hazlett. Charles Page was born in 1860 in Wisconsin. His father died when he was 10 years old. He got a job carrying telegraph messages from the railroad station. He raised chickens, rabbits, and livestock, and learned to trade with people. Later he worked as a lumberjack for 2 or 3 years, and then had a general store in Duluth and another in Superior. Later, he went to Everett and Tacoma, Washington, and then to Victor, Colorado, where he and his wife were practically broke. He, with Isaac Canfield, drilled the first well in the Boulder Field, in 1895. He sold out in 1900 for $11,000 in cash and came to Oklahoma. He drilled the first wells at McLoud, Chandler, and New Taneha, Oklahoma, shortly thereafter, all dry holes. He developed properties and sold them, and finally got some luck. His largest deal was when he sold properties in the Glenn Pool to Graham & Harmon for $1,250,000, and now has a daily income of more than $1,000. He remembered his hardships as a child, with his mother and her 8 children, and decided to build an orphanage at Sand Springs and a home for the elderly and homeless, 8 miles west of Tulsa, Oklahoma. He purchased 8,000 acres on the north bank of the Arkansas River and along the Katy Railroad. He laid out a townsite, laid cement sidewalks, and put in sewage, waterworks, and electricity, and natural gas, and built an electric railway to Tulsa, with a park midway between, for $600,000. He built an orphanage, where 100 children live, and a home for the elderly, where about 100 elderly people live. He has financed the building of industrial plants in the area, and has homes for 1,000 people. He has about 25,000 acres in fee or under lease in the area, and has many wells, especially south of town, in the Lost City Field, which supply gas to the area. He only produces one-eighth the capacity of each well, and frequently gives his wells a rest. He lives in Tulsa, but will now probably build a residence at Sand Springs. About 1,500 people now live in Sand Springs, and the Pierce Oil Corporation and the Phoenix Oil Co. have refineries there. The orphanage has been maintained for 6 years.

p. 14-15. Oklahoma. Healdton. The second well drilled by the Red River Oil Co. is producing about 40 bopd. However, this was not immediately known, and rumors in Oklahoma City and Houston had the well producing 500 to 5,000 bopd. This is the only late producer in southern Oklahoma.

Blaine County. The Watonga Oil & Gas Co. has started a well on the Matli Farm in Sec. 11-16N-11W, 3 miles northeast of town, and will go to 2,000 feet.

Pittsburg County. The Reese-Evans Oil Co. is drilling 7 miles west of Kiowa, and is down about 500 feet. Three gas sands occur near here, and the company has some producers; the pay being at 460, 860, and 1,260 feet deep.

p. 16, 18. Frank B. Ufer Retires from Business. Frank B. Ufer was born in the Genessee Valley of New York, on a farm. At age 14 he landed broke in Billings, Montana, at the end of the railroad line then. He went to work on a ranch, riding fence lines. He was a good horseman, and soon had some cattle of his own. The Sioux uprising came, and put him out of business. He and his pal, "Curly" McDonald enlisted as volunteer scouts in the U. S. Army under Nelson A Miles. He served through the Sioux campaigns until Sitting Bull and American Horse were stopped, and then went back to herding cattle. Then came the last uprising of the Apaches in northern Colorado. He and Curly again served under General Miles, and were scouts under Captain Lawton, the later governor-general of Cuba who was killed in the Philippines. They reported to Capt. Lawton at Albuquerque, and then began the march into Mexico. They chased the Apaches for weeks, until Geronimo and Natchez were caught in Sonora. Ufer and McDonald accompanied the captured Apaches as far as San Antonio, and their term of service ended. Ufer then went to Arizona, and did some mining and ranching, working at Globe and Silver City. Just about that time, the boom was on in Colorado, and for year he lived in Denver, Cripple Creek, Gunnison, Telluride, and Silver City, Colorado. He finally came to Independence, Kansas, in 1904, and entered the oil game, ending up in the business firm of White, Sinclair & Ufer. Mr. Ufer has testimonials from General Lawton and General Miles, but has refused to tell stories about the campaigns in the 1870's and 1880's. Nor will he sit for a photograph. He only has one picture of himself when he was a boy in New York. He is of German descent, and just returned from Germany on a vacation. He was one of the organizers and an original director of the Exchange National Bank in Tulsa.

p. 17. Incorporations. The Elzey-Moffet Oil & Gas Co., of Ardmore, with $10,000 stock, was incorporated by S. B. Elzey, J. D. Moffett, Frank Scivally, Granville Hodges, and Isaac Roberts.

Vol. 12, No. 22, Nov. 6, 1913, p. 1. Magnolia to Build New Line. Magnolia Petroleum Co. will build an 8-inch line for 230 miles from the Cushing Field to Petrolia, Texas, to handle 20,000 bopd, according to David C. Stewart, vice-president and general manager of the company.

p. 1. Prospects for Oil in Alaska. The only production in Alaska is near Katalla, in a narrow strip south of Sitka, where a half-dozen shallow wells have been producing for several years. One of these wells was drilled deeper this year. The oil is refined on an island near Katalla, and sold nearby. Only one company has worked here. The oil is of a good grade, and occurs in seepages, which led to the discovery.

p. 1-2. Will Demand Exceed Supply? With rapid increase in production of crude oil, there have been few periods when demand has not been equal to supply. Durin the past few years, there have been so many new uses for petroleum, that, unless new fields are discovered, the demand will be greater than the supply. Oil has taken the place of coal, and will be supreme, unless the supply falls off.

p. 2. Dr. Diesel Was Improvident. Late reports seem to leave but little doubt that Dr. Rudolf Diesel, the inventor of the Diesel crude-oil internal combustion engine, during a temporary mental derangement, deliberately stepped off the boat on which he had taken passage from France to England. Sometime after he had mysteriously disappeared, the body of a man was found along the coast by a fisherman, who was unable to bring it ashore because of a severe storm. The fisherman saved several articles from the body, which were afterward recognized

by Dr. Diesel's son as having belonged to his father. Like most inventors, Dr. Diesel died poor. He left unsecured debts amounting to $125,000, and mortgage debts amounting to $150,000. His widow has placed the furniture of their home at the disposal of his creditors, leaving the family entirely unprovided for. Dr. Diesel gave up his last insurance policy last August, at its surrender value, to secure funds to carry on his experimental work. His creditors have decided to avoid bankruptcy proceedings and will attempt to liquidate his assets gradually.

p. 2. Central Fuel Company. After 3 years of litigation, the Central Fuel Oil Co. suit with The Texas Company was settled, with The Texas Company owning the 47,000 acres and 4,100 bopd in the Osage and Cherokee Nations. The reorganized company will be named the Central Petroleum Co., with David F. Connolly, of Tulsa, being vice-president and general manager. There was 3,000 pages of litigation. Central was originally organized by William S. Porter, of San Francisco, and was intended to supply fuel oil for the Southern Pacific Railroad. George C. Priestley and P. D. McConnell, of Bartlesville, were among the original promoters. About 25 companies were involved (details given). The Texas Company was to deliver the oil, and Central Fuel was to supply the oil.

p. 4, 6. Personal Mention. C. W. Shannon, state geologist of Oklahoma, made an inspection tour of the oil fields of southwestern Oklahoma last week.

T. J. Redd, personal representative of Gunsburg & Forman, of Buffalo, N.Y., has moved from Tulsa to Ardmore, to look after securing some leases for his firm.

E. M. Jennings, M. Murphy, and M. Murphy, Jr., all of Pittsburgh, Pa., were in Tulsa. Mr. Jennings is the head of the Quaker Oil & Gas Co., and Mr. Murphy is president of the Pure Oil Co.

C. V. Linsman, gross production tax clerk in the office of the State Auditor of Oklahoma, is checking various oil, gas, and coal companies, to see that they make out proper reports.

J. E. Smith, of Pleasant Plains, Arkansas, was in Tulsa. He says that 2 tests were recently completed near Pleasant Plains with light showings of oil. They were drilled to 1,200 feet, and he wants capital to go deeper.

Howard R. Hughes, president and manager of the Sharp-Hughes Tool Co., of Houston, Texas, has returned from California. He invented the rotary rock drill bit which bears his name, and enjoys an international reputation. He will probably have an agency in California to sell the bits there.

C. N. Payne, of Titusville, Pa., is in Tulsa, after a trip to Scotland, where he played golf on the links at St. Andrews, where the sport originated 48 years ago. He is president of the Magnolia Petroleum Co.

p. 6. Noted in Passing. Adolphus Busch, the St. Louis millionaire brewer, left an estate valued at $50,000,000. His chief oil holdings were in the Caddo Field, of northwestern Louisiana, and are valued at $1,000,000.

A booklet on the Standard Oil companies was issued by F. S. Smithers & Co. of New York City, and is one of the most complete works on these companies, giving much information on each company after dissolution.

p. 16, 18. Oklahoma. Owasso. Northwest of Owasso, Tulsa County, the Mallory & Lewis well on the Arrowwood Farm in Sec. 25-21N-13E, has 125 bopd at 1,180 feet, with 7 feet of pay to 1,187 feet. This has caused some excitement, and leases are $10 to $30 per acre. The well is close to a number of dry holes. Three-fourths of a mile west is a small gas well. If this is a pool, it will be small.

Coweta, Wagoner County. Chase, Zeigler & Irwin have a well 1 mile north and 1/2 mile west of Coweta in Sec. 12-17N-15E. They have about a 75-bopd well at 1,475-1,478 feet. This wildcat is deeper than other producing wells in the area and may open up a deeper pool in this field.

Vian, Sequoyah County. A report was received that a gas well was completed at 1,600 feet near Vian.

Oklahoma City. Three wells are drilling near the city. The Merchants Oil & Gas Co. of Oklahoma City is starting on the George M. Housch Farm in the SW-1/4-Sec. 5-11N-2W, 5-1/2 miles southeast of the city limits in Oklahoma County. The Oklahoma Mutual Oil & Gas Co. is down to 1,150 feet northeast of town. The Zelma

Oil & Gas Co. is drilling 16 miles southwest of Oklahoma City, in northern McClain County.

Lawton, Comanche County. Epstein & Co. are at 800 feet in Sec. 31-2N-10W, 200 feet from the test on the Marple Tract, which attracted so much attention for a while. (Other wells are drilling; details given).

Stephens County. Many rigs have been moved to the Healdton area of Carter County. In the loco area, the Oklahoma-Diamond Oil Co. is drilling on the Blake Farm in Sec. 14-3S-5W, south of where the first gassers were found. (A number of wells are listed in the Duncan Field area also).

p. 24-25. Foreign Investments in Oklahoma. by H. G. James. Paul Arbon believes that there are Dutch, English, and French capitalists who have invested about $20,000,000 in Oklahoma oil securities. The largest concern is the Union des Petroles of France, incorporated in Paris in June 1911, for $8,000,000 or 40,000,000 francs. It has 24,950 acres in Oklahoma, with 2,996 acres in the Glenn Pool, with 100 producing wells, and 21,945 acres in the Cherokee shallow-sand district, with 571 producing wells. Since 1911, the company has expanded, and now has 1,200 producing wells with 4,000 bopd production, and is drilling 10 wells.

The Royal Dutch began in Oklahoma with purchases in the Glenn Pool, through J. E. Crosbie of Tulsa. Now they have about $5,000,000 invested in Oklahoma, with holdings from Kansas to the Canadian River, and are considered one of the fifth biggest companies operating in Oklahoma, with the Prairie Oil & Gas Co. being first, Gulf Pipe Line Co. second, The Texas Co. third, and Union Oil Co. fourth with 4,000 bopd. The Cushing Field is not as yet included, and there may be one or two operators with larger production. The Dutch purchases were in 1909.

The Asiatic Petroleum Group of London formed the Roxana Petroleum Co. in the United States to purchase the Bell interests and others in the Bartlesville and Cleveland Fields for about $2,000,000, with about 180 producing wells, and 3,500 bopd production. Asiatic was organized in 1911 to take over the properties of the Anglo Saxon Petroleum Co., with $15,250,000 capital stock, covering Egypt, Federal Malay States, the India Co., the Straits Settlement Co., and the Dutch Indies Co. The Roxana has offices in Tulsa.

The Oklahoma Oil Co., Limited was incorporated for $750,000, to purchase the holdings of the Canadian Oil & Gas Co., consisting of 3,120 acres and 87 producing wells, chiefly in the Bartlesville and Tulsa districts, in 1910. John Steele manages the company, and they are now drilling in the Keystone district about 15 miles west of Tulsa.

In 1910, the Premier Petroleum Co. purchased properties and wells from Gunsburg & Forman and Lovell in the Cherokee shallow-sand area, for $1,250,000.

In late 1911, a French firm bought 40,000 acres and wells from Barnsdall & Robinson for $800,000, in Okmulgee County.

The Oil Fields of Oklahoma Co., an English syndicate, was organized in April 1911, to acquire leases south of Sulphur in Murray County. They also had some acreage, about 190 acres, and wells in the Alluwe Field, They had $1,000,000 in stock.

The Alluwe Oil Syndicate, Ltd., was organized in London in 1911 to purchase holdings in the Alluwe Field from H. F. Mitchell, forming a company called the Kansas-Oklahoma Oil Co. to operate the properties.

The Tulsa Oil Co., a part of the Union des Petroles, was registered on June 28, 1912, to purchase more of the Glenn Pool extension, together with 7,500 acres in the Haskell Pool, for $135,000. Prof. C. N. Gould, State Geologist of Oklahoma, reported on these properties.

The Pawnee-Cleveland Oil Fields, Ltd., was organized in London in Jan. 1913, to purchase leases of 320 acres from H. F. Jackson in the Cleveland Field in Pawnee County, for $25,000.

The Glenn Pool Oil Co., Ltd. was organized in Feb. 1913 in London, for $50,000, to acquire property in the Glenn Pool.

In 1910, the Premier Petroleum Co. was registered in Maine, to acquire 3,660 acres in Oklahoma. Later the property was transferred to Petroles d' Oklahoma for 1,000,000 francs. The company was capitalized at $3,000,000.

In the above deal with the Dutch, it is believed that these wells were also the same people with Union des Petroles. The story was told by Mr. R. S. Litchfield, who came to Tulsa from Franklinville, N.Y., and is president of the First National Bank. In September 1906, he and his associates drilled their first well in the Glenn Pool on the Gracie Berryhill lease of 80 acres in Sec. 8-17N-12E. They drilled 24 wells, each of which produced from 150 to 3,000 bopd, and by 1909 had 10,000 bopd production under the name of the Oklahoma State Oil Co. They finally sold the lease and production for $284,000 in gold coin to Van Oss & Co. of The Hague, Holland, through Mr. J. E. Crosbie of Tulsa who dealt through Goldman, Sachs & Co. of New York City. The new company was operated by Mr. Crosbie in Tulsa and was named the Oklahoma Petroleum Co., which also acquired the holdings of the Best Oil Co., Tulsa Oil Co., Kansas-Oklahoma Oil Co., and Reese Oil Co., paying a total of $1,500,000. This was the first foreign sale of Glenn Pool production. Mr. Litchfield's eyes still glisten when he tells of waiting on the pier at New York City to see his ship of gold coming in.

p. 25. Recent Incorporations. The Seymour Oil & Gas Co., with $6,500 in stock, was organized at Seymour, Texas, by G. S. Plants, M. H. Gibbs, and George Knight.

The Arkansas-Texas Oil & Gas Co., of Childress, Texas, with capital of $4,000, was incorporated by G. R. Cooper, M. A. Cooper, and T. M. Morgan, all of Childress.

The Hillsboro Oil & Development Co., with $10,000 stock, at Hillsboro, Texas, was incorporated by Harry Beck, Webster McEvay, and Herman Eastland.

The Wichita Valley Oil Co., of Lawton, with $25,000 stock, was organized by A. T. Russell, G. W. Horne, and J. A. Hughes.

p. 31. Recent Incorporations. The Eva Oil Co., of Tulsa, with $5,000 capital, was incorporated by J. Garfield Buehl, Ralph Swearingen, and Gertrude Buchanan.

The Pawnee-Osage Oil & Gas Co., of Pauls Valley, with $15,000 stock, was incorporated by Roy E. Burke, G. C. Smith, and Perry Sullivan.

The Chelsea Natural Gas Co., of Oklahoma City, with $20,000 stock, was incorporated by F. E. Keith, D. J. True, and James Bottomly.

Vol. 12, No. 23, November 13, 1913, p. 1. Pending Deals in Oklahoma. In the Healdton Field, Gunsburg & Hochstetter has purchased an undivided three-fourths interest in 4,000 acres from J. I. Dunn, of Casey, Illinois. The Gunsburg company is from Buffalo, New York.

p. 6. Personal Mention. E. T. Miller, of Tulsa, is looking over the oil situation in Carter County.

J. E. Duffy, of Tulsa, is in Ardmore, looking for a good location of his supply store, the Western Supply Co.

Sidney J. Hernstadt, of 63 Broadway, New York, was in Ardmore, and secured some holdings in Carter County.

Charles N. Kimball, of Sistersville, W. Va., was in Ardmore, securing acreage in the new Carter County development.

H. C. Weiss, of Beaumont, Texas, with the Paraffine Oil Co., is looking over the new development at Healdton, Carter County.

H. R. Hardenburg, of Tulsa, is in Ardmore, looking to purchase leases in the new Healdton development.

I. M. Sowers, of Chicago, Ill., is visiting his son Frank, in Tulsa. Mr. Sowers has the distinction of having located the first producing well in Oklahoma, which was on the river bank near Bartlesville, owned by the Cudahy Company.

S. A. Guy has returned to Shreveport, La., from New York City, where he made a contract with the M. P. Film Co. of London, England, to operate his moving pictures of the burning well of the Star Oil Co. at Mooringsport, La.

O. W. Maloney, of Tulsa, is in Healdton, installing tanks for his company, the Maloney Tank and Manufacturing Co.

W. G. Skelly, of Tulsa, will drill 2 wells for the Red River Oil Co., in the Healdton area.

Neil Esperson, a producer in the Humble and Markham Fields of Texas, was in Healdton, from Houston.

F. V. Faulkner, of Corsicana, Texas, who is vice-president and general manager of the Corsicana Petroleum Co., is in Ardmore looking after his company's interests. Before coming to Texas, he had charge of the operations of the South Penn Oil Co. in Lincoln County, West Virginia.

p. 6, 8. Noted in Passing. The Bess Tucker Oil Co. was recently organized in Ardmore. Fred E. Tucker is general manager. They will drill a well in Sec. 36-3S-4W, northwest of the Healdton wells, in Jefferson County.

An 8-inch line was completed from the Haskell Field to Muskogee, and will supply 50,000,000 cfgpd, from wells mostly owned by the Caney River Gas Co.

Gulf Coast producers are coming to southwestern Oklahoma, and include R. S. Sterling, Lee Hager, A. M. Bowman, Neils Esperson, Staiti Brothers, and J. L. Henry, all of Houston, and Randall Silverman, Harry Weiss, W. B. Flynn, and John Henderson, of Beaumont, Texas. Nearly all of them have acreage in the new play. Many of the big companies have holdings in the Healdton area, including the Sun Co., the Gulf, the Producers, the Humble, the Paraffine, and the Corsicana companies.

C. E. Summers, a Kansas City, Mo., inventor, has worked 7 years on a kerosene carburetor for motor cars and engines, and thereby will reduce the cost of fuel by 75 percent. A gallon tank of gasoline is all that is needed to start the engine many times, and once the engine is hot, the kerosene is switched on. Several large automobile manufacturers have declared the invention a success.

p. 10, 12, 14, 16. Oklahoma. Kay County. Newkirk Field. Newkirk is the County seat of Kay County, with population of 1,500. It has two semi-weekly newspapers that are conservative and cover the oil news. The town has electric lights, with main street lit up like a white way. Gas is piped from the Ponca City Field, 2 miles south of Ponca City, by the Kay County Gas Co. at 20¢ per thousand. A few months ago, in September 1913, the McGraw Oil Co., of Ponca City, drilled a well on the Murdock Farm about 7 miles southeast of Newkirk and 18 miles northeast of Ponca City, in the NW-1/4-SW-1/4-Sec. 2-27N-3E, and found oil at 1,000 to 1,015 feet, and the well now produces about 60 bopd of 40° gravity oil. The Ponca Refining Co. is taking the oil, selling excess oil to the Miller Brothers Refinery at Niotaze, Kansas, and to the Chanute Refining Co. The second well that was drilled was the Ponkirk Oil Co. (Armstrong & Co.) on the Croman Farm in the NE-1/4-SE-1/4-Sec. 3-27N-3E, resulting in 20 bopd at 1,025 feet. The third well was by McGraw & Co. on the Howarth Farm in the NW-1/4-SW-1/4-Sec. 15-27N-3E, which had gas at 350 feet, but went to total depth of 1,044 feet. The next well was by the 101 Ranch Oil Co. on the Coleman Farm in the SW-1/4-S-1/2-NE-1/4-Sec. 35-28N-3E, northeast of the main pool, which struck some oil. Next was the well of Judge Armstrong & Co., of Oklahoma City, on the A. V. Horinek Farm in the SW-1/4-NW-1/4-Sec. 2-27N-3E, one location northeast of the Croman Farm well, with 66 bopd this past week. Next the Co-Operative Oil Co. of Derby & Co. completed a well on the Jens Christensen Farm (G. Hawthorne Farm on maps) in the SE-1/4-Sec. 2-27N-3E, and when into 12 feet of the pay sand, the well blew out with 10,000,000 cfgpd and at least 200 bopd was saved by running the oil into a ravine. The well is now being cleaned out. Mr. A. L. Derby is the pioneer contractor in the state, having drilled 80 wells in Kay County in 18 months. The average time for completion of a well is 16 days, and the average cost is $4,500 a well. The next well was by the Laclede Oil Co. of Heberline & Co. on the W. G. Jones Farm in the NW-1/4-NE-1/4-Sec. 11-27N-3E, one mile south of the Co-Operative well and one-half mile east and one-half mile south of the Murdock well, striking oil at 1,000 to 1,015 feet for 330 bopd, but now making 250 bopd. Many companies are now drilling, especially in sections 2, 3, and 11, such as the 101 Ranch Oil Co., Co-Operative Oil Co., Ponkirk Oil Co., Laclede Oil Co., Ponca Oil Co., Heberline & Co., McGraw & Co., Stratton & Bell, Radure & Calkins, Moorehead & Tyndell, H. B. Garden & Co., W. McElroy & Co., with individuals involved such as A. L. Derby, E. W. Marland, Judge J. R. Armstrong, A. H. McGilvray, M. G. Ricketts, H. Meindus, W. Douse, and a Mr. Griffith.

In the past 12 years some drilling had taken place. In 1901 the first well to be drilled near Newkirk was completed by the Newkirk Oil & Mining Co. on the

McClosky Farm in the NE-1/4-Sec. 15-27N-3E, to 973 feet. The second well was in Sec. 14-27N-3E, about 2,000 feet east of the initial well, and some say that it was drilled past the Newkirk sand, while others say that it was abandoned at 600 feet. The Journal's information is that it was drilled by the same parties on the Boster Farm, and was abandoned at 700 feet. Two months ago, the McGraw Oil Co. drilled a dry hole to 1,650 feet on the M. E. Clackley Farm in Sec. 15-27N-3E. Last Spring, Stratton & Bell of Bartlesville, drilled a well 3-1/2 miles southeast of the field and one mile west of Uncas, but abandoned at 1,530 feet.

About 20 wells are now being drilled. Leases are sky high. Last week, a party paid $5,500 for a one-eighth interest in 80 acres with one producing well. The average well starts out with a 12-inch hole, with 10-inch casing at the surface, followed by 380 feet of 8-1/4-inch casing, and 1,000 feet of 6-1/4-inch to the pay. At 280 feet, caving develops for 100 feet, and at 700 feet, there is 200 feet more caving. Contractors charge about $1.25 to $1.50 a foot, while drillers get $6.00 to $7.00 a day, toolpushers get $5.00 a day, teamsters $5.00 a day, and pumpers and roustabouts $75 to $100 a month. The Oil Well Supply Co. will put in a yard at Mervine, two miles south of the field.

Ponca City Field. The activity has slumped in the Ponca City Field now being drilled. The deepest well in Oklahoma is reputed to have been drilled here, to 3,754 feet, by the 101 Ranch Oil Co. No. 7 on the Primeaux Farm in Sec. 4-25N-2E. Ponca City has a population of 4,000, and business has picked up because of the Newkirk discoveries. The Ponca Refining Co. is running at capacity of 1,500 bopd. The Ponca City Field has 46° gravity oil. The Kay County Gas Co. delivers about 2,250,000 cfgpd to Ponca City. The arcade Hotel is where many of the operators are staying while working in the Newkirk Field 18 miles northeast of Ponca City. The pay in the Ponca City Field is at 1,550 feet for oil, and at 1,600 feet for gas. Much drilling has been done, but it appears that the field has about been drilled out. Only 4 wells in the entire field produce from the Newkirk sand. One of the wells now being drilled is that of the 101 Ranch Oil Co. No. 7 on the Willie Cry Farm in Sec. 8-25N-2E. The other is on the Susa Buffalohead Farm, by the same company.

Western Oklahoma. In Roger Mills, Ellis, Woodward, and Greer Counties, there has been considerable acreage leased, but as yet no operator has had the nerve to start a test.

Coal County. Near Coalgate, the Coalgate Oil & Gas Co. abandoned a well at 2,100 feet. Gas wells have been completed near here, but they are small. The same is true in Pittsburg County, where Reese-Evans Oil Co. is at 700 feet, seven miles from Kiowa.

Hughes County. Eight miles southeast of Calvin, on the Flinchem Farm, Pennsylvania parties have a well at 900 feet, and they will drill to 2,000 feet.

At Allen, 14 miles south of Calvin, a company is at 855 feet.

Cherokee County. Glassen Brothers will start a well on the Tom Moore Farm one mile west of Hulbert.

Jefferson County. The International Oil & Gas Co. is down 255 feet in the SE-1/4-SE-1/4-NW-1/4-Sec. 15-4S-5W, 6 miles west of the Healdton Pool. The Berlin Oil Co. is down to 600 feet near Addington in Sec. 3-4S-6W.

Craig County. Recently, a small oil well was completed on the John Morris Farm, at 711 feet, on Big Creek, 25 miles northwest of Vinita. This may start a new oil field.

Comanche County. Hall & Hivick had a gas showing at 500 feet on the Dragg Farm in Sec. 32-2N-10W. It is to be drilled to 700 feet.

Tulsa County. Broken Arrow Field. The initial well of the Nejolo Oil Co. on the Boles Farm in Sec. 22-18N-14E, is making 60 bopd, from about 1,400 feet.

Carter County. Healdton Pool. Nichols & Westheimer got a 30 bopd well at 477 feet in the SW-1/4-NE-1/4-Sec. 5-4S-3W, about 1 mile north of the Red River Oil Co.'s well. This is like Electra where there is a chance to get a producer at almost any depth.

Wicey Field, Tulsa and Okmulgee Counties. Ingram & Dickenson completed a well for 800 bopd at 1,521 feet, on the N. line-NE-1/4-SE-1/4-Sec. 11-16N-13E. The Caney River Gas Co. on the Harry Farm got 4,000,000 cfgpd in Sec. 5-16N-13E.

The Nickel Oil Co. No. 6 Jacobs Farm in Sec. 30-16N-14E, got 70 bopd.

p. 16. Texas. Shackelford County. Moran Field. About 110 miles southwest of Wichita Falls in the Moran Gas Pool, one mile northeast of Albany, The Texas Co. completed a well on the Edwards Tract for 200 bopd at 2,000 feet. During the past 10 months, The Texas Co. has tried to open a new pool here, but only found gas. So far, they have completed 5 gas wells for 14,000,000 cfgpd, which is used to supply towns nearby. There was a general rush for leases, spreading into Jones, Stephens, Taylor, and Eastland Counties. Wildcatting continues in Stephens, Eastland, Throckmorton, Young, Haskell, and Jones Counties. In Throckmorton County, The Texas Company completed two gas wells during the early part of the year, and they now have a well on the Matthews Tract, in Shackelford County.

p. 32. Relics for Drake Museum. Relics are beginning to pour in upon Edwin C. Bell, trustee of the Drake Memorial Museum at Titusville, Pa., including the chair in which E. L. Drake sat in his later years. Articles from the Maple Shade office of 1864-1865 were donated, including a clock and mirror. This was on the Egbert Farm and was a center of operations at Petroleum Center. Old sight drafts of the Bissell Bank were donated, and books of the Oil Exchange were given, which registered many big deals in the area.

p. 43-46. Oklahoma. Wells. Completed and Drilling. Miscellaneous and Southern Oklahoma. (20 wells were completed, and 92 were drilling outside of the defined fields of northeastern Oklahoma). These were in Carter, Murray, Love, Seminole, Comanche, Pontotoc, Garfield, Jefferson, Caddo, Kiowa, Stephens, Tillman, Oklahoma, Pittsburg, and other miscellaneous counties.

Vol. 12, No. 24, November 20, 1913, p. 12, 14-15. Oklahoma. Osage County. In Sec. 1-21N-7E, on the Boston Lease, the Gypsy Oil Co. is continually bringing in gushers. So far, 12 wells have been finished, producing 14,000 bopd. The Gypsy and the Prairie Oil & Gas Co. will have about 25 wells going in this area. The Gypsy No. 14, when drilled into the Bartlesville sand at 2,195 feet, struck 61 feet of sand for 2,500 bopd. The Gypsy No. 12 is 4,000 bopd, completed at 2,396 feet; Gypsy No. 13 is making 3,000 bopd at 2,318 feet.

Healdton, Carter County. The Humble Oil Co. drilled a test in the NW-1/4-Sec. 9-4S-3W, and had oil and gas at 937 feet, which is different from the discovery sand. It is estimated that this well will yield 200 to 300 bopd. Magnolia Petroleum Co. will erect a 55,000 barrel steel tank here. This test extends the pool one mile east. The Red River Oil Co.'s McClure well in Sec. 5 is flowing at 100 bopd., and the No. 1 on the Apple-Franklin Farm in Sec. 8 is making 25 bopd. The Nichols & Westheimer well in Sec. 5 is making 30 bopd at 477 feet. This field looks like Electra, where oil and gas may occur in different sands. The original Healdton sand was at 916 to 931 feet, but the second well got production at 811 and 852 feet, and the third well got production at 477 feet, and the fourth well got oil and gas at 937 feet.

Murray County. The Garvin County Oil Co. has a rig in Sec. 18-2S-3E, south of Sulphur. There have been some small oil wells in this area.

Coal County. It is reported that Bartlesville parties have a good gas production 12 miles north of Coalgate, and is being sold locally.

Comanche County. Hivick & Hall completed a gas well for 1,000,000 cfgpd on the Dragg Farm in Sec. 32-2N-10W, and are selling the gas to Lawton for light and fuel purposes. In Sec. 31-2N-10W, Epstein & Co. are down 800 feet in a test located 200 feet from the Marple tract where a well was drilled some time ago and reported to be a producer, but was dry. (Other wells are drilling and locations are given).

The Green River Oil Co. was organized at Wichita Falls, Texas, by J. A. Kemp, Frank Kell, Julius Markowitz, and L. C. Heydrick, to operate in southwestern Oklahoma. They may follow Mr. Munn's suggestions in his recent report of the U. S. Geological Survey.

McIntosh County. The Green River Oil Co. is drilling a well in the SE-1/4-SW-1/4-SW-1/4-Sec. 29-11N-17E, about 5 miles south of Checotah. Some gas has been found in this county, and one well showed oil. For a long time, the oil fraternity has been of the opinion that oil should be found somewhere in McIntosh County.

p. 28. Gas. Oklahoma. The total production of gas in Oklahoma for 1912 was 73,799,319,000 cubic feet, valued at $7,406,528 or 10.04¢ per 1,000 cubic feet. There were 12 casing-head gasoline plants in Oklahoma in 1912, especially in Creek, Nowata, Muskogee, and Washington Counties. A few good gas wells were completed in Marshall and McIntosh Counties in 1912, but for want of a market, were closed in. There were 870 productive gas wells in Oklahoma in 1912. There were 526 wells completed for gas in Oklahoma in 1912, of which 329 were producers. The number of gas wells abandoned in 1912 was 191. Many new wells were added in Kay, Stephens, Osage, Pawnee, Okmulgee, Rogers, Tulsa, and Wagoner Counties.

Vol. 12, No. 25, November 27, 1913, p. 3. Oil in Mississippian Lime. Commonly it was the custom to drill to the Mississippi lime and then stop. Since the bringing in of the well at Coweta at a depth of 1,479 feet, after the drill had penetrated 150 feet of a stubborn formation, it is thought that future contracts may call for drilling through the upper portion of this so-called Mississippi lime. Also, oil has been found at several widely separated points in Oklahoma and in Kansas in the Mississippi lime. Recently the Braden companies completed 2 wells five miles east of Tulsa, to a total depth of 1,875 feet, good for 10 and 25 barrels each. The pay was found after penetrating 350 feet into the Mississippi lime.

In the Turkey Mountain District five miles southwest of Tulsa, it is claimed that several small wells were completed in a pay zone in the Mississippi lime.

Between Claremore and Collinsville, a Braden company penetrated 1,100 feet of the Mississippi lime in a well on the Peggy Doublehead Farm, to total depth of 2,640 feet. There were 3 or 4 changes in the character and color of the rock, and several sands 30 to 40 feet thick. If this is true, a number of producers believe that all of the old fields will have to be drilled deeper.

North of Claremore in Rogers County, a well is down to 1,500 feet in the Mississippian lime, and drilling has been going on for 6 months.

N. M. Valerius of Valerius & McNutt Geologic and Mine Engineering Co. of Tulsa, has pointed out that Mississippian and Lower Carboniferous are the same thing, and that many different types of rock may occur in this System, and the rocks may not all be limestone. Logs of wells near Claremore, Tulsa, and Mounds, show that the top of the Mississippian system is 780, 1,700, and 2,200 feet respectively below the surface. The upper limestone varies from 35 to 175 feet in thickness, and in Kansas is known as the Pitkin limestone, with shale and sandstone with some limestone below, known as the Fayetteville. Next below is the Boone formation or Burlington limestone, which is the common Mississippian lime of most drillers. It would be profitable to the producer and driller to make contracts for a formation, and not use the term Mississippian lime. At Claremore, in the above illustrations, the contract called for wells to the Mississippian lime, and when the Pitkin limestone was reached, the contractor stopped. The company wanted to go to the Boone, and both parties should have used the name Boone formation in their contract.

Geologists agree quite commonly that oil is probably produced from shale that is squeezed into adjacent sandstones. So the finding of oil in limestone is considered rare. It is very costly to drill into limestone, and it is recommended not to drill below the Boone, unless production falls off and prices increase.

p. 6. Personal Mention. Frank Phillips left Bartlesville last week on a two weeks business trip to New York City.

John W. Forney, of Philadelphia, Pa., in the land department of the Twin State Oil Co., returned from Carter County, where drilling operations are booming.

W. G. Skelly has returned to Tulsa from Ardmore. He has three wells going at Healdton and one at Duncan.

J. E. O'Neill, president of the Prairie Oil & Gas Co., has returned to Independence, Kansas, from New York City. He is building a splendid residence on Long Island, near New York City.

R. S. Sterling, president of the Humble Oil Co. of Houston, was in Ardmore looking after his company's interests in Oil City and Healdton.

Kansans have caught the southwestern Oklahoma fever, including George Guernsey, D. G. Crig, C. C. Surber, H. O. Caurt, E. C. Fair, and H. B. Smith.

C. C. Staiti, of Houston, of the Staiti Brothers, will establish his headquarters in Ardmore, where they will have drilling operations.

B. L. Brookins, of Wichita Falls, has some acreage near Healdton, and will become active in this area.

C. M. Van Pelt, long time in the land department of the Gypsy Oil Co., is now independent, and has acquired some nice acreage in the Healdton Field.

Julius W. Markowitz, of Wichita Falls, and president of the Developers Oil Co., with production in the Petrolia Field, is starting two wildcats; one at Randlett and one near Checotah.

T. N. Barnsdall, II, and Miss Rhea Barnsdall, of Bradford, Pa., were visiting Tulsa and Bartlesville, and will soon return to the Oklahoma fields.

F. M. Selby, president of the Selby Oil & Gas Co., will be working around Ardmore where he bought several tracts. He lives in Marietta, Ohio, and drilled the second well in the Glenn Pool, and has been quite active in Oklahoma.

L. C. Heydrick, of Wichita Falls, is drilling two wildcats, one in Caddo County and one in McIntosh County. He organized the Green River Oil Co.

N. H. Cole, president of the Twin State Oil Co., was looking after the drilling operations at Healdton. His wife, and J. E. Ring were also at Ardmore. They are shipping in a lot of tankage for production.

J. I. Dunn, of Casey, Ill., is in Ardmore, where he sold some of his acreage to Gunsburg & Forman. He has typhoid fever, and his son, L. J. Dunn, of Clarkston, Missouri, is at his bedside.

C. E. Menzie, W. A. Stanburrough, and W. N. Banks, of the National Supply Co. of Independence, Kansas, were in Ardmore to put in a store.

p. 6, 8. Noted in Passing. The Jack Rabbit Petroleum Co. was incorporated at Okmulgee, with $6,400 stock.

The Moran Oil & Gas Co. is trying to get a contract to supply McAlester with natural gas. The field is in Coal County, 20 miles away. The company has several average-sized wells shut in, awaiting decisions by McAlester citizens.

p. 16-17. Oklahoma. Washington County, Wann Field. Guiler & Deloe drilled a test on the Abraham Haff Farm in the NE-1/4-SW-1/4-NE-1/4-Sec. 16-28N-14E, southwest of Wann, and got 100 bopd and 1,500,000 cfgpd in the Bartlesville sand at 1,195 to 1,227 feet, for a new discovery in a deeper sand. Previous wells went to 550 feet and produced gas. Their No. 2 well on the same tract, just south of No. 1, showed 3,000,000 cfgpd from the Oswego lime. In Sec. 17, west of the well, some previous wells were completed in the Bartlesville, but the pay was low.

Garvin County. The Garvin County Oil & Gas Co. has a test on the Charles Fox Farm, about 12 miles southeast of Pauls Valley, in Sec. 18-2N-2E. They have about 5,600 acres under lease in the area.

Atoka County, Redden Field. A test of more than ordinary importance will be drilled by the Olive Oil Co. in Sec. 33-1N-14E, one mile east of the village of Redden, in the northern part of Atoka County. Several tests drilled in that locality have shown some oil, but owing to the peculiar formation, it was not found in commercial quantities. It is in territory known as "edge stuff", the rock dipping at an angle of 38°. The present location has been made after a geologic survey of the area, the idea being to locate the test in a "fold" large enough to provide room for a small pool of oil.

p. 17. Texas. Shackelford County. Moran Field. Moran was an unknown burg about 4 weeks ago, but today it is a busy oil town. The new pool holds the attention of operators with the recent completion of The Texas Co. well. The Corsicana Petroleum Co. has leases on 73 acres of land on the Chaney Heirs' Tract, located about a mile from the producer on the Edwards Tract.

Knox County. J. T. Wilke & Associates, from California, have 16,000 acres and have started a well near Goree on the E. B. Coffman Ranch, 1 mile west of the Goree railroad station. Mr. Wilke has headquarters in Wichita Falls.

p. 24-25. Early-Day History, Oil City, Pennsylvania. Mr. W. R. Wadsworth

began working in the oil industry on June 4, 1864, as a pumper on the old Columbia Farm along Oil Creek near the Drake Discovery well. The wells were started soon after the Drake well, and some are still producing in 1913, keeping the historical spot continually on the map. The Columbia Farm was then the site of a small town, with an 18-inch brass band, and Mr. Wadsworth was cornetist in the band. D. K. Smith, who is still living at Jamestown, N.Y., was the leader.

In 1866, Mr. Wadsworth joined the Central Petroleum Co., working on the Wood Farm on McGray Hill. He surrendered this position to his brother in 1874, and went to Butler County, to work for the Standard Oil Co., with which he remained and retired until a short time ago, with a pension. He began in 1874 to work for Morgan Todd and John S. Klein as a machinist for the National Transit Co. in Petrolia. Later, the shops were removed from Butler County to Oil City, and Mr. Wadsworth was transferred back to Oil City, with Mr. Klein as manager.

It was here that Mr. Wadsworth and Mr. Klein invented the paraffin scraper to clean paraffin from miles of oil lines. The problem was to construct the scraper so that it would turn angles, pass all types of interior obstructions, and would adapt to all dimensions of oil lines. The device is familiar to all oil men, consisting of movable metal wings, so constructed that they fill the opening of the pipe. When placed in the pipe, the wings are shoved ahead by the force of the fluid behind, while the wings revolve and scrape the paraffin from the inside of the pipe. The device moves from station to station some 20 to 40 miles apart at about the speed of a man walking. Its long continued use has demonstrated that the device is faultless.

p. 25. A Crude-Oil Engine. In Tulsa, at the International Dry-Farming Congress, a Mr. C. O. Seitz, a Danish inventor, exhibited an engine that runs on crude oil just as it comes from the well, without the use of a battery, magnets, hot tube, carburetor, or any special mixing device, the oil being fed directly into the cylinder by gravity. A firm in St. Marys, Ohio, has the rights to the engine, and they are manufacturing the engine there. The engine operates on the principal of compression and will operate on cold combustion. This will revolutionize the use of internal-combustion engines. It requires no special grade of oil, and asphaltum-based oils can be used. It will even run on lard or sperm oil.

Vol. 12, No. 26, December 4, 1913, p. 1. The Journal is Copyrighted. The Journal is now maintaining a large staff of expert writers on oil in the United States and Canada. The work is painstaking in order to be accurate. The Journal is the only publication devoted exclusively to the chronicling of the oil and gas business. The publishers have decided to avail themselves of the Copyright law, and the present issue is protected under the Federal Copyright Law, and all future numbers will be safeguarded in the same manner.

p. 1. Identifying Mid-Continent. The Journal will in the future carry the statistics of Kansas, Oklahoma, northern Texas, and the Caddo District of Louisiana, under the caption of Mid-Continent Oil. In the past, the Mid-Continent covered only Kansas and Oklahoma.

p. 1. Outlook in Various Fields. A rank wildcat in Pontotoc County, Okla., has created considerable interest. It is 753 feet deep and looks like a 15 barrel a day well natural. There is a new increase in the Wann, Newkirk, Cushing, and Healdton Fields, and the Boston Pool in Osage County, and the Okmulgee pools.

p. 2. Consumption of Natural Gas. In 1912 in the United States, the consumption of natural gas was 562,000,000,000 cubic feet, at an average price of 15.04¢ per thousand. On the assumption that 28,000 cubic feet of gas equals in heating power 1 ton of coal, gas displaced 20,000,000 tons of coal last year.

p. 2. U.S. Navy Oil Company. Mr. Daniels Proposes Radical Plan. Josephus Daniels, Secretary of the Navy, proposed a radical plan for supplying the Navy with fuel oil. He wants Congress to authorize the Navy to refine its own oil from its own wells. He did not want to purchase the oil from private companies at exorbitant and ever-increasing prices. The superiority of oil over coal has already been demonstrated. The English are going to Mexico and elsewhere to

supply their Navy with oil, and the English Government is erecting tanks and making provisions for their Navy. The Hon. Winston Churchill, First Lord of the Admiralty, recently declared in the House of Commons that it is necessary for the Royal Navy to establish refineries and handle its own oil transportation. England has no supply within its borders. The United States has Government Land with oil on it, and this should be used for the Navy, and developed by the U. S. Government, so as to lessen the burden to taxpayers. Today, the U. S. Navy is paying twice as much for oil as it did in 1911. We use 30,000,000 gallons of oil and the U. S. Navy is only partially equipped. In the future, this will increase to 125,000,000 gallons, and every gallon must be purchased from some oil company, at their price. The price of fuel has almost doubled in the past two years, and it is predicted that it will go even higher in the future, causing much concern to the Navy and to the country. By the time that the Panama Canal is opened, the Navy should be producing its own oil from the Navy Petroleum Reserves in the Elk Hills and Buena Vista Fields of California. Prompt steps should be taken to erect a refinery on the Atlantic Coast, and to lease oil lands in the Mid-Continent.

p. 4. Wilson, Carter County. The Frick-Reid Company will establish a supply store at Wilson, 20 miles west of Ardmore, 1.5 miles from Hewitt, and 9 miles from Healdton, at the western terminus of the O.N.M. & P. Railroad, recently built by the Ringling Brothers. James E. Swindler and C. C. Simmons visited there last week. Wilson is a new town. Two weeks ago, there was nothing but a shack or two, and now it is a typical oil-boom town. In one week, two lumber companies, a hotel, general store, and bank had been built, and 40 to 50 shacks and tents were going up in all directions. Lots in the business section of the new town are selling for $1,000 each, and it is claimed that within the next 30 days the population will be 1,500.

p. 4, 6, 8. Personal Mention. H. C. Foster, with the Devonian Oil Co. of Tulsa, is in Carter County looking for leases.

D. C. Satterlee, of Tulsa, was in Healdton looking over the development for the Colonial Petroleum Co.

E. K. Moss, of Tulsa, representing several companies, was in Ardmore, looking at southwestern Oklahoma developments.

Samuel Briscoe, of Corsicana, Texas, is looking over Carter County for the Corsicana Petroleum Co.

J. E. Keller, of Caney, Kansas, was in Wilson, Carter County, the new Eldorado of southwestern Oklahoma.

M. D. Loughlin, of Cushing, is in Ardmore, and will erect some rigs for the Red River Oil Co.

C. E. Fisher, of Okmulgee, was in Ardmore, to take a position as a field man for Nichols & Westheimer who recently completed a shallow-sand well.

B. W. Morrison, of St. Louis, Mo., was at Ardmore, looking over the Healdton development for the Wynona Oil Co.

C. M. Van Pelt, of Ardmore, is now engaged as a leaser. He was formerly associated with the Gypsy Oil Co.

W. N. Thraves, of Tulsa, is in Carter County, looking after his interests.

Robert Watchorn, of the Union Oil Co. of Los Angeles, is in Ardmore. He is also connected with the Red River Oil Co. which recently completed two wells in the new pool at Healdton.

S. Y. Ramage and son, A. H. Ramage, of Oil City, Pa., are at Ardmore, looking over the new development with an investment in view. He is one of the pioneer operators of the Eastern fields.

D. Gunsburg and George A. Forman, of Buffalo, N.Y., have started drilling operations in the new Healdton Field, under management of Ralph Hochstetter.

R. S. Sterling and S. K. Warrener, of Houston, recently brought in a good well for the Humble Oil Co. in the Healdton Field, and have some good-looking acreage close in.

John Moyle, of Augusta, Kansas, has secured some leases in southwestern Oklahoma.

W. H. Wallace, of Tulsa, visited the Healdton Pool, and is field manager of the Continental Supply Co.

C. D. Reaves, of Shreveport, La., is looking over the Carter County developments. He is one of the pioneers of the Gulf Coast, getting started at Spindletop, and going to Sour Lake and other pools.

R. S. Gray, of Tulsa, head of the land department of the Prairie Oil & Gas Co., has returned from a visit to the Healdton Pool, and says that the prices for leases are out of sight, and large sums are being paid for leases far in advance of production.

G. C. Wood, of Wichita Falls, Texas, has secured some acreage at Healdton, and will probably start some work there.

D. C. Stewart, vice-president and general manager of the Magnolia Petroleum Co., visited Ardmore last week, selecting sites for new tanks and pipe line from Healdton to Petrolia, Texas.

The supply companies are well represented at Ardmore; The Frick-Reid Supply Co., with J. E. Swindler and R. G. Smith; the Continental Supply Co., with Charles Henderson and W. H. Wallace; the National Supply Co., with W. A. Stanburrough, Frank Lewis, C. E. Menzie, and W. N. Banks.

W. C. McBride, of St. Louis, Mo., was in Tulsa on business. He is head of the Silurian Oil Co., a director of the Pure Oil Co., and has a number of other companies, besides being the largest individual operator in the country, with extensive holdings in all of the important fields. In Oklahoma, most of his holdings are at Cushing and Mounds.

E. C. Lufkin, the newly-elected president of The Texas Company, is a te of native of Massachusetts, and a graduate of the Massachusetts Institute of Technology. In his boyhood, he lived at Titusville, Pa., and he had a good general knowledge of the oil business before he became actively engaged in it. His first job with Texaco was at Fort Worth, where he was placed in charge of the natural gas department. Later he went to Houston, and was made vice-president. About two years ago, he left Houston for New York to make his headquarters, where he remains as president of the company. He is in the prime of life.

Campbell M. Hunter, of Thompson & Hunter of London, England, was in Tulsa concerning the Alluwe Oil Co. and the Kansas Oil Refining Co. He has a world-wide reputation as a petroleum engineer, and has worked in Great Britain, Japan, Russia, Roumania, and South America, and now is working in Peru and Trinidad. Mr. Hunter is the inventor of the Hunter Combination Gas Exhauster and Burner, which is handled by the Oil Well Supply Co. It is especially designed to use low pressure gas, enormous quantities of which are going to waste in almost all oil fields of the world. It is simple in construction, and is proving its worth in many fields.

p. 8. Noted in Passing. The oil fever near Newkirk has spread to Arkansas City, Kansas, where large areas are being leased.

City officials of Fort Smith, Arkansas, have cut the price of gas from 30 to 25 cents a thousand.

The Purified Petroleum Products Co., of Kansas City, Kansas, has a process for purifying crude kerosene and gasoline and turns the product out as a substitute for gasoline in motor trucks. It has plants at Little Rock, Ark., Shreveport, La., Los Angeles, Denver, and Portland, and will soon build one at Savanna, Ga.

Cosden & Co., of Tulsa, with $1,200,000 stock, was incorporated by J. S. Cosden, of Tulsa, E. R. Perry, of Tulsa, and A. W. Gieske, of Baltimore, Md. The filing fee was $1,200, one of the largest ever filed in Oklahoma. Pennsylvania capital is behind the corporation. They will build refineries, pipe lines, tank boats, wharves, and other facilities for handling oil.

p. 8. In Foreign Fields. A report from Karachi, India, announces the arrival last month of a Japanese vessel with a cargo of oil from Abadan, Persia. This is the first shipment of oil ever reported from the Persian fields. It is presumed that it will be used for tests by the Northwestern Railway of India in their locomotives.

p.. 14, 16. Oklahoma. Pontotoc County, Allen Field. An important wildcat has struck oil in Sec. 23-5N-8E, just west of Allen, in northeastern Pontotoc Co. It is west of the Hughes County line about a mile, and previous reports have placed it in Hughes County. The well is that of the Kurtz Oil & Gas Co. on the Wallace Farm, with the sand at 745-753 feet, producing 15 bopd of 28° gravity oil, with asphaltum base. The hole has 16-inch pipe to 300 feet, 12-inch to 450 feet, and 10-inch to 753 feet, and has not been shot. This is the third hole that the company started; the first two being lost because of quicksand. A 250-barrel tank is being erected. Leases are $100 an acre nearby, and 1.5 miles away, $25 an acre, with a drilling clause to start a well within 90 days. J. A. Kurtz is a geologist with the Crescent Oil Co. and he located the site. He claims to have located 121 sites in Pennsylvania, West Virginia, Ohio, Texas, California, and other areas, and that all were producers. Nine miles east, in Hughes County, the Test Oil Co. is now drilling a well. A number of gas wells have been completed in Pontotoc, Pittsburg, and Coal Counties.

Stephens County, Duncan Field. W. G. Skelly & Co. has a 5,000,000 cfgpd well on the J. S. Mullen Farm in the SW-1/4-NE-1/4-Sec. 12-1-6, in a 900-foot sand. It is southwest of the other gas wells a short distance, and extends the pool in that direction.

Carter County, Healdton. Many wells are being drilled (detailed locations given), but everything is slowed down because of deep mud and impassable roads. Horse teams are charging $10 per load. Wagons are commonly sunk to the axle, and no automobiles are running.

Wildcatting. Wells are being drilled in so many different parts of Oklahoma that it is almost impossible to keep up with the activities.

Bryan County. Keltner & Co. are drilling a well between Durant and Aylesworth, one mile east of Aylesworth. They have several thousand acres under lease.

Jefferson County. The International Oil & Gas Co. is drilling in Sec. 15-4S-4W, and got a rainbow of oil at 560 feet. It is a short distance north of Cornish. The operators think that they will get something at 900 feet.

Caddo County, Keeche Hills. The Cement Oil & Gas Co. has a well on the Funk Farm in Sec. 21-5N-9W, and is a rank wildcat.

Atoka County. Within the next few days, a well will be started by the Olive Oil Co. in Sec. 33-1N-14E, one mile east of Redden. It is reported as an "edge well".

Two other wells will be started shortly. Priestley & Co. will drill in Sec. 5-2S-10E. The Lavaca Oil Co., of Muskogee, will drill in Sec. 18-3S-10E, near Boggy Depot. Several tests in this locality have had shows of crude, and a new pool may yet be opened.

Comanche County. Several wells are down (details given), but nothing has been struck.

Tillman County. Near Davidson, the North Fork Oil Co.-McClure-35-3S-18W started.

Cotton County. Four wells are drilling, but nothing has been found. (details given).

Other rigs are drilling in Blaine, Garvin, Oklahoma, Garfield, and Murray Counties. (details given).

p. 31. Mesopotamia and Syrian Oil Concession. The British Government will obtain a concession of all the oil wells in Arabia, Mesopotamia, and Syria, according to a statement from Constantinople, under the new Anglo-Turkish treaty which is being negotiated. This treaty has to do with the frontiers, the sultanate, and the navigation of the Euphrates and Tigris Rivers, and other matters.

Vol. 12, No. 27, December 11, 1913, p. 6. Personal Mention. C. E. Suppes, of Tulsa, will build a few rigs in the Healdton Pool area. He is one of the oldest rig builders in the country in point of service. He built the first rig in the Kiefer Pool.

Eugene Mackey, of Pittsburgh, Pa., president of the Kansas Natural Gas Co., has been appointed general counsel for the Tidewater Pipe Line Co., with headquarters at New York City. He was born and reared at Titusville, Pa., where he studied law.

L. E. Bell, of Pocatello, Idaho, is visiting his parents, Mr. and Mrs. H. E. Bell of Kiefer, Okla. He is a railway engineer. The Bell family came to Oklahoma several years ago, and H. E. Bell has a gasoline-from-gas business at Kiefer. The family originally came from Bradford, Pa.

Frank Brown was in Tulsa this week from Independence, Kansas. He helped in the building of the Cosden refinery of West Tulsa, later selling his interest to Mr. J. S. Cosden.

J. H. Pew, Jr., of Philadelphia, Pa., and N. H. Cole, of Tulsa, were in Carter County looking over their interests of the Twin State Oil Company, the Oklahoma branch of the Sun Company.

p. 6, 8. Noted in Passing. The Sure-Shot Oil Co. was recently incorporated by Ardmore capitalists, although they wanted the name Midway Oil Co., which was rejected. They will drill in the new Healdton Pool.

The Maricopa Queen Oil Co., of California, proposes to acquire leases in Oklahoma, and will spend several hundred thousand dollars. W. S. Wilhelm, president of the company, has been investigating Oklahoma for some time.

In Carroll County, Missouri, several barrels of oil were taken from a coal mine about 12 miles southeast of Braymer, while cleaning out the old mine. Leases have been taken over quite a large acreage, and tests will be drilled by local parties.

The Federal Government has completed the valuation upon the surface of the agricultural and grazing lands in a large segregated area of Oklahoma, including 340,000 acres in Haskell, LeFlore, Latimer, Pittsburg, Atoka, and Coal Counties. In nearly all of these counties, there is increasing activity in oil and gas prospecting, with good prospects of opening new pools.

Probably the fastest time in the completion of a 1,500-foot hole was that of the Barnsdall Oil Co. No. 16 on Lot 193 in Osage County, where the well was completed to 1,529 feet in 9 days. Harry Breene was the contractor, and Hoffman and Long were the drillers. There was 525 feet of 8-inch casing, and 1,473 feet of 6-5/8-inch casing.

The Higgins Oil & Fuel Co., of Beaumont, Texas, has decided to amend its charter so that they can operate in all states, especially Oklahoma.

The Acme Fishing Tool Co., of Parkersburg, W. Va., announces their 10th Anniversary in business, on December 4, 1913. Wherever there is an oil field, you will find Acme.

p. 14, 16. Oklahoma. Almost all counties in southern Oklahoma have some wells. Wheeler Field, Carter County. This field is also called the Oil City Pool. The Santa Fe Railway Co. has done most of the work here. Humble Oil Co. and Lacy & Co. have also done some work. The Santa Fe has 1,000,000 barrels in storage, of 19° gravity oil, with a line to Ardmore, a 6-inch line laid 16 miles. Santa Fe has about 75 wells, with 400 bopd production. In T. 3 S. - R. 2 W., there are 45 wells in Sec. 21, five gassers and 3 dry holes, and 37 oil wells. In Sec. 22, there are 22 wells, one being gas. In Sec. 28, nine wells were drilled, including 6 gassers and 2 dry holes. In Sec. 29, nine wells were drilled, including 1 gasser. In Secs. 26 and 35, some work was done, but were failures. In Sec. 16, quite a little work was done, with some gas and oil wells being found. In Sec. 17, a few producers and a few dry holes were drilled. Other portions of the township have been tested but proved to be barren. Operators are now trying to link Wheeler with the Healdton Field. The oil at Healdton is 32° gravity.

Atoka County. One well is drilling and two locations have been made.

p. 30-31. Early Day Drilling is Described. One of the exhibits in the Drake Memorial Museum at Titusville, Pa., is a working model of the rig and tools used in drilling oil wells following the discovery of Col. Drake. Mr. Josiah G. Winger, of Grand Valley, Pa., made the models, after the first two wells which he worked on more than 50 years ago, in April 1861, at Walnut Bend on the Allegheny River in Venango County, before serving 3 years in the Union Army. The rig was a spring pole, and pole tool shaft, and a 40-foot derrick, 14 feet wide at the base. Four men placed a foot through a loop in a rope tied to the spring pole, and kicked about 2 feet downward at the same time, lowering the bit at the end of the

pole shaft about 2 feet, striking the rock below. The pole would spring back up, and the men would kick it back down, until tired or bloody. The wages were 50¢ a day. The well was drilled to a depth of 200 feet.

The Tramp Lever Rig was different, with a walking beam in place of a spring pole, but the beam still had to be tramped down on one end. Wages on this rig were 75¢ a day. This second well was worried to a depth of 200 feet also, and the head man had to go to war. Mr. Winger is still drilling wells.

Vol. 12, No. 28, December 18, 1913, p. 1. Mid-Continent Production. The estimated daily production of crude oil in the Mid-Continent at the end of last week was 253,000 barrels a day, with 31,000 bopd in the Caddo district, 28,000 bopd in the Electra district, and 194,000 bopd in the Kansas-Oklahoma area. There is now overproduction in the fields. James E. O'Neill, president of the Prairie Oil & Gas Co. states that his company will not build new tanks at present, and advises a curtailment of drilling, if producers expect the price of oil to go up to $2.00 a barrel in the next 2 years. It would be best to leave part of the oil in the ground. Production may have reached its crest. New pipe lines are being built, and can probably handle any excess. By 1914, the Prairie will finish its new parallel line to Alton, Illinois, and be able to handle an additional 20,000 bopd to there. The Standard Oil Company of Louisiana line could handle an additional 20,000 bopd if the Caddo Field decreases, but, this field has increased. The proposed Magnolia Petroleum Co. line to Healdton and Cushing could handle an additional 20,000 bopd, if they follow through with their plans. New refineries and additions to older refineries in Oklahoma and Kansas could take an additional 10,000 barrels a day. In the Mid-Continent, there is 56,073,809 barrels of oil in storage, while available open storage by the pipe lines is only 4,050,000, leaving pipe lines no alternative but to store 20,000 bopd in excess that they cannot use. The following estimates of stocks on hand and open storage available by the pipe line companies are:

Oil in Storage

Name of Pipe Line Company.	Barrels
The Prairie Oil & Gas Co., Kansas and Oklahoma	42,548,553
The Gulf Pipe Line Co., Kansas and Oklahoma	5,489,820
The Texas Co., Kansas and Oklahoma	2,781,290
Miscellaneous, Kansas and Oklahoma	15,000
The Magnolia Petroleum Co., N. Texas	949,785
The Texas Co., N. Texas	114,500
The J. M. Guffey Petroleum Co., N. Texas	40,400
The Standard Oil Co. of Louisiana, Caddo Field	112,311
The Texas Co., Caddo Field	1,282,550
The Gulf Refining Co., Caddo Field	739,600
All Companies, Gulf Coast	2,000,000
Total stocks of refinable oil in Mid-Continent.....	56,073,809

Available Open Storage

The Prairie Oil & Gas Co., Kansas and Oklahoma	2,250,000
The Gulf Pipe Line Co., Kansas and Oklahoma	500,000
The Texas Co., Kansas and Oklahoma	300,000
All companies, N. Texas	500,000
All companies, Caddo Field	200,000
All companies, Gulf Coast	300,000
Total.....	4,050,000

The new rules that a well has to be completed within 90 days of the lease in the Osage Indian Reservation will not help. Some of the new wells coming in at 3,000 bopd or more will cause a glut on the market. Nearly 100 wells will have to be drilled in just the next few weeks. The average daily production in this area from old wells is 35,000 bopd. There will be overproduction in the Mid-Continent shortly. The Prairie, Gulf, and The Producers companies are not taking many new leases, and are cutting back on drilling. Prairie has already shut down 30 wells this week. The pipe line companies are curtailing operations in the Mid-Continent. The operators are confronted by real conditions and not

theory, and it would be wise to call a temporary half to drilling operations.

In the past week, three wells completed in Osage County yielded 7,000 bopd new production. Three wells in the Owasso Pool, in north Tulsa County, were completed for 3,000 bopd new production. Ten completions in the Okmulgee District added 2,000 bopd new production. The new pools at Healdton and Newkirk are not included as yet. Many leases were taken around these areas, however, and the operators will have to drill them or lose them.

Supply is now ahead of demand, and the large companies cannot find additional markets for their products. The United States is the leading producer of oil in the world, followed by Russia, and Mexico.

p. 6. Personal Mention. Robert Watchorn, of Los Angeles, visited Oklahoma for several weeks. He is one of the officials of the Union Oil Co. of California and also connected with the Red River Oil Co.

J. M. Critchlow, of Titusville, Pa., has returned to Ardmore. He is president of the Red River Oil Co. who drilled the discovery well in the Healdton Field.

Many people are visiting the Healdton area from Ardmore, such as W. M. Dunham; B. H. Mills of the Eastern Oil Co.; J. L. Henry; R. S. Sterling of Humble Oil Co.; F. C. Glynn of Jarecki Manufacturing Co.; L. R. Wallace; C. M. Hapgood; S. L. Cronin of Woodsville, Ohio; F. J. Bradford of the Parkersburg Rig & Reel Co.; David Gunsburg and G. A. Forman of Buffalo, N. Y.; and Martin D. Rowe of Wichita Falls of the J. M. Guffey Petroleum Co.

p. 8. Noted in Passing. J. M. Critchlow, of Titusville, Pa., has applied for a charter for a $5,000,000 company, to take over the holdings of the Red River Oil Co., which are mostly in the Healdton Field. This is not connected with the Red River Oil Co. of Texas which operates in the Electra Field.

p. 10, 12. Oklahoma. Comanche Co., Lawton. An unconfirmed telegram has been received that Epstein & Co. has a 50 bopd well in the 800-foot sand in Sec. 31-2N-10W, east of Lawton. It is 200 feet from the test abandoned on the Marple Tract some time ago. Boone & Warren are also reported to have an oil well of 5 bopd with gas in the 400-foot sand in the NW-1/4-Sec. 31-2N-10W. Also, oil had been found on the Conklin Farm, 4 miles south and 1 mile west of Lawton.

North Tulsa County, Owasso Field. Three wells were completed this week in a deeper sand. This district came to notice about 5 weeks ago, when Mallory & Lewis completed a test on the Arrowwood Farm in Sec. 25-21N-13E, which started off at 250 bopd. The field is now extending to the northeast. The work is confined to Section 25 at this time. The Glenn Braden No. 2 Arrowwood on a 10-acre strip in the NE-1/4-Sec. 25-21N-13E, one location east of No. 1, started off at 1,200 bopd. The No. 1 was 150 bopd. The Gem Oil Co. (Page & Co.) completed 2 wells on the Lucy Brown Farm of 10 acres south of the Braden well, the No. 1 on the southwest corner of the farm starting off at 30 barrels an hour, and the No. 2 on the northwest corner of the farm starting off at 60 barrels an hour. The total production of this field is 4,310 barrels per day; Mallory & Lewis-850; Glen Braden-1,300; Gem Oil - 2,160 bopd.

Washington County, Wann Field. In the past 10 days, Spangler & Co. completed a well for 500 bopd on the west 20 acres of the Rachel Holland Farm in the NE-1/4-NE-1/4-Sec. 16-28N-14E, at 15 feet into the sand.

Creek County, Cushing Field. A deeper sand has now been found to be productive in the Cushing Field, the Bartlesville sand, which may result in the re-drilling of the entire field. The Prairie Oil & Gas Co. got a well in the Bartlesville sand on the Tucker Farm a few weeks ago. Now, the Producers Oil Co. have a well for 55 barrels an hour in the Bartlesville sand in the SW-1/4-Sec. 3-17N-7E. Gunsburg & Forman have a well for 400 bopd in Sec. 4-17N-7E at 19 feet into the Bartlesville sand. The T. B. Slick No. 1 Hawkins in Sec. 15-18N-7E, which was dry in the Layton and Wheeler sands, is now a producer in the Bartlesville sand, but this is close to the first well drilled in the field which was dry in the Bartlesville sand.

Love County. Some fair wells have been completed in Love County, but work is not very active. A few companies hold the acreage where the wells were completed.

Wildcatting. Murray County. The Garvin County Oil & Gas Co. is down 200 feet in Sec. 18-2N-2E, north of Sulphur. A number of small wells have been reported in this locality.

McClain County. The Zelma Oil & Gas Co. is down about 2,000 feet, eight miles west of Norman and 16 miles southwest of Oklahoma City. The company has applied for a franchise to supply Norman with gas. There is gas in the immediate vicinity, but the company has other sources from which the gas will be piped.

McIntosh County. Some gas has been found in McIntosh County, and 10 wells are now being drilled. J. H. Hogan reported a gas showing at 700 feet on the Brown Brothers Farm northeast of Eufaula, and there were some oil showing.

Pontotoc County, Allen Field. The Kurtz Oil & Gas Co. No. 1 Wallace in Sec. 23-5N-8E, has 8 bopd at 753 feet. Seven more wells will be drilled around Allen shortly, some across the line in Hughes County.

Kiowa County, Gotebo Pool. Small producing wells are being found, but shut in because of poor roads. Unconfirmed reports are that the Rosser & West well on the J. H. Schmidt Farm 1.5 miles southwest of Gotebo, has oil. The well is down 1,500 feet. The Della Dean Oil Co. has 10 bopd in the NW-1/4-Sec. 35-7N-16W, from 1,000 to 1,095 feet, which was shot. Vandersole & McJunkin have a well on pump in the SW-1/4-Sec. 7-6N-16W, and was completed some time ago. West & Rosser have pumps on their wells, but are not shipping oil because of the bad roads.

Pushmataha County. Hugo parties are drilling in the NE-1/4-SE-1/4-Sec. 3-2S-15E, with a showing at 1,200 feet. Casing is in transit and the test will be drilled in shortly.

Mayes County. Killam & Sanders have a 3,000,000 cfgpd well at 240 feet, 3 miles west of Locust Grove.

Atoka County. It is the intention of a number of leaseholders to start work shortly. The Lavaca Oil Co., of Muskogee, expects to drill a well shortly in Sec. 8-3S-10E. The Olive Oil Co. is drilling a test one mile east of Redden, in Sec. 33-1N-14E. Priestley & Co. will drill a well in Sec. 5-2S-10E.

Miscellaneous. Wells are located in many counties, such as Bryan, Cotton, Garfield, Oklahoma, Jefferson, Blaine, Tillman, and Carter, and some details are given.

p. 23-24. An Old Timer's Tale of Early Oildom. Mr. Josiah G. Winger, of Grand Valley, Pa., who is still actively engaged in the oil business, built a model of a horse-operated drilling rig, which he donated to the Drake Museum. The model is based upon a well which he drilled in 1861, his third well. The Agnew No. 1 Allegheny Dropper, located a few rods from the ferry landing at Walnut Bend of the Allegheny River, drilled to 220 feet. The horse walked in a circle, turning a wheel, which turned another wheel at right angles, attached to a walking beam, which would go up and down with cable tools attached to a pulley attached to the top of the derrick. The derrick was a tree limb. The driller would sit up high and throw small pebbles at the horse, making the horse move forward in a circle. When the driller ran out of pebbles, the horse would stop, and the driller had to go down to the river and get more pebbles. Mr. Winger received $1.00 a day wages. A packer was constructed of a seed bag and tallow-wrap around a collar, to shut off fresh water. Pine tar was used to daub threaded pipe joints. Pipe was made of copper tubing, in 14 foot lengths, 2-1/2 inches in diameter, and 1/8-inch thick, and used in place of iron because salt water would eat out iron pipe. Many tons of copper tubing are still in wells.

p. 42, 44-45. Oklahoma. Wells. Miscellaneous and Southern Oklahoma. About 12 wells were completed and 99 wells drilling in southern Oklahoma and other areas outside of the main producing district of northeastern Oklahoma. Details are given, for Tillman, Love, Carter, Comanche, Coal, Stephens, Kiowa, Caddo, Jefferson, Garfield, Cotton, Pontotoc, Seminole, Murray, Garvin, Blaine, Oklahoma, Atoka, and Carter Counties.

Love County. Ralston et al No. 2 Love got 2 bopd in Sec. 35-6S-2E. Jordan at al got 1 bopd in their No. 1 Eskew in Sec. 33-6S-3E.

McClain County. Zelma Oil & Gas Co. No. 1 Redmond in Sec. 16-9N-4W, was still drilling.

Coal County. Coalgate Oil & Gas Co. No. 2 is drilling near Coalgate.
Atoka County. Olive Oil Co. No. 1 is drilling in Sec. 33-1N-14E.

Vol. 12, No. 29, Dec. 25, 1913, p. 1. (end of microfilm roll #8). U. S. Navy to Buy 1,000,000 Barrels of Oil. The U. S. Naval Department will call for bids for 1,000,000 barrels of oil for fuel. One-fifth will be needed on the Pacific Coast, and the remainder must be delivered to supply stations in other parts of the county. The Navy may use 125,000,000 gallons of fuel oil in 1914.

p. 1-2. Oil Will Not Become Exhausted. Ever since the beginning of the oil industry, statisticians have been calling attention to the probability of an early exhaustion of the world's supply of petroleum. Each year of the past ten years was supposed to have been the apex of oil production, and that a rapid decline would soon follow. The contrary has happened, and in the past 8 years, more crude has been produced than in all of the previous years in the history of the industry. The demand has kept pace with the increase. At present, in the Mid-Continent, there is more supply than demand. However, other fields in the east, and foreign fields have fallen off, and there may be shortages elsewhere. However, there may be much oil in Siberia, Philippine Islands, Japan, New Zealand, and China, while Mexico, South America, and Central America may flood the market. It takes capital, to get started, but at the present time, there are 20,000,000 barrels a year being taken out of Mexico, but with more capital, this will probably double next year. This same type of development can take place in other countries such as Canada, where the Athabasca District north of Edmonton has yet to be developed.

p. 2. Substitute for Oil and Gas. C. E. S. Phillips, a London scientist, has discovered a way of producing gas by decomposing water with radium. He has prophesied that gas produced by radium will someday be the motive power of the world, replacing coal and oil for engines. This will come after a cheaper process for the manufacture of radium has been discovered. There are 20,000 tons of radium in the ocean. The world's supply of coal would be exhausted in 200 years.

p. 4. Personal Mention. V. H. McNutt, of Valerius & McNutt, is drilling a well in Caddo County, about 14 miles south of Hydro, for the Hydro Oil & Gas Co. A large artesian flow of water was found at 250 feet. The test is now drilling at 1,000 feet, after passing through a thick bed of salt.

p. 4. Noted in Passing. There are in the United States today something like 1,500,000 gasoline engines, with an annual increase of about 500,000. This is one reason why gasoline has been in such great demand. With a cheaper fuel than gasoline for internal-combustion engines, these engines will come into still more common use.

In Logan County, Arkansas, the Paris Mineral, Oil & Gas Co. will begin drilling operations by January 1, 1914, according to M. F. Kennedy, secretary. The company has 11,000 acres under lease. Oil has been noticed in water wells in this area for a number of years.

p. 8. In Foreign Fields. Under a new treaty with Turkey, Great Britain will get important oil concessions from Turkey. A clause in the treaty grants to Great Britain the exclusive right to all the oil in Arabia, Mesopotamia, and perhaps Syria.

p. 10,12,14. Oklahoma. McIntosh County. When Jim Flannigan completed a gas well on the Estes Farm in Sec. 26-11N-15E, and some oil showed, new work was started in this area. A new well of Henshaw & Co. on the T. Kanard Farm in the NW-1/4-Sec. 6-11N-14E was a failure in the Schulter sand 10 days ago, but when drilled into the 1,000-foot pay, the hole started filling with crude oil. It has no gas, but will probably be a fair pumper of oil. It is the first oil producer to be found in McIntosh County, but is only 2,000 feet from the Okmulgee County line. Geologists have made favorable reports on this area. There are approximately 7 wells now drilling in the county. In Sections 7, 8, 9, and 17, gas wells have been found during the past 2 years in the 1,000, 1,200, and 1,300-foot sands.

The well of Flannigan & Co. got the gas at 975 feet, where the rainbow of oil was discovered. A number of years ago, a small showing of crude was found southeast of the Flannigan well on the McNac Farm in Sec. 29-11N-16E, which is now shut in. Following is a resume of what is now going on in the county.

The Green River Oil Co. has a gas showing on the Watson Farm near Checotah in the SW-1/4-SW-1/4-Sec. 29-11N-17E, at 620 feet, with 45 feet of pay, and 1,000,000 cfgpd. At 490 feet, in 12 feet of pay, it had 500,000 cfgpd. The well is 4 miles south of Checotah. Green River is owned by Wichita Falls parties.

H. H. Galbraith, Sullivan & Litchfield are drilling on the Thomas Farm in the SE-1/4-NW-1/4-Sec. 24-10N-16E.

Litchfield & Co. are drilling on the West Farm in the NE-1/4-SW-1/4-Sec. 10-10N-16E.

There are others drilling, not listed.

Carter County, Healdton Pool. The first gas well of any size to be found was that of the Crystal Oil Co. on the Milton & Thomas Lease in Sec. 5-4S-3W, 400 feet east of the good McClure well, where 16,500,000 cfgpd was found at 700 feet. It is shut in. Ardmore is in need of gas, and the well may be finished at this level. This is 8 miles from the end of the Ardmore line at Oil City. The 1911 Oil & Gas Co. test in Sec. 32-3S-3W is good for 50 to 60 bopd at 1,106 feet, but this is still unconfirmed. (Many wells are being drilled, and details are given).

Pushmataha County. The well in the NE-1/4-SE-1/4-Sec. 3-2S-15E, had a showing at 1,200 feet, but after being tested, it was too small to make a well.

LeFlore County. Local parties have found a gas well near Poteau. Gas has been found in this county previously near Heavener and Spiro.

p. 26-27. Evolution of Drilling Methods. Mr. Josiah G. Winger, the oil-well driller of Grand Valley, Pa., has more stories to tell about early day drilling around Oil City, Pa., since 1860.

At Oil City, a lease consisted of one-fourth acre or one-half acre, and a rig was erected. Some wells came in at 3,000 bopd, and the oil flowed down ravines into pits. One well caught on fire. Drill stems were about 2-1/2-inches in diameter and 20-feet long, and the driller and tool pusher could carry a stem a mile or less to the blacksmith shop for repairs. Roads were blocked with teams of horses as far as the eye could see. A centerbit and reamer were the only tools known for drilling a round hole. A 14-foot sinker bar with steel jars below was also used. In 1880, Mr. Winger found out that jars were not needed, when he and his tool pusher Sam Averel drilled a well in Garlock Hollow in Mckean Co., Pa., the No. 2 Garlock for Bradley & Greene, with locked jars. Sam was last known in Bartlesville, Oklahoma. One well they drilled in early 1869 on the Allegheny River at Foxburg, opposite the old Foxburg House, to 200 feet. At 5 o'clock in the morning, a great rush of air came out of the hole, followed by a flow of 2 feet of water above the top of the casing, lasting for about 1 hour. Each day thereafter, at 5 o'clock, this phenomenon occurred regularly just like "Old Faithful" geyser. The water would recede to the level of the river.

Vol. 12, No. 30, January 1, 1914, p. 2. Million-Dollar Oil Deal. The Carter Oil Company, an Ohio and West Virginia corporation, is reported to have purchased the Oklahoma holdings of Thomas B. Slick for $1,500,000, for producing properties in the Cushing Field and leases in Payne and Lincoln Counties. There are 63 producing wells with daily capacity of 1,543 barrels, and 130 new locations. It is reported that the Magnolia Petroleum Co. may purchase the Shaffer property in the Cushing Field for about the same price.

p. 2. Conservation of Oil and Gas. Secretary Lang is asking for $30,000 for the Government to devise ways and means for the conservation of oil and gas.

p. 2. Magnolia is Expanding. The Magnolia Petroleum Company has its legal troubles settled with the State of Texas. They now can complete a mammoth office building in Dallas, and the extension of its pipe line from Bowie, Texas, in the Electra Field to Cushing, Oklahoma. The line is to be a 10-inch line. The Magnolia

Pipe Line Co. has been chartered in Oklahoma, with stock of $500,000, and they will build the line under direction of the president D. C. Stewart and his assistant E. A. Latimer. The northern end will connect at Cleveland, Oklahoma. The southern end connects eventually at Corsicana and Beaumont, Texas, with dockage facilities at Sabine Pass. Healdton, Oklahoma will be connected also. The line will handle 22,000 bopd.

p. 2. Atlantic Coast Wildcatting. In Maryland, near Salisbury, natural gas was discovered after the Charleston earthquake about 25 years ago, and the gas has been used for lighting and heating at Salisbury. Now, the Wiccomico Oil & Gas Co., with $300,000 stock, has been organized, and they have leased land and are moving machinery to the Salisbury area, under direction of Col. Thomas Lavery. Oil seepages have also been found in the area.

p. 3-4. Personal Mention. Col. W. A. Pierce, of Chicago, Ill., operates in the Nowata Field. He was one of the pioneer producers in the Chanute Field of Kansas.

D. W. Ohern has resigned as director of the Oklahoma Geological Survey, to enter the employ of an oil company. C. W. Shannon has been appointed as his successor.

Jo P. Cappeau, Jr., and wife have moved to Tulsa from Pittsburgh, and will make Tulsa their home. He will look after the business of Jo P. Cappeau & Sons in the Mid-Continent.

The National Oil Exchange is the name of a new corporation that will open offices in Oklahoma City. The president is W. E. Shaffer, and the vice-president is J. B. Foster.

S. E. Nice, of Independence, Kansas, affiliated with the Niece Oil Co., is in Carter County, looking after his company's interests. A well will be started within a short time near the town of Pooleville.

O. D. Harrington, of Pittsburgh, Pa., reputed to be the oldest leaser in the country, has arrived in Tulsa after spending some time in the East. In spite of his years, Mr. Harrington gets around as well as the younger men.

R. M. McFarlin, of the McMann Oil Co., was in Tulsa from his home in Holdenville. He spends most of his time in North Texas. S. M. McFarlin, of the same company, was also in Tulsa.

John Dyson, of Fort Worth, Texas, a well-known operator in North Texas, was in Tulsa. He is one of the old-timers in the contracting business and drilled the first well in the Cleveland Pool, Oklahoma. Before coming west, he did most of his work in the vicinity of Mannington, W. Va.

E. B. DeLoe, field manager of the Cudahy interests, moved from Tyro, Kansas to Coffeyville, Kansas, from where he will manage the Eldorado and Cudahy producing properties, along with the LaSalle Oil Co.'s property. He has been with the Cudahy people for the past 8 years, and is given a well-earned promotion.

W. S. Wilhelm, president of the Maricopa Queen Oil Co., visited Oklahoma and has returned to his home in Long Beach, California. He leased and purchased 1,220 acres of mineral rights in Oklahoma, in McIntosh and Muskogee Counties, and intends to drill on them in early Spring.

C. L. Bass, of San Antonio, Texas, a well-known Gulf Coast producer and operator, visited Oklahoma. He said that the lobby of the leading hotel in Tulsa is like a crowd at a national convention of a political party. Every night one may see leading business men from many sections of the country and Europe. Railroads leading out of Tulsa are lined for many miles with derricks that stretch away for 5 or 6 miles as far as the eye can see. At night, the lights that glimmer from these derricks remind one of a great city that stretches beyond the view.

p. 4, 8. Noted in Passing. It is claimed that the use of oil for fuel in battleships will increase their radius of action 40 percent.

British experts estimate that the Admiralty will use a future supply of 7,000,000 barrels of fuel oil annually for British war vessels.

The deep test near Poplar Bluff, Mo., which is being drilled by the Minnetonka Oil Co., has reached a depth of 3,775 feet. The company recently increased its stock from $15,000 to $20,000 and will go on down with the test.

The Weimer gas plant at McAlester has been sold to the Howe-Corrigan syndicate of Grand Rapids, Mich., for about $250,000. The name will be changed to the McAlester Gas & Coke Co. F. A. Williard will be the local manager.

According to the Fort Scott, Kansas, Tribune, a new shallow oil field has been discovered near Swartz in Vernon Co., Mo., where a well recently was completed on the Barney Brannon Farm for about 10 bopd. The well was drilled to a total depth of 161 feet. Two pays were reported, at 107 and 151 feet.

Kansas City oil men have leased a large acreage in Vernon Co., Mo., and will drill a deep test near Deerfield. Messrs. Houston, Downing & Skinner drilled several shallow wells last summer and claim to have found some oil. Their first well will be drilled on the Brannon Farm south of Eve, where the derrick is up and the tools are on the ground.

The oil-carrying ship Wotan is the largest motor vessel afloat. It is 404 feet long, with beam of 52 feet 3 inches, and depth of 29 feet 6 inches of hold. It carries 6,000 barrels of bunker oil for her own fuel, sufficient to propel her 30,000 miles, and can carry 50,000 barrels of oil as a cargo. This represents an enormous saving, with 3 oilers and 3 firemen instead of 20 firemen and coal passers, and with a well-ventilated and cool engine room without coal dust and dirt.

p. 6-8. How Mud-laden Fluid Conserves Gas. (pictures and portraits). A. G. Heggem and J. A. Pollard, of Pittsburgh and Los Angeles respectively, with the U. S. Bureau of Mines, have been in Oklahoma the last 8 months working in the Cushing Field, demonstrating the mud-laden process for cutting off gas while drilling deeper for oil. Earlier it was reported that a well was wasting 40,000,000 cfgpd, and they were called to seal the well. The usage of clay mixed with water was probably discovered in 1889 by the late Benjamin Andrews. Perhaps the first use of clay in water as a drilling fluid was in the famous Lucas well at Spindletop in 1901. The heavy mud is driven back into the soft formation and seals it off. In the Mid-Continent, the formations are hard and the method here tofore has not been used.

In Oklahoma, the first well to be treated with the mud process was that of Gries & Co. on the L. Yarhola Farm in the Cushing Field in Sec. 8-17N-7E. The well was drilled to a depth of 1,700 feet, where gas was struck and fire destroyed the rig. The rig was rebuilt and drilling resumed to 2,140 feet, using mud-laden fluid. The gas sand was successfully bypassed. To prove this, the fluid pressure was gradually decreased until the well flowed gas again at 22,180,000 cfgpd. The gas was cased off, and drilling resumed to find the deeper oil.

The second well to be drilled was that of White, Ufer & Sinclair, on the same farm, where the mud was introduced into the Wheeler sand.

In June, 1913, the Devonian Oil Co. used the method in their well that had 180 feet of caving with gas. Using mud-laden fluid, and drilling through 28 feet of hard limestone, it took 36 hours to bypass the caving and limestone.

Near Haskell, the Anders & Cory well on the Walter Coleman Farm in Sec. 12-15N-15E, struck 35,000,000 cfgpd and 250 barrels of salt water an hour, polluting the countryside and wasting gas. By using the mud-laden fluid, the well was brought under control.

In July 1913, the Barnsdall Oil Co. had a 40,000,000 cfgpd well on its No. 13 Lot 298 in Osage County, and wanted to case off the gas with 5-inch casing, but could not. Using mud-laden fluid, they cased it off, and went deeper for the Bartlesville sand.

The first contract let for this method was in September 1913, with Jim Morrison and Joe Snakard, who drilled No. 20 on the same lot as the Barnsdall well in Osage County, mentioned above. The Bartlesville sand was drilled 100 feet in 3 days.

p. 8. Recent Deaths. George W. Fair aged 84 years, died at his home in Butler, Pa., Thurs., Dec. 25, 1913, following an illness of several weeks. During the early excitement in the Butler Fields he operated a hotel at Jefferson and Munroe Streets. He was a veteran of the Civil War. He was later well-known in the oil-producing business. He was the inventor of the Fair Elevator for tubing and casing, a device now considered indispensable in oil and gas wells. Just recently, he secured a patent on an improvement to the elevator.

He is survived by his wife, six sons, and two daughters. The surviving children are A. J. of Butler, Pa.; Lewis C., of McDonald, Pa.; George W., of Charleston, W. Va.; Harry G., of Okmulgee, Okla.; W. F., of Troy, W. Va.; Charles A., of Clarksburg, W. Va.; Mrs. A. L. Young, of Lima, Ohio; and Mrs. E. J. Thompson, of Clarksburg, W. Va.

p. 10, 12. Summaries of Field Operations for the Month of December 1913. During the month of December 1913, in Oklahoma there were 931 wells completed, 163 of which were dry, and 58 gas wells, with new production of 43,173 bopd. There were 856 rigs up, 683 of which were drilling. New wells, at Wann in the Bartlesville sand, and at Owasso in the Burgess sand were found. Three new wells were completed in the Bartlesville sand in the Cushing Field, being the first wells in this sand there. Nineteen wells were completed in the Newkirk Field. The Healdton Field has many producers. There were 12 completions in southwestern Oklahoma.

p. 14. Past Year in Mid-Continent Fields. In Oklahoma for 1913, there were 9,131 wells drilled, of which 1,317 were dry holes, and 589 gassers. The new production was 327,502 bopd. In February 1913, the Wicey Pool was discovered, eight miles south of Bixby. In April, the Collinsville Pool of Rogers County was found. The shallow sands were found productive, in Rogers County, and good wells were found east of Chelsea and Talala. In July 1913, the Artesia Pool was opened in Okfuskee County. In August 1913, the Cushing Pool was extended northward. In August, the Boston Pool in Osage County was drilled deeper, the initial well being drilled in shallower beds the previous year. In August, the Boock sand in the Morris Pool was opened in Okmulgee County. At Healdton, Carter County, a new field was discovered in August 1913, and this is expanding. In September, the Newkirk Pool in Kay County was discovered. In September, the Inola Pool in Rogers County was found, with oil at 500 feet. In October 1913, the Owasso Pool in Tulsa County was discovered.

In North Texas for 1913, 761 wells were completed, including 187 dry holes and 9 gassers, with 51,257 new bopd production. The most active area was in Wichita County, comprising Iowa Park, Eeds, Borchelt, Burkburnett, and Electra including Folkes Station. In Clay County, the Petrolia Pool shows a steady increase. In Archer County, only one well was completed, while 19 others were dry holes. In Shackelford County, the Moran Pool was discovered.

In northwestern Louisiana, the Caddo Field production has steadily increased, with total production of 1,000,000 barrels a month. The new wells were 541, of which 114 were dry and 66 gassers, with total new production at 160,369 bopd. A new DeSoto Pool in DeSoto Parish, 55 miles south of Shreveport, has greatly expanded the field. Some gas wells came in at 70,000,000 cfgpd. Initial production falls off, so that the new production declines rapidly. The field has now been extended northward and westward into Texas.

p. 16. Oklahoma. Wildcat Operations. In Hughes County, near Calvin, the Red River Oil Co. of Mr. Critchlow completed an oil well in the NE-1/4-Sec. 33-6N-10E, at 1,020 feet, but the results have not been released.

In Cherokee County, two miles west of Hulbert, a well was completed for 3 bopd at 860 to 900 feet, and this may be an extension of a field in eastern Muskogee County. The Rice Oil Co. drilled the well on the Moore Farm.

In McIntosh County, ten wells are drilling near Checotah and Eufaula.

In Adair, Cherokee, and Delaware Counties, there are 5 wells drilling. Oil has been found on surface spring water in the northern end of Cherokee County. South of Tahlequah, in Cherokee County, a well is down past 1,400 feet in a hard limestone.

In Bryan County, the well of Smith & Lee near Aylesworth, was abandoned.

In Johnston County, near Bromide, Robert Galbreath will drill a well.

In Atoka County, an active campaign is being carried out. The Garatoka Oil Co. has started a well near Redden in Sec. 33-1N-14E. The Conewango Oil Co. is at 1,000 feet on the Danehour Tract in Sec. 7-2S-10E. The Velvet Oil Co. has material on the ground in Sec. 31-1S-10E. Southeast of Atoka, Frank B. Summers

of Sapulpa will move in two rigs and start operations. The Lavaca Oil Co. of Muskogee will start a well shortly in Sec. 8-3S-10E. Priestley & Co. will drill in Sec. 5-2S-10E. The Olive Oil Co. expects to drill one mile east of Redden in Sec. 33-1N-14E. (Note: 1S-10E is in Coal County).

In Pittsburg County, Reese-Evans is drilling at 823 feet, 3 miles east of Kiowa, in the center of a block of 10,000 acres of leases. Six miles northeast of Kiowa, the Midland Oil Co. is down at 543 feet. It is 14 miles west of the Homa Gas Co. well.

In Blaine County, near Geary, Dyer & Co. have incorporated under the name of the North Canadian Valley Oil & Gas Co., and will drill a well. Near Watonga, the Watonga Oil & Gas Co. is down past 1,100 feet on the Maiti Farm in the NW-1/4-SW-1/4-Sec. 10-16N-11W, 3-1/4 miles northeast of Watonga. This is supposed to be the first well drilled in the county.

In Garfield County, near Enid, Charles Rosier of Tulsa has a test for the city of Enid, and is down to 2,395 feet, on contract for 3,000 feet. They now think that the Bartlesville sand will be at 3,500 feet, and they will probably have to drill deeper than 3,000 feet.

In Pottawatomie County, five miles north of Highland and a mile west of Kickapoo, in the NE-1/4-Sec. 26-11N-3E, a well is being drilled on the Mattocks Farm.

In Jefferson County, Colcord & Co. are drilling in the NW-1/4-NE-1/4-Sec. 15-3S-5W (? Stephens County), and reportedly struck some oil in a 25-foot sand at 1,300 feet, for about 10 bopd. Kelly & Co. will start a well in Sec. 32-4S-5W, about 18 miles east of Addington, and 5 miles south of the Loco Field. The International Oil & Gas Co. is at 808 feet in Sec. 15-4S-4W.

In Pushmataha County, a well is down to 1,300 feet in the NE-1/4-SE-1/4-Sec. 3-2S-15E, and had a good showing at 1,200 feet.

In Cotton County, near Ahpeatone, a well will be started about 11 miles north of the Burkburnett Field of Texas, by Garvin & Co.

In Caddo County, in the Keeche Hills, the Cement Oil & Gas Co. is at 1,225 feet on the Funk Farm in Sec. 21-5N-9W.

In McClain County, west of Norman, and 16 miles southwest of Oklahoma City, the Zelma Oil & Gas Co. reported some oil at 1,970 feet, in a 4-foot sand.

In Murray County, the Garvin County Oil & Gas Co. is drilling at 300 feet in Sec. 18-2N-2E (? Garvin County). A number of small wells have been drilled in this area.

In Comanche County, near Lawton, Epstein & Co. is pumping about 30 bopd of heavy black oil in Sec. 31-2N-10W. The development is going on in a haphazard manner. This is the first producer in the county. It is 200 feet from the old well on the Marple Farm, abandoned some time ago, said to be an oil well but spoiled by the drillers. Boone & Co. are drilling in the NW-1/4-31-2N-10W, and are at 435 feet.

p. 24. Nevada. Missouri. May Be New Oil Field. In Vernon County, Mo., at Swartz, on the Brannon Farm, oil was found less than 200 feet deep, and after being shot, the well is producing about 10 bopd.

p. 24. Mexia, Texas. Another big gasser has been brought in on the Jackson Lease, about 14 miles southwest of Mexia, by the company headed by Mayor Frank Smith. This extends the field about 2 miles. It is now the largest gas field in the state. The gas is being piped to Waco and all nearby towns.

p. 31. Gas. Oklahoma. In Oklahoma for the month of December 1913, there were 58 gas wells completed, with 376,500,000 cfgpd new gas discovered. The largest production was from the Cushing field, where 11 wells produced 174,000,000 cfgpd new initial production. The Quapaw-Wichita Gas Co. will be running gas from Cushing to Bigheart, to Kansas and Missouri, as soon as the Bigheart compressor is finished. This line will move about 50,000,000 cfgpd. At Healdton, Carter County, the Crystal Oil Co. on the Milton & Thomas Lease in Sec. 5-4S-3W, had a well with 16,500,000 cfgpd. This is about 8 miles from the Wheeler Field, and will be connected to the end of the Ardmore gas line. In Stephens County, the Duncan Pool had a gasser, that of W. G. Skelly & Co. on the Mullen Farm in Sec. 12-1N-6W,

for 5,000,000 cfgpd, with a pressure of 500 psi. In Tulsa County, the Owasso Pool had 13 gas wells completed for 58,500,000 cfgpd new gas.

Vol. 12, No. 31, January 8, 1914, p. 14, 16, 18. Oklahoma. The Newkirk Pool, Kay County. Good wells have been found in Secs. 3 and 11-28N-3E, each starting off with a few barrels a day to 300 barrels a day. Wildcatting has not extended the field, which is 1-1/4 miles long by 3/4 mile wide, covering 300 acres. Section 3 is the most prolific. The pool is 7 miles south and east of Newkirk, along the Arkansas River, 10 miles south of the Kansas line. Only a few rigs were operating a few months ago, but now there are 27 producing wells and 37 wells drilling. The oil is 37 to 41.8 gravity, and the total production is about 2,450 bopd. J. S. Cosden & Co. of Tulsa have four 1,600 barrel tanks, and will start taking oil at once, paying 6¢ a barrel premium. They have a 10-car rack at Mervine, 4 miles away. The Ponca Refining Co. is laying 20 miles of 3-inch line to their refinery at Ponca City, and will pay a premium of 11 cents a barrel. Miller Brothers of Humboldt, Kansas, have a loading rack at Mervine, and 4 miles of 2-inch line. The Western Refining Co. has a loading rack at Mervine and a 3-inch line to the pool from Mervine. The Co-Operative Refining Co. of Chanute, Kansas, is also handling some of the production. The first well was completed about 5 months ago. The main sand is at 1,000 feet, called the Newkirk sand. The Ponca City sand is at 1,500 feet. White & Sinclair of the Scioto Oil Co. made 20 locations this past week. A. L. Derby has 9 wells. Byers & Co. have 3 wells drilling. Five smaller companies have one each drilling. (details given on producers, etc.).

The Blackwell Pool. Kay County. During the past five years, about 60 gas wells have been drilled from a sand like that at Newkirk, only a hundred feet higher. About 80,000,000 cfgpd is produced, and the gas is used by local towns. E. W. Marland & Co., of Ponca City, has 35 wells and 50,000,000 cfgpd, and they sell to the Wichita Gas Co. which supplies Winfield, Wellington, Salem, and many nearby towns in Kansas. The Blackwell Gas Co. has 25 wells and 30,000,000 cfgpd, and furnishes gas to Blackwell, Peckham, and Newkirk. The gas sands are at 750, 900, and 1,500 feet, with about 350 psi pressure. One well was completed at 1,900 feet, with 430 psi pressure. The field is 11 miles long and 2-1/2 miles wide, and no dry holes have been drilled. The field extends from Blackwell to within 3 miles of Peckham. Three years ago a gas well was drilled near Peckham in Sec. 13-28N-1E, but no oil was found, as is the case in the Blackwell Pool

Arkansas City, Cowley County, Kansas. A small gas well was drilled to 1,100 feet in Arkansas City, inside the city limits, 27 years ago (1887). Twelve years later, Conrad & Co. drilled a gas well southwest of town. In 1905, Morton & Co. of Chicago completed a gas well north of town on the Green Farm. Since then, this company has drilled 12 wells, with total production of 14,500,000 cfgpd, mostly from sands at 900 feet, with pressures about 335 psi. The Wichita Gas Co. has taken the gas. Hundred of thousands of acres have been leased and many wells are being drilled deeper.

Wann Pool, Washington County, Oklahoma. The Wann Pool covers an area of approximately one-half mile square with production in the NE-1/4-Sec. 16-28N-14E, consisting of 1,300 bopd from 7 wells. Previous production was in a sand at 500 feet, but now the operators are drilling deeper for the Bartlesville sand. (details given on wells).

Wildcat Operations. Pontotoc County. The Kurtz Oil & Gas Co. has an 8 bopd well on the Wallace Farm at 745 feet, in an 8-foot sand, near Allen, in Sec. 23-5N-8E. The well was drilled to 756 feet during the week without increasing the production. The oil is 28 gravity and of asphaltum base.

Marshall County. A Star rig has been placed on the L. J. Woods Farm about 4 miles south of Mannsville in the NW-1/4-SE-1/4-Sec. 2-5S-4E. During the past week, W. J. Blair & Co. have leased 1,500 acres and have contracted with Rainfrow & Baker to drill a test on the Colbert Farm, in the center of the section (?).

Jefferson County. The International Oil & Gas Co. is at 815 feet in Sec. 15-4S-4W, and having trouble. Colcord & Co. are at 1,325 feet in the NW-1/4-NE-1/4-Sec. 15-4S-4W.

p. 25. Bartlesville is a Live Progressive Community. This Washington County town has had slow steady growth, and was the first oil town in Oklahoma. There was no boom and bust. The first supply stores located here. It is the headquarters of two large companies, the Barnsdall Oil Co. and the Indian Territory Illuminating Oil Co., the latter holding a blanket lease over much of the Osage Nation, beginning in 1893-1896. More than 6,000 wells are producing in Washington County, with 33,000 bopd production. Much of the production is obtained at 550 feet and 1,200 feet deep. The average well produces from 5 to 7 bopd, mostly from the Bartlesville sand. The Plover Drilling Co. is here, and they are currently drilling 17 wells. The Doherty Gas Co. has headquarters here, which manages the Quapaw Gas Co., Wichita Gas Co., and Bartlesville Gas Co. The Henry Gas Co. and Smelter Gas Co. are also here.

p. 30. Nevada, Missouri. The oil well on the Brannon Farm near Swartz, in Vernon County, Mo., was shot, and will probably be a 5 bopd pumper. The oil was found in two sands at 121 feet and 167 feet.

Vol. 12, No. 32, January 15, 1914, p. 4. Big Increase in Production. In Oklahoma, for 1913, the production was 62,500,000 barrels of oil, as compared to 1912 with 51,427,071 barrels. In the United States for 1913, the production was 242,000,000 barrels, and in 1912 was 222,113,218 barrels.

p. 4. Scotland. Scottish shale-oil companies raised and retorted 3,000,000 tons of shale in 1913.

p. 4. Oil in Egypt. Traced from a Bible story is "She took for him an ark of bullrushes and daubed it with slime and pitch and put the child therein", referring to the mother of Moses who set her babe adrift on the River Nile. The word "pitch" has been interpreted to mean bitumen or asphaltite or dried-up oil. Charles Whiteschott, a geologist from Wooster, Ohio, with Standard Oil Co., was sent to Egypt to find the place where the pitch was used for the boat of Moses. He examined the place where tradition said that the event happened, and as a result, traces of oil were found, and now three wells in the area are producing oil. He said "The Field is a very promising one". "I was sent there solely on the strength of that Bible verse, penned thousands of years ago."

p. 6. Personal Mention. W. B. Pine, of Okmulgee, is in Ardmore, He is one of the largest independent operators in Oklahoma, having production in the Pine Pool and other portions of Okmulgee County.

George Miller, of Ponca City, is in Tulsa on business for the 101 Ranch Oil Co. He has now formed a company for gasoline from cashing-head gas, and will have a plant in operation near Ponca City.

p. 6. Noted in Passing. On January 7, 1914, voters turned down the proposition to create a new county in Oklahoma out of portions of Creek, Payne, and Lincoln Counties. The new county was to be named Shaffer County in honor of C. B. Shaffer, one of the pioneer operators in the Cushing Field. The town of Cushing was to become the county seat. Voting irregularities are charged on both sides, and the courts may be called upon to decide the contest. The vote was close.

p. 12. Oklahoma. Wildcat Operations. Coal County. In Sec. 24-3N-11E, a gas well has been completed for 3,000,000 cfgpd. The owners of this well and 4 other producers across the line in Pittsburg County are very secretive. In Sec. 23-3N-11E, only dry holes have been drilled. Near Coalgate, local capitalists recently drilled a dry hole, but they will soon start another well, under the name of the Coalgate Oil & Gas Co.

Pittsburg County. In Sec. 19-3N-12E, four gas wells have been drilled, with total production of 7,500,000 cfgpd. The wells are small and 2-inch tubing is being used. The gas occurs at 400 and 1,500 feet, and the gas at 400 feet is Braden-headed with the 1,500-foot gas. The largest leaseholders in this development are the Bromide Oil Co. and J. B. Moseley. Moran & Co. are drilling in the SW-1/4-Sec. 17-3N-12E. Reese-Evans & Co. are drilling at 840 feet, three miles east of Kiowa, and is on a 10,000 acre block of leases. The Midland Oil Co. is at 610 feet, six miles northeast of Kiowa.

p. 21. Bradford's Deep Well. The hole is now 5,710 feet near Bradford, Pa. It is still an 8-inch hole, and they will probably drill another 100 feet.

p. 26. Natural Gas for Waco. George W. Slough, of Kansas City, Mo., representing capitalists of that city, was granted the right to pipe the streets of Waco, Texas, for natural gas. The Texas Power & Light Co. has mains under the main streets and they will distribute the gas, with the supply coming from Mexia.

p. 26. Fifty Years of Success. The Vacuum Oil Co. will have a special meeting on Feb. 28, 1914, at Rochester, N.Y. They will extend the time of their corporate existence for another 50 years.

p. 30. Canada. Fort M'Kay Drilling. The Athabasca Oils, Ltd. company of Vancouver, B.C., has released some information on their operations of Northern Alberta. The wells are near Fort McKay, about 30 miles north of Ft. McMurray.

No. 1 well was drilled in 1911, to 560 feet, striking oil-bearing rock from 18 feet to 115 feet. In 1912, the well was deepened to 1,130 feet, and struck salt water at 765 feet. The well was near the river bank. The oil was 70% asphaltum.

Well No. 2 was drilled in 1912, 690 feet from the river bank, to a depth of 210 feet, striking oil at 143 feet. The oil was 22.8% asphaltum.

Well No. 3 was drilled early in 1913, 300 feet from the river, to a depth of 300 feet, the oil rock extending to that depth. About 200,000 cfgpd was struck at 178 feet. High gravity brown oil was found.

p. 30. Nevada. Missouri. The well on the Brannon Farm is reported not to be producing. It is claimed that the shot was too heavy, and the well has been abandoned.

p. 42. Oklahoma. Wells. Miscellaneous. Revenue Oil & Gas Co. No. 1 Bruner in Sec. 32-9N-8E was dry, in Seminole County.

Della Dean Oil Co. No. 1 was completed for 4 barrels per day in Sec. 35-7N-16W, in Kiowa County.

W. G. Skelly et al No. 1 Mullen was a gasser in Sec. 12-1N-6W, Stephens County.

p. 44. Oklahoma. Wells. Miscellaneous. Drilling. Atoka County.

33-1-14	Olive Oil Co. No. 1	(1N-14E)	
33-1-14	Garatoka Oil Co. No. 1	(1N-14E)	
31-1-10	Velvet Oil Co. No. 1 Paschel	(1S-10E)	(Coal County)
31-1-10	Swimmer et al No. 1	(1S-10E)	(Coal County)
5-2-10	Priestley & Co. No. 1	(2S-10E)	
7-2-10	Conewango Oil Co. No. 1 Danehour	(2S-10E)	
18-3-10	Lavaca Oil Co. No. 1	(3S-10E)	

Bryan County.

Keltner & Co. No. 1

In southwestern Oklahoma and southern Oklahoma, there are listed 69 wells being drilled, outside of the regular fields such as Healdton; in Tillman, Stephens, Kiowa, Caddo, Jefferson, Garfield, Cotton, Pontotoc, Comanche, Seminole, Murray, Garvin, Pittsburg, Coal, Blaine, Oklahoma, McIntosh, and other counties in eastern Oklahoma, and miscellaneous of central and northern Oklahoma, outside of the main fields.

Vol. 12, No. 33, Jan. 22, 1914, p. 6. Recent Deaths. John E. Burrows, president of the Burrows Oil Co. of Oklahoma City, died at his home in Oklahoma City on Sunday, Jan. 18, 1914, after a brief illness. He was well-known among the oil men of the Mid-Continent. He is survived by his wife and one daughter, Mrs. James T. Riley, of El Reno, Oklahoma.

p. 8, 10, 12. Oklahoma. Healdton Field. Carter County. Fourteen wells have been completed in the Healdton Field to date, including 1 gas well and 4 dry holes. The discovery well of the Red River Oil Co. of Critchlow & Co., on the Apple-Franklin Farm in Sec. 8-4S-3W, completed in August 1913, started off at 50 bopd, and is now making 43 bopd at 915 feet. So far, four different oil-bearing

sands are producing: at 477 feet, a small well was found in Section 5-4S-3W; the pioneer well in Sec. 8-4S-3W found the pay at 916-931 feet; another well got the pay at 939 feet; and the best well in the pool is producing from 1,103 to 1,145 feet. The gas well is producing 30,000,000 cfgpd at 750 feet, probably in a fifth sand. The 900-foot pay is the most regular. So far, the production is confined to 4 sections: 5, 8, 9, and 32, with 2 wells in Sec. 5, 4 wells in Sec. 8, 2 wells in Sec. 9, and 1 well in 32-3S-3W. The daily total production is now estimated at 1,118 bopd. About 28 wells are being drilled at present, and many deeper sands will be examined. Bonus prices for land are 150 to 200 dollars per acre for close-in leases, and 50 to 100 dollars for leases one to two miles away. The average cost of completion of a well is $4,500. Generally 12-1/2-inch casing is set at 21 feet, followed by 320 feet of 10-inch casing, then 621 feet of 8-inch, and approximately 900 feet of 6 and 5/8-inch casing to the top of the sand. The average time for completion is 17 days. The contracting price is $2.25 a foot, fuel and water furnished. Gas is the fuel furnished at $7.00 a day. Drillers receive $7.00 a day, and tool pushers $5.00 a day. Following is a list of the producers and their wells:

Red River Oil Co., initial discovery well, Apple-Franklin Farm, Sec. 8-4S-3W, 43 bopd at 916 feet.
Red River Oil Co. No. 1 McClure, Sec. 5, 265 bopd.
Red River Oil Co. No. 2 Apple-Franklin Farm, Sec. 8, 30 bopd at 839 feet.
Humble Oil Co. No. 1 Smith Farm, Sec. 9, 60 bopd at 900 feet.
Rex Oil Co. No. 1 Hicks Farm, Sec. 9, 30 bopd.
Westheimer & Nichols No. 1 Underwood Tract, Sec. 5, 10 bopd at 477 feet.
The 1911 Oil Co. No. 1 Clark Farm, SE-SE-32-3S-3W, 300 bopd at 1,103-1,145 feet.
Twin State Oil Co. No. 1 Arrington Farm, Sec. 8, 60 bopd at 947 feet.
Twin State Oil Co. No. 1 Newton Tract, 20 bopd.
Red River Oil Co. drilled 4 dry holes in Secs. 8, 17, 21, and 29-4S-3W. The test in Sec. 17 was drilled to 1,435 feet, and is the deepest test in the area.
Crystal Oil Co. No. 1 Milton & Thomas Lease, Sec. 5-4S-3W, 30,000,000 cfgpd at 700 to 750 feet.

The first 360 feet of rock is red rock, and then blue shale is encountered, with pay sands at different depths. The pool is now 1.75 miles long and 0.75 miles wide.

Wilson is the main oil town, at the terminus of the Oklahoma, New Mexico & Pacific Railway, better known as the Ringling Road. It is said to be named after President Wilson. It is about 7 miles southeast of the Healdton Pool. Three months ago, the area was a farm. About 500 people are there. The daily cars on the railroad are packed with freight and passengers, and the daily run to Ardmore and back is called the "Coal Oil Johnny" train. Many people are living in tents. About 300 teams of horses haul the freight to the field over bad mud roads. There is mail, telephone, and telegraph service at Wilson. The main supply stores are locating there. Ardmore is about 25 miles from the Healdton Pool, and it is also booming. It has a population of about 11,500, and is about 25 years old, and has better accommodations, so this town is the real headquarters for most of the companies. Four railway lines run into Ardmore. Ardmore has paved streets, the asphalt of which was taken from the mines 3 miles from the city. Water to Ardmore comes from an artificial lake, and gas is piped in by the Ardmore Gas Co. from the Oil City or Wheeler Pool by a 6-inch line, about 20 miles to the west. About 8 more miles of gas line will be extended to the Healdton Pool shortly. The gas is sold for 35¢ a thousand. Ardmore also has a complete electric plant. The Randol and Whittington Hotels are reaping a harvest, having a full complement of guests.

Just this week, the Humble Oil Co. No. 2 Smith is spraying oil at 825 feet, with 10,000,000 cfgpd, in Sec. 9-4S-3W having penetrated 5 different gas sands.

One of the drillers is Bill Skelly, working for the Red River Oil Co. He has a good local tent camp, with three bunk houses and an eating house, serving 40 of his men.

(Many details are given for each well drilling).

Wildcat Operations. Operators are looking for new pools throughout Oklahoma. In Jefferson, Love, and Marshall Counties, most of the acreage has been leased.

In Comanche County, near Lawton, Warner & Boone drilled east of town in Sec. 31-2N-10W and got oil from 270 to 297 feet. The well will probably go to 400 feet. Epstein & Co. on the Beddo Farm in Sec. 31-2N-10W has 20 bopd at 800 feet. The Night & Day Oil Co. on the Martin Farm in Sec. 31-2N-10W has 40 bopd at 165 feet. Another well has been completed on this same tract at 12 bopd at 140-157 feet.

In Hughes County, eight miles south of Calvin, in Sec. 33-5N-10E, the Red River Oil Co., on the Flenchim Farm, is at 1,350 feet, with 300 feet of pipe in the hole. There was a showing of gas at 850 feet.

In Pontotoc County, next to Allen, Kurtz Oil & Gas Co. has a well on the Wallace Farm in Sec. 25-5N-8E, for 28 bopd. When completed it was 8 bopd, but with increased deeper drilling to 763 feet, it picked up more oil. The same company is now drilling in Sec. 23-5N-8E on the Justice Farm, and in Sec. 2-4N-8E on the Seward Farm, northwest and south of Allen respectively. There are 10 new locations in this area, some in Hughes County. (Details given).

In Pittsburg County, many tests are being started, but only gas has been found. Near Scipio, the Choctoka Oil & Gas Co. is at 650 feet, and they expect to get a good sand at 1,000 feet. They have several thousand acres of land under lease in the area. The Gladiator Oil Co. will start a test in T. 6 N.-R. 16 E. They have 4,000 acres under lease, about 9 miles northeast of McAlester and 9 miles south of Featherstone. The Midland Oil Co. is at 740 feet 6 miles northeast of Kiowa. Moran & Co. are drilling in the SW-1/4-Sec. 17-3N-12E. Reese-Evans & Co. are at 920 feet, 3 miles east of Kiowa. They have 10,000 acres under lease, and this location is in the center of the block.

In Atoka County, almost 6 new wells will be started. In Sec. 33-1N-14E, the Olive Oil Co. is spudding, while the Conewango Oil Co. is drilling at 1,500 feet in Sec. 10-2S-10E and is shut down.

In Cherokee County, the test 5 miles southeast of Tahlequah is down, 1,800 feet, and hung up.

p. 12. Texas. North Texas. The daily production in north Texas is 28,995 bopd. Electra is 25,900 bopd, Burkburnett is 1,670 bopd, and Petrolia is 1,400 bopd. Many wells are being completed, and development work continues. (Details given).

p. 22. Osage New Map. The Osage Indian Agency at Pawhuska began making maps showing work done by Osage sub-lessees. The map will show where the previous wells were drilled to Dec. 31, 1913. Renewals of leases will probably be made on the basis of so many acres for every well drilled. The companies would like more acreage per well, contending that some leases actually lost money to operate. They would like to receive $1.03 a barrel guaranteed, and would not like to be paid the different fluctuating prices of the oil market. The blanket lease in the Osage expires in 1916, and there is speculation as to renewals to large companies. The Indian Territory Illuminating Oil Co. holds the lease, and sublets to many smaller companies, retaining a small percentage of the oil royalty money. It retains the gas rights on the properties, and all gas wells are turned over to the parent company. The Barnsdall Oil Co. holds 300,000 acres of a sublease and they are drilling wells as fast as possible. All other sublessees are doing the same.

p. 30. Henryetta, Okmulgee County. Gas. Smith & Snow supply natural gas to Henryetta, including the coal mines. The coal companies mine and sell coal at $1.20 a ton, but buy gas at 5¢ a thousand, and since 20,000 cfg equals 1 ton of coal, it costs the coal company less to burn gas than coal, by 20¢ a ton.

Vol. 12, No. 34, Jan. 29, 1914, p.1-2. New Bit Aids Development. Sharp-Hughes Tool Company. Much of the credit for the increase in the world's oil production is due to improvements in the rotary drilling system, and to the invention of the S.-H. rotary rock drill bit invented by Howard R. Hughes of Houston, Texas. This is especially true where soft rock alternates with hard rock. The Sharp-Hughes Tool Company has been a wonderful success in the manufacturing of this bit.

p. 4. Personal Mention. C. E. Hutson, of Independence, Kansas, oil man and hotel proprietor, has returned from a trip to McIntosh County, Okla., where he is interested in a producer brought in a month ago. This is the first oil well to be found in that county and Mr. Hutson is highly elated.

p. 6. Noted in Passing. Dead Sea. According to a recent consular report, an American oil company has obtained a six months' working option on a concession for oil and gas in the vicinity of the Dead Sea. The concession was granted by the Ottoman Empire to Turkish subjects and assigned by them to the Americans.

Oklahoma Income. Oklahoma now has an income of approximately $1,000 a day from royalties on state lands. There have been 71 wells drilled, of which 46 are producing, with 28 oil wells and 18 gas wells and 21 dry holes, with 4 abandoned, and 5 drilling. About $100,000 is held in escrow awaiting the decisions of the courts as to whether it belongs to the Indians or to the State.

p. 6. Recent Deaths. Henry C. Folger, vice-president of the Thompson Meter Company, aged 80 years, died at his home on Quincy Street, Brooklyn, N.Y., on January 18, 1914, of pneumonia. He was a descendant of Peter Folger who came from Holland to America in 1665 and settled at Nantucket, Mass. Four sons and a daughter survive him. One of his sons, H. C. Folger, Jr., is president of the Standard Oil Co. of New York.

p. 10. Oklahoma. Wildcat Operations. Atoka County. The Olive Oil Co.'s test near Redden in Sec. 33-1N-14E got a small showing of gas at 250 feet, but is going deeper. There are 3 other tests drilling in the county.

Seminole County. Eight years ago there was excitement over Block 53 in Wewoka, where it was reported that oil had been struck at 1,597 feet, but the market was too low for the oil to be sold. Recently, the Wewoka Oil & Gas Co. has a test on Lot 10, Block 38, and reportedly struck an oil sand at 789 feet, which showed 42 feet of oil pay. It was cased off, and they are down to 1,000 feet. The Oklahoma-Tennessee Oil Co. is drilling at 910 feet, five miles southwest of Wewoka.

p. 12, 14. North Texas. Fowlkes Pool. Six wells have been completed in the past week in this area, increasing production by 70 bopd new production. It has not been possible to connect this pool with the Iowa Park Pool. (Details given).

Moran Pool. Shackelford County. The discovery well of this pool was drilled and completed in late October 1913 by The Texas Company, and 9 wells followed. The Texas Co. has been quietly developing this pool for more than a year. In November there were 3 gas wells, and 5 dry holes, and a gas line to Albany 14 miles away. The Texas Co. has 250,000 acres under lease. Treat & Crawford of Pittsburgh, Pa., has 65,000 to 70,000 acres. Gulf Oil Co. has 50,000 acres. Lone Star Gas Co. has most of the remainder. The wells are about 2,000 feet deep and cost about $12,000 to drill.

The Edwards well, the first deep oil well, one-half mile north of Moran, was finished on Dec. 10, 1913, with the oil sand at 2,090 feet, flowing 150 bopd.

The second oil well, known as the Wild Well, is one and five-eights miles southwest of the Edwards, and is producing about 75 bopd.

The two gas wells are one-half mile apart, about 1 mile east of the Edwards well, and a third gas well is now one-half mile west and a little north of the Edwards well. These have 800 to 850 psi pressure, with 2 to 6 million cfgpd open flow for each, supplying Moran, Albany, and other towns along the way. The gas sand is about 2,100 feet below the surface. There was an abandoned gas well one mile east and one-half mile north of the Edwards well, but was ruined by salt water. It was drilled to 3,100 feet.

There are two shallow oil wells making 5 bopd each from the 190-foot sand.

Many offset wells are being drilled. (Details given).

The Texas Company has a 12-car loading rack along the Texas Central Railroad at Moran, and a tank farm northwest of Moran.

p. 26. Drilling in Arkansas. Lockesburg, Arkansas. A test for oil is down to 400 feet west of DeQueen, by the Nichols Oil & Gas Co. Work was suspended when the manager W. F. Nichols was killed.

p. 26. Second Missouri Well. Nevada, Missouri. The second well, drilled by Houston, Downing & Skinner, on the Houston Farm in southwestern Vernon County, showed some oil in a 20-foot sand at 156 feet, after being shot with 60 quarts of nitro-glycerine. It is a thick, black, dead oil, with an asphaltum base. The Mississippi lime is found at 200 feet. Oil has been found at some points in the Mississippi lime in Oklahoma, so the theory that oil does not occur in commercial quantities in the Mississippian may be wrong, and possibly the operators should drill deeper.

p. 26. Mexican Land. Mr. T. A. Coleman, of San Antonio, Texas, owns 50,000 acres of land at the mouth of the Tuxpan River, near the Gulf of Mexico. He inherited this through his father and grandfather. The Huerta government gave the property to the Pearson oil interests of London, England. Mr. Coleman has filed suit with the Mexican government and the U. S. government. President Wilson has formally announced that the United States does not recognize any act of President Huerta of Mexico. The land is worth about $25,000,000, being an island at the mouth of the Tuxpan River, and is valuable because of storage facilities. This has now become an international matter.

p. 30. Oklahoma Pipe Lines. The Prairie Oil & Gas Co. has 3,250 miles of pipe lines in Oklahoma, with an evaluation of $32,000,000, running north of the Glenn Pool and northward to Kansas, connecting Missouri, Iowa, and Illinois. They operate in Osage, Washington, Nowata, Tulsa, Creek, Muskogee, Pawnee, and Payne Counties.

The next largest company is the Oklahoma Natural Gas Co., with an evaluation of $7,905,378. It operates in Washington, Rogers, Tulsa, Creek, Lincoln, Okmulgee, Muskogee, Logan, and Oklahoma Counties.

The next is The Texas Co., with an evaluation of $5,100,000, with 275 miles of lines and the refinery at West Tulsa, and 98 storage tanks. Their lines are in Osage, Washington, Tulsa, Creek, Okmulgee, Muskogee, Okfuskee, Hughes, Coal, Atoka, and Bryan Counties, with a branch in Nowata County.

The Gulf Pipe Line Co. is next with $3,368,513 evaluation, including the Cushing extension line of 23 miles. They have 319 miles of lines in Tulsa, Creek, Washington, Osage, Okmulgee, McIntosh, Hughes, Pittsburg, Atoka, Pushmataha, and Choctaw Counties. This includes tanks, telegraph, and telephone lines also.

The oil taxes are distributed to the schools in each district in each county where the taxes are paid. Palatial school houses are generally better built than the local court houses, in such towns as Nowata, Collinsville, Jenks, Ramona, Copan, Vinita, Muskogee, Okmulgee, Cushing, and Cleveland.

Vol. 12, No. 35, February 5, 1914, p. 1. The Journal in New Quarters. The current issue of the Journal was printed in the new home of this publication, No. 114 West Second Street in Tulsa, Oklahoma. The near future will witness many improvements in the Journal. With its own equipment and increased facilities, the Journal expects to keep pace with the growth of the oil industry which it aims to fearlessly and honestly represent.

p. 6. Noted in Passing. Oil producers need to know that John Ringling, of New York, president of the New Mexico & Pacific Railway Co., will extend his railroad line from Wilson to Lawton via Comanche and Walters, Oklahoma. The line is now operating from Ardmore to Wilson - 20 miles - and several miles of track have been laid beyond Wilson. Shippers have complained that the freight rates are 4 percent higher than those of other railroads.

p. 8. Oklahoma. January Field Operations. In Oklahoma, in January 1914, there were 876 wells completed, including 149 dry holes and 38 gas wells, with a total new production of 27,627 bopd. There were 736 wells drilling and 137 rigs being erected at the close of January 1914.

p. 10, 12, 14. Oklahoma. Oil advanced to $1.05 a barrel on Monday. At Healdton, the Red River Oil Co. No. 2 McClure in Sec. 5-4S-3W, got 41,688,000 cfgpd. The well is about 800 feet north of the Crystal Oil Co. gasser of 33,000,000 cfgpd. The Healdton Field is progressing steadily. (Details given). The field was extended eastward by the Robert Watchorn No. 1 Roy Johnson well in the SW-1/4-Sec. 4-4S-3W, which got 240 bopd at 820-835 feet, and after completion should be about 400 bopd.

In Stephens County, the Diamond Oil & Gas Co. in Sec. 14-3S-5W, three miles southwest of Loco, got 3,000,000 cfgpd at 2,062 feet.

In Payne County, W. of Stillwater, Thomas Von Tackey & Co. have a gas well at 2,006 feet, and it is reported to be sufficient to make a paying well.

In Kiowa County, near Gotebo, in the SE-1/4-Sec. 27-7N-16W, the Badgett & Co. No. 1 Watkins is making about 5 bopd on a pump.

In Comanche County, near Lawton, a test on the Boone Farm in Sec. 31-2N-10W had oil from 435 to 463 feet deep, and will make a small producer. Two previous wells have been producing at 370 feet.

In Atoka County, near Redden, the Olive Oil Co. well is going along nicely after the reported showing at 250 feet. It is now down 497 feet. There are other tests drilling, but the results will not be due for several weeks.

In Kay County, around the Newkirk Pool, to new towns have sprung up, named Oil City and Jones. Jones is named after the lease of the Laclede Oil Co. Oil City is across from the Murdock Lease. Tents and shacks are much in evidence. The first oil was run to Ponca City on Friday, when 1,600 barrels was moved. The Ponca Refining Co. failed to pay their 10¢ premium, however, and only paid the market price. The pool is now producing about 2,500 bopd, and there is about 20,000 barrels in storage. There have been 49 wells completed so far in the field including 1 gas well and 10 dry holes. The pool is 2 miles long by 0.75 miles wide.

p. 33. Last Chapter Written. Gas. In Oklahoma's fight to prevent natural gas from being piped out of Oklahoma, the last chapter was written at Muskogee on Jan. 22, 1914, when two decrees by the Kansas Natural Gas Co. and the Quapaw Oil & Gas Co. were entered in the U. S. District Court at Muskogee against C. N. Haskell and others. The decrees reiterate the findings of the court on Feb. 1, 1911. The decrees hold that Chapter 65 of the Laws of Oklahoma, 1907-1908, is unconstitutional, and perpetually enjoins the defendents from ever interfering with the construction of interstate pipe lines for the transportation of natural gas. Gas was a commodity and its purchasers had the right to dispose of it at any time and place they saw fit. The defendants originally were Gov. Haskell and Attorney General West, in 1911.

p. 33-34. Gas. Oklahoma. During January 1914, the new initial gas production in Oklahoma was 214,400,000 cfgpd, from 38 new gas wells. About 90,000,000 cfgpd came from Cushing, and 53,500,000 cfgpd from Osage County, and 45,000,000 cfgpd from Creek County. The waste at Cushing amounts to more than 300,000,000 cfgpd, which at 25 cents per thousand is a loss of $75,000 a day. There are many fields in the United States that are wasting gas on an enormous scale.

p. 34. Pecan Petroleum Tree. George W. Stiles, who owns a farm near Cushing, has a large pecan tree growing in the creek bottom. The pecans are so strongly impregnated with oil that they are unfit to eat. He thinks that the roots have penetrated a pool of oil.

p. 35. The Jackson Oil Company has been organized at Jackson, Tennessee, by H. G. Robertson, I. B. Tigrett, and Judge Thomas McCrory. The president is Dr. S. A. Henderson, and vice-presidents are T. H. Scruggs and Albert Crenshay, with secretary Hunter Jones. They have $35,000 stock and will drill for oil on the Walter Brown tract on 400 acres near Nowata, Oklahoma.

Vol. 12, No. 36, February 12, 1914, p. 4,6. Personal Mention. T.N. Barnsdall, of Bradford, Pa., a nephew of T. N. Barnsdall, of Pittsburgh, PA., is in Tulsa looking after the Barnsdall interests in the Mid-Continent.

E.H. Hains, G.A. Harbaugh, N.R. Gascha, and John B. Doolin, all of Ada, Okla., connected with the Revera Oil & Gas Co., were visitors at Okmulgee at the annual meeting of the company.

Robert Galbreath, of Tulsa, is looking over the Carter County development. He is shipping two strings of tools to Bromide, Johnston County, where he expects to drill. He is credited with opening the Glenn Pool.

U.G. McClelland, of Tarentum, Pa., has arrived in Okmulgee, to make that his new home. This is his first visit to Oklahoma and he is pleased. He is a brother of Jesse and Joseph McClelland, well-known producers of Okmulgee.

Jake Hamon, formerly Republican State Chairman of Oklahoma, announces that he has abandoned the political game for railroad building and oil. He is in charge of the Ringling Railroad interests in Oklahoma, and is interested in the new oil development in Carter County.

p. 4. Oil in Washington. The U.S. Geological Survey has made preliminary studies of oil and gas in the State of Washington. The prospects are in the extreme western part near the Pacific Ocean. Oil seepages occur in Chehalis and Jefferson Counties, mostly within the Queniult Indian Reservation. Some wells were put down last Spring. The oil is 29.5 gravity and light amber.

p. 4. Rotary Drilling in Russia. In the last 6 months, about 10 Americans have come to Baku in the Caucasus Mountains and to Gurleff on the Volga River, to introduce rotary drilling in Russia. About 7 rigs are at Baku. One well was completed to 2,438 feet in 34 days, setting a record for drilling in Russia.

p. 6. Noted in Passing. near Amarillo, Texas, a test for oil penetrated a deposit of animal bones that were petrified. At 1,200 feet, a 35-foot bed of rock salt was found. The test is going deeper.

p. 6. Recent Deaths. Robert Christie, aged 50 years, died Jan. 30, 1914 in the Washington County infirmary, at Bartlesville, Oklahoma. He was a well-known oil worker in the Mid-Continent. He started at Oil City, Pa., and drifted to Oklahoma a number of years ago.

p. 8, 10, 12. Oklahoma. Boock Sand Pool. The Boock sand, 14-40 feet thick, was discovered 5 years ago when A. Preston & Co. drilled a test on the Boock Farm in the NW 1/4-Sec. 20-13N-14E, and got production at 1,100 feet. The sandstone bed later was named after the farm. Generally the operators went to 1,600 feet, where there was better production, and they cased off the Boock sand. Various fields such as Morris and Bald Hill were named and extended, based upon the deeper earlier production. Last year, a well was drilled in Sec. 1-13N-14E, and struck the sand at 1,100 feet, and then another well was drilled in the SW 1/4-Sec. 36-14N-14E, to 1,140 feet, followed by wells in Secs. 26, 27, 28, and 35-14N-14E. This was named the Boock Pool after the Boock sand development, but it is not located on the Boock Farm. This Pool is about 2 miles long and 0.75 miles wide, mostly in T. 14N.-R. 14 E. Other wells have been completed in Secs. 23-24-25-13N-14E, closer to the original Boock Farm, but not next to it. Since last year, about 84 wells have been drilled in these above sections by about 25 companies, each well with production at about 200 to 500 bopd, settling down to about 150 bopd. The oil is 36 gravity and paraffine based. About 5,000 bopd is currently produced. Most of the operators stay in Okmulgee. These wells are in other named pools, so there is overlap with the Boock Sand Pool with such pools as the Morris Pool. Okmulgee is crowded, with a population of about 8,000, so many oil workers live in hundreds of tents about town. The American and Indiahoma Refineries are located there. There are also 4 glass plants that employ 700 men.

Rogers County. Inola Pool. The Inola Pool is producing about 2,650 bopd, at about 550 feet depth. Some large wells are being completed, such as the Gladys Belle Oil Co. well in the N1/2-Sec. 9-19N-16E, with initial production of 500 bopd. It takes about 3 days to drill a well, at a cost of about $1,000. About 15 rigs are now working in the field.

Oklahoma Wildcats. In the past 8 months, wildcats have been disastrous, but operators are still following the anticlines.

In Atoka County, Priestley & Co. had a dry hole at 1,200 feet in Sec. 5-2S-10E. There was one oil well found in this locality years ago, and wells are now being drilled in hopes of finding that pay zone. In Sec. 7-2S-10E, the Conewango Oil Co. is drilling at 1,250 feet on the Danehour Tract. The Lavaca Oil Co. of Muskogee had a location in Sec. 8-3S-10E, but had to abandon it because of a bad title. They will start another well close by. The Velvet Oil Co. is getting ready to drill in Sec. 31-1S-10E. The Olive Oil Co. is drilling at 455 feet in Sec. 33-1N-14E, with a showing at 250 feet. Frank B. Summers, of Sapulpa, is getting ready to start two wells. (Note: 1S-10E is in Coal County).

In Marshall County, south of Mannsville, J.S. Alexander is starting a test on the Woods Farm in the NW 1/4-SE 1/4-Sec. 2-5S-4E. The Mannsville Oil & Gas Co. is drilling at 650 feet on the Colbert Tract, in the center of the section 2.5 miles south of Mannsville. A showing of oil was reported at 300 feet.

In McIntosh County, in Secs. 4 and 5-9N-13E, three gas wells were completed some time ago, at 828, 1,600, and 1,950 feet, with a combined total production of 10,000,000 cfgpd. Some work is now starting to the west in Hughes County.

p. 43-45. Wells, Oklahoma. Completed and Drilling. Seven miscellaneous wells were completed outside of the main areas. There were 90 wells drilling in southern Oklahoma with a few miscellaneous in northern Oklahoma, in Tillman, Stephens, Kiowa, Caddo, Garfield, Cotton, Comanche, Seminole, Murray, Garvin, Atoka, Coal, Blaine, Oklahoma, Jefferson, Love, Hughes, Pittsburg, and Carter Counties. (Details given on each well). These are outside of the main drilled fields.

p. 45. North Texas. In Northern Texas, outside of the main fields, there were 28 wildcats working in January 1914, in Shackleford, Throckmorton, Haskell, Knox, Jones, Hardeman, Denton, Stephens, and Wise Counties. (Details given).

Vol. 12, No. 37, February 19, 1914, p. 8-10. Oklahoma. The main pools being developed at present are Cushing, Beland, Inola, Boock, Newkirk, Allen, Wann, Healdton, Broken Arrow, Coweta, and Jenks.

Wildcats. Almost 100 wildcat wells are being tested over a wide area of the state. Land is being leased in nearly every county.

In McIntosh County, the H.H. Galbraith well in the SW 1/4-Sec. 31-12N-14E, got 100 bopd. This is the second oil well to be found in McIntosh County, the first being in the NW 1/4-Sec. 6-11N-14E. The oil occurs at 1,800 feet. South of Checotah about 4 miles is the Green River Oil Co. gas well on the Watson Farm in Sec. 29-11N-17E. It has 3 gas pays: at 480-508 feet was 500,000 cfgpd, at 600-645 feet was 2,500,000 cfgpd, and at 2,006-2,020 feet was 2,000,000 cfgpd. The well is now drilling at 2,100 feet. The company is composed of L.C. Heydrick, Julius Markowitz, and Frank Kell, prominent operators of Wichita Falls, Texas.

In Kiowa County, the Gotebo Field was opened in 1904, but has not been tested much because the wells are small. Recently J.A. Ward completed a 5 bopd well in Sec. 7-6N-16W, and is drilling another in the NW 1/4-7-6N-16W. Several other tests are being drilled.

In McCurtain County, there is talk of a well to be drilled near Garvin.

In Choctaw County, Shaffer & Smith are drilling at 750 feet near Hugo, where they expect to find oil at 1,100 feet.

In Coal County, near Tupelo, the Norman-Tupelo Oil Co. has a rig up in Sec. 35-2N-8E. They expect to drill to 2,000 feet.

In Pittsburg County, about 18 miles northwest of McAlester, near Scipio, it is reported that E. A. Sheets of Muskogee has a reported oil showing at 1,610 feet.

In Marshall County, the Mannsville Oil & Gas Co. on the Colbert Farm 2.5 miles southwest of Mannsville, is drilling at 798 feet.

In Caddo County, near Verden, the Verden Oil & Gas Co. is drilling at 216 feet on the Heim Farm. This is the second test to be drilled in the county. The Cement Oil & Gas Co. is at 2,000 feet on the Funk Farm in Sec. 21-5N-9W.

In Carter County, the Healdton Pool is steadily developing. A late report from Ardmore is that the Ideal Oil & Gas Co. has 1,320 bopd at 820 feet from their well on the Woodworth Farm in the S1/2-Sec. 32-3S-3W. This is the largest well in the pool, and confirms that the pool continues northward.

p. 10. Texas. Shackelford County. Moran Pool. The Producers Oil Co. has a well one-half mile south of Moran that is producing 200 bopd at 2,090. It is 40 gravity oil. The Texas Co. Edwards well one-half mile north of town is now making about 250 bopd at 2,090 feet. The Texas Co. Wilds well, located 1.25 miles southwest of the Edwards, is making 75 bopd. The Corsicana Petroleum Co. Cheney Heirs' Tract well, 600 feet south of the Edwards well, is producing 5,000,000 cfgpd at 1,950 feet. Five gas wells have now been completed in the Moran Pool with a total volume of 14,500,000 cfgpd, from an average depth of 2,500 feet and average pressure of 600 psi. A list of the gas wells follows:

Corsicana Petroleum Co. Chaney Heirs	--- 1,955 feet deep	--- 5,000,000 cfgpd
The Texas Co. Brewster	--- 2,000	--- 1,500,000
The Texas Co. Watson	--- 2,040	--- 4,000,000
The Texas Co. Cottle	--- 2,600	--- 2,000,000
The Texas Co. Chaney	--- 2,600	--- 2,000,000

Many wells are now being drilled. (Details given).

p. 24. Incorporations. The Lake Region Oil Co., of Shreveport, La., was organized by E.G. Palmer, president; Sam M. Mason, vice-president; and E.B. Rand, secretary-treasurer, all business men of Shreveport.

p. 24. Osage Nation, Blanket Lease. In 1896, the Osage Nation made a lease to the Indian Territory Illuminating Oil Co. for 1,400,000 acres, covering the entire Osage Nation, for a period of 10 years. In 1906, upon expiration, an extension was made for another ten years to March 17, 1916, on lands where development work had been done. The extension covered 680,000 acres. The company sublet 136 subleases to other firms, the largest of which is the Barnsdall Oil Co. with 350,000 acres. Most of the operators are still actively drilling. The Indian Commissioner at the Pawhuska Agency is platting the holdings, showing the developmental work and all the wells. The Department of the Interior in Washington is now holding hearings on this "big lease' or "blanket lease". The Osage country has been a big loser for 90 percent of the operators, because of the stiff regulations. The Gypsy Oil Co., operating on a sublease on the Boston Farm, is making money, but this is rare. Leases under the old Foster lease are not worded as clearly as those in the past few years, and there is no stipulation as to how long a producing property can be held. If the government terminates all leases in 1916, they could buy out the operators and take over 40,000 bopd production and all property, and dispose of it as they choose, to benefit the Osage Nation. The I.T.I.O. Co. would benefit because they still have the rights to the gas and one-twenty fourth of the royalty of the oil, unless the government decides to invalidate those rights, and to enter the oil business.

p. 25-26. War in Carter County. The Ringling Railroad interests and oil men are in a fight. The city of Ardmore agreed to pay the railroad $60,000 if the railroad would run regular trains at least 25 miles west of Ardmore. The railroad has completed its contract, and a new city of Joiner City has sprung up 4 miles west of Wilson. The railroad will only accept freight to Wilson, however, and there are no facilities at Joiner City, which is 4 miles closer to Healdton. The Corporation Commission has ruled that the railroad should have a siding at Joiner City. Jake Hamon, head of the Wilson Townsite Co., owned by the Ringling interests, has protested. The oil operators are billing the railroad to carry their freight to Joiner City, and if they do not, they will sue for damages. Residents at Joiner City will flag down the train personally, and if refused passage, they have the right to sue for $19.00 a person for damages, the sum being under $20, the State law stating that claims under $20.00 cannot be appealed. The building sites at Wilson are $1,250 a lot, owned by the railroad, but the railroad does not have this freedom in Joiner City. Dave C. Stewart, president of the Magnolia Pipe Line Co. offered $5,000 bonus to the railroad to deliver pipe to Joiner City,

but was turned down. Since Jake Hamon also has interests in the oil fields, it will be interesting to see what Dave will do to Jake later on.

p. 29. Missouri's Oil Pool. In Vernon County, Mo., seven wells are now producing heavy black oil, at a rate of 1 to 5 bopd per well. In Coal Township, on the Brannon Farm, in Sec. 33-35-33, there are 3 wells. In Harrison Township on the Lawson Farm in Sec. 16-36-33, one well. In Henry Township, Turley Farm, Sec. 34-37-33, one well. In Harrison Township, Wall Farm, Sec. 10-36-33, one well. In Henry Township, Johnson Farm, Sec. 27-37-33, one well. The pay sand is 25 to 35 feet thick, at about 165 feet deep. The Mississippi lime is about 200 feet deep. Some operators may drill some deep tests.

p. 35. Wooden Tankage. In the Mid-Continent, almost $1,000,000 was spent on wooden storage tanks in 1913. Cypress and pine are used, with cypress used for staves, and pine for bottoms and decking. The following table shows the data:

Barrels	Diameter	Height	Board feet used	Cost
65	8 feet	8 feet	875	$65.00
100	10	8	1,100	95.00
250	16	8	1,950	130.00
500	16	16	2,950	250.00
1,200	24	16	4,500	400.00
1,600	28	16	6,000	500.00

Many tanks can be knocked down and reset with only about 5% wastage. Many tanks in the older fields in Pennsylvania are still in good shape, and many have been reset in the Mid-Continent. A rule of thumb for making estimates of storage, is to figure one barrel to the inch of oil in a 100-bbl. tank, 2 bbls. to the inch in a 200-bbl. tank, and 2.5 barrels to the inch in a 250-bbl. tank.

p. 35. Colorado. The Grand River Oil & Gas Co. has completed an oil well near Debeque, Mesa County, for 10 to 100 bopd at 1,807 feet. It is 30 gravity oil. Various people in Colorado Springs and Denver are elated. Three other companies are now drilling. Debeque is on the Grand River, a mile south of the Garfield County line, and 75 miles southeast of the Rangely Oil Field of Routt and Rio Blanco Counties. The discovery has some people believing that Colorado may be an oil-producing state. The total production of the State in 1913 was about 200,000 barrels, of which 180,000 was produced in the old Boulder Field near Florence in Fremont County. The Boulder Field has been producing since 1901.

The Rangely Field was discovered about 5 years ago, and about 60 wells have been drilled, averaging about 4 bopd per well. Most of the wells are shut in until there is some better transportation out of the area. The Denver & Salt Lake Railroad may reach there this summer.

In Las Animas County, gas has been found. In Montezuma County, near Cortez, some oil and gas has been found. East of Denver, at Aurora, considerable gas has been found at 1,000 feet.

p. 35. Indian Land Appraised. Choctaw and Chickasaw Nations. Hon. Cato Sells, Commissioner of Indian Affairs, has announced the completion of the appraisal of 450,000 acres of Indian lands in Oklahoma belonging to the Choctaw and Chickasaw Indians. These lands will be offered for sale shortly. A large amount of this acreage is believed to have value for oil and gas prospects.

Vol. 12, No. 38, February 26, 1914, p. 2. Panama. Delivery of the first cargo of Mexican oil at Panama by the Mexican Petroleum Company is a reminder to Californians that there will be competition from Mexico. The distance from Tampico to Colon is one-half the distance from Los Angeles to Ancon. It is advantageous for the Union Oil Co. to purchase Mexican crude for Panama business. Lord Cowdray has major oil interests in Mexico, Trinidad, and West Indies, and could supply South America with oil more cheaply than American interests could.

p. 2. China. What effect will the entry of the Standard Oil Co. of New York into China have on the future of the oil industry? Will it lead to international complications? Already the Japanese are looking on this transaction with disfavor. Will other nations insist on an "open-door" policy? Standard will retain 55% of

the stock of the new Chino-American Company, and the Chinese Government will receive 37-1/2% of the stock, with option to buy 7-1/2% in two years. The Chinese Republic has 400,000,000 people, and they will probably consume all of the production, and will not export oil. Half of these people have never seen a kerosene lamp. It is popularly supposed that China has a vast store of petroleum.

p. 4. Personal Mention. John Ringling and Charles Wilson, of the Ringling Shows and financial backers of the Ringling Railroad from Ardmore to Lawton, were in Ardmore last week. The new oil town of Wilson is named after Charles Wilson, the showman, and not President Woodrow Wilson of the United States as popularly supposed. They were in town listening to the oil men about freight rates.

p. 4. Noted in Passing. While drilling for water at Sequim, Washington, the Co-Operative Creamery Co. struck oil at 280 feet. Sequim is in the northern part of the Olympic Peninsula. The oil is found with water, and there is enough gas to make it flow.

So great is the pressure at the Crystal Oil Co.'s big gas well at Healdton that it is impossible to drill the hole deeper. The tools were blown from the hole, and the well will be completed as a gasser. Workers had to pack their ears in wax to prevent ruining their hearing.

The number of automobiles registered in the United States the past year was 1,128,000. It is estimated that for 1914, it will require 500,000,000 gallons of gasoline for automobile consumption. At 20 cents a gallon, this will be $100,000,000 a year for gasoline.

p. 4. Recent Deaths. Lydia Haviland Lockwood, wife of former Senator M.L. Lockwood, aged 65 years, died of heart trouble and complications at the family residence, 1430 Cheyenne Ave., in Tulsa, Friday night, February 20, 1914. Services were held at the family residence on Sunday. She was born in East Hamburg, N.Y., on June 11, 1848, and was married to Marcus Lafayetts Lockwood in 1871. For 37 years they lived in Pennsylvania, coming to Tulsa in 1906. She was the mother of 10 children, and is survived by her husband and 7 children, as follows: Philo Lockwood, Tulsa; Mrs. H. W. Ailing, Jamestown, N.Y.; Mrs. R. E. Porter, Guthrie, Okla.; Mrs. Harold Helm, Moravia, N.Y.; Mrs. Schuyler C. French, Tulsa; Robert L. Lockwood, Tulsa; and Mrs. Elton Everett, Ottawa, Kansas.

Owen A. Evans, aged 62 years, died at Excelsior Springs, Mo., of Bright's disease, on Saturday, February 21, 1914. He spent most of his life in the oil country. The remains will be shipped to Freeport, Pa., for interment. He was connected with the Prairie Oil & Gas Co., being the first superintendent at Neodesha, Kansas. In the past few years, he left the company because of private interests. Until recently, he was connected in an official capacity with the Barnsdall Oil Co. in Bartlesville. After leaving the pipe-line business, he engaged in manufacturing enterprises.

p. 6. A Wonderful Oil Increase. The production of crude petroleum has increased from 100,000,000 barrels of oil to 243,000,000 barrels a year in the last decade in the United States. Marketers had to wait upon developments and had to build up a supply before advertising the sale of new products. In England in 1905, about 5,000,000 gallons of gasoline were consumed, and at that time the experts believed that in a few years the consumption might be 20,000,000 gallons a year. Nine years have since passed, and England is using 100,000,000 gallons a year. Instead of multiplying by 4 the consumption has multiplied by 20 in the past 10 years. Will it multiply by 20 or more in the next 10 years? It is estimated that the total possible production of gasoline by modern methods is about 1,500,000,000 gallons, and is not enough to meet the needs of the world. Perhaps better refining and the use of heavier oil in motors might help, or the reserve figures may be too low.

P. 8, 10, 12. Oklahoma. This week, the main interest is in the Cushing Field with Bartlesville sand production, and the Boston Pool, and Healdton Pool. At Healdton, west of town, a new town has sprung up, named Wirt, in honor of Wirt Franklin of Ardmore. There are 15 stores and many bunkhouses, and a weekly paper

will probably be published. It may not be long before society notes will be published.

In Carter County, near Berwyn, the Oil Creek Oil & Gas Co. is drilling at 900 feet in Sec. 27-3S-3E.

In Creek County, the Cushing Pool production was 19,250 bopd, but now with completion of 12 Bartlesville sand wells, the production is now more than 26,500 bopd. About 35 new wells are being drilled. T.B. Slick is making 5 new locations this week. The Prairie Oil & Gas Co. is taking 12,500 bopd. The Texas Co. -4,427 bopd, The Pierce Oil Corp.-3,783 bopd, The Union Pipe Line Co. - 2,223 bopd, the Consumers Refining Co. - 1,525 bopd, the Chanute Refining Co. - 1,372 bopd, and the Gulf Pipe Line Co. - 593 bopd. Most of the new Bartlesville wells are in Secs. 4 and 10-17N-7E., near Drumright.

In Marshall County, at Lark (about 9 miles south of Kingston), a well was completed in Sec. 35-7S-5E, and got about 1,000,000 cfgpd at 490 feet. This is the first gas well reported in this area.

In Pittsburg County, the Gyp Oil & Gas Co. is erecting a rig in Sec. 12-2N-13E, in Atoka County, but leases are being held on both sides of the line. Evans and Co. are drilling at 1,550 feet in Sec. 4-3N-14E, near Kiowa. They had a reported showing at 1,500 feet. The Test Oil Co. No. 4 Cunningham in Sec. 17-3N-12E was a dry hole so far to 2,500 feet. This company has 4 gas wells to its credit in this area. Their gas is piped to McAlester and distributed by the Homer Oil & Gas Co. The E. A. Sheets & Co. well on the Walker Farm is shut down at 1,700 feet, in Sec. 20-7N-13E, near Scipio. It is to go to 2,000 feet.

In Kiowa County, near Gotebo, Boyland & Co. has a 15 bopd well on school land in Sec. 33-7N-16W. Many other tests are being drilled. The Gotebo Field was opened up in 1904, but there are no big wells in the field.

In Comanche County, the Warner-Boone well east of Lawton near the Beddo Tract is flowing about 6 bopd. The well of Epstein & Co. on the Beddo Tract in Sec. 31-2N-10W, is being cleaned out after a cave in. This well encountered 3 oil-bearing sands, at 240, 400, and 800 feet. Several companies are drilling in this area.

In Atoka County, several showings have been found. It is reported that there is one well that has been producing for a number of years. The Lavaca Oil Co. of Muskogee, George Priestley of Bartlesville, and the Brown Brothers of Toledo, Ohio, have considerable acreage and will give it a thorough testing. A late report from this district is that the Olive Oil Co., drilling near Redden, in Sec. 33-1N-14E, got 30 feet of rich-looking sand at 190 feet, where a fair show of crude was encountered, but the test will be drilled deeper in hopes of finding a lower pay. This is one of the rankest wildcats started in the county. J.M. Givens is drilling a test in Sec. 16-3S-10E. Conner & Associates are drilling in Sec. 7-2S-10E. Priestley & Co. had a duster at 1,200 feet in Sec. 5-2S-10E, but it is reported that they will go deeper.

There are many other tests in Coal, Caddo, Seminole, Pontotoc, Hughes, Garvin, Jackson, Grady, Greer, and Muskogee Counties. (Details given).

p. 24. Big Deal in Caddo. A deal was closed in St. Louis, Mo., yesterday, whereby the Louisiana Co. takes over the Busch-Everett properties in the Caddo Field for $1,687,000, paying $267,000 cash and notes running for 15 months. The notes are secured by a deposit of 6% bonds of the Industrial Security Co. of Maine. The Louisiana Co. is identified with The Texas Co. and Producers Oil Co., both of which are held by the Industrial Securities Co. The Busch-Everett syndicate was organized in 1909, to supply St. Louis, Mo., with natural gas, but they failed to secure a franchise. The Pasadena Petroleum Co., another Texas Co. subsidiary, is the owner of a part of the Busch interests.

p. 24. Toyah, Texas. May Be A New Oil Field. It is claimed that the Producers Oil Co. has brought in a big well near Toyah, Reeves County, Texas, in Sec. 17-Block 59, at 2,000 feet, south of the developments in New Mexico. It is claimed that the company discovered the oil in 1911, but kept it secret until after the passage of a law in 1913 allowing the State to lease public lands. They now have about 300,000 acres under lease and are drilling 3 more wells in Sec. 27-Block 110,

Sec. 41-Block 52, and Sec. 17-Block 71. There have been several shallow wells producing oil near Toyah for a number of years, but this is the first time that an effort has been made to find a deep pay.

p. 24. Killed by Train. Dennis O'Connor, aged 30 years, was killed Wednesday at 4:35 p.m., when his automobile was struck by a Katy passenger train on a grade crossing in East Tulsa. Miss Surline Middleton, of Los Angeles, a passenger in the car, was painfully injured. Mrs. O'Connor was a nephew of W.C. McBride of St. Louis, Mo. He was manager of the Silurian Oil Co., and a native of Butler, Pa.

p. 26. Gas Fields at Mexia, Texas. To date, 21 wells are producing 102 million cfgpd in the Mexia Field. The area is 12 miles long NW-SE and one-half mile wide. The gas is found in a sand about 35 feet thick at 700 feet, with a shale cap. The pressure is about 276 psi. The gas is free of water and seems to have a paraffine base, with 1,069 B.T.U. heat value per 1,000 cf. Each well produces from a few thousand cfgpd to 12,570,000 cfgpd. The development has been almost entirely carried on by local men and capital. Operations were begun July 2, 1912, and 10 dry holes were drilled. In April, 1913, the eleventh well struck gas. Only one rig was used, but now there are 5 rigs in the field. Some companies want to go deeper to the Woodbine Sandstone which occurs at 2,300 feet in the Caddo Field, and they hope to find the Woodbine at 3,000 feet or less. The Mexia Oil & Gas Co. was the first in the field and they have the largest acreage in the region. They supply Mexia with gas, and now have a contract to supply Waco with gas by a contract with T. J. Driscoll and associates of Indianapolis and the Texas Light & Power Co. The Driscoll interests are trying to secure franchises in other intervening and nearby towns. Some smaller companies also have gas at Mexia. The Little Giant Oil & Gas Co., with A. E. Wilder as president, is furnishing gas to a company at Teague, Texas. G. W. Stough, of Kansas, with the Little Giant Oil & Gas Co., has a franchise for an additional pipe line to Waco. C.T. Herring, of Amarillo, has a franchise at Groesbeck, and has applied for a franchise in Kosse, Thornton, and Marlin.

Vol. 12, No. 39, March 5, 1914, p. 4. Proposed Oil Monopoly in Germany. The German Government wants to create a German oil monopoly and wants to confiscate the holdings of the Standard Oil Company, said to be worth $15,000,000, and to turn them over to a new company to be created by pending legislation. The U.S. Department of State has interceded and has asked for just compensation to Standard.

p. 4. Texas men Leave For China. The Chino-American Oil Co., a subsidiary of the Standard Oil Co. of New York, has signed up some Texas oil men to be in charge of the field operations of the new company in China. The entire field management will be under Dave C. Stewart, president and general manager of the Magnolia Pipe Line Co., who has been granted a year's leave of absence. He left Houston on Feb. 27, 1914. He has a crew of 11 men. A.B. Smith, the superintendent of the Henrietta Drilling Co., a subsidiary of the Corsicana Petroleum Co., will be the resident manager in China. E. W. Morgan, a contractor, will be the assistant to Mr. Smith. Other oil men are H.B. Schinholt and wife, L.A. Holman, Walter Youngling, Joseph Guinn, and Ray Sterritt. All contracts are for one year, with options to remain 3 years. They have 4 cable tool rigs and 2 rotary rigs. They will sail from San Francisco on March 10.

p. 4. Oil Fields of Argentina. Oil was first discovered in Argentina by engineers, who, before 1908, were looking for water in the Atlantic Coast region of Chubut, in the district of Comodoro Rivadavia, on the Gulf of San Jorge. At first they were only drilling to 500 feet. Later they decided to go to 1,500 feet, and struck oil. Today there are 12 wells in this field, producing about 1,200 bopd, at about 1,500 feet deep. A refinery is now being erected. There are 8 private companies operating in this area. Recent work in northwestern Argentina show the existence of petroleum in the Provinces of Mendoza and Jujuy. Concessions cannot be bought outright. Grants are made for a specific period. The land belongs to the National Government, and each company must follow rules laid down in 1911. Each company has 300 days to develop the property, starting in 30 days

from time of permission.

p. 5-6. Personal Mention. D.J. Kelly, of New York City, president of the Manhattan Oil Co., is in Tulsa looking over the properties of his company in the Mid-Continent.

S.J. Lester and Fred Winger, from Bradford, Pa., left for Cushing, Monday, where they will drill a test for Wolfe & Duffield on the Gunsburg & Forman Richads Lease in Sec. 4-17N-7E.

J.B. Shepard, of Denver, Colorado, has located in Tulsa. He is heavily interested in Wyoming oil properties.

E.T. Crawford, of Charleston, W.Va., and A.E. Humphrey, of Denver, Colo., president and vice-president of the Queen Esther Oil Co., are in Tulsa for an inspection of their properties in the Red Fork Field.

Frank J. Ingle, president of the Ingle Oil Co., has returned to Tulsa from a trip to Alma and Dyer, Arkansas, where his company has taken some leases and proposes to drill a wildcat well.

L.M. Young, Sr., a superintendent of the Barnsdall Oil Co., has been appointed general manager of the natural gas company at Humboldt, Kansas, and left Tulsa Saturday to assume his new duties. He has been working 48 years in the oil and gas business, having started at Bradford, Pa.

p. 6-7. Noted in Passing. There is a possibility of a new gas field being developed near Vick, Arkansas, between Little Rock and Shreveport, where natural gas has been discovered by a local company at a depth of 2,700 feet, with a reported show of 500,000 cfgpd.

John Purdy, the director of the Anglo-Mexican Petroleum Co., the marketing end of the Pearson interests in Mexico, recently stated that the Pearson interests will explore for oil and gas in Argentina, Brazil, Chile, Uruguay, and Peru. With the opening of the Panama Canal, they hope to compete with American oil by shipping oil to the United States.

The Mexican Eagle Petroleum Co., owner of the Potrero del Llano gusher of 110,000 bopd, has enclosed the well in a solid concrete block, 15 feet square. The cement is reinforced with steel bars and is surmounted by a cross to protect the well from the warring factions in Mexico, considering the reverence that the average Mexican has for Christian symbols.

During the recent cold weather, the city of Little Rock, Ark, was left out in the cold by a shortage of natural gas. The Arkansas Natural Gas Co. supplies the town from the Caddo Field of Louisiana, and they should build a compressor station at Arkadelphia, and lay a 12-inch line from there to Little Rock.

p. 8. Summaries of February Field Operations. In Oklahoma for February 1914, there were 849 wells completed, including 135 dry holes and 58 gas wells, with a total of new production of 37,423 bopd. The main gain is due to Cushing, with noticeable increases in Inola, Wann, and Healdton. About 997 rigs were being erected or drilling at the end of the month, mostly in the southern part of the state.

In North Texas, there were 73 wells completed in February 1914, including 23 dry holes and 2 gas wells, with a total of 4,202 bopd new production. About 213 rigs are working or being erected. The Wichita area had the most activity, with 58 completions and 130 rigs drilling or being erected.

In the Caddo area, subdivided into 15 fields, there were 36 completed wells, including 6 dry holes and 4 gas wells, with a total of 6,765 bopd new production. There were 143 rigs drilling or being erected at the end of February 1914. The named fields are Mooringsport, Oil City, Jeems Bayou, Pine Island, Monterey, Vivian, Harris Ferry, Hosston, Lewis, Blanchard, DeSoto, Red River, and Bossier of Louisiana, and Marion County and Harrison County, Texas.

p. 10, 12, 14, 16. Oklahoma. More than 80 wildcat wells are drilling in Oklahoma, in places never before drilled.

In Muskogee County near Webbers Falls, the Dibble-White Oil Co., 4 miles south of town, struck a pocket of gas at 1,922 ft. A bystander, smoking, ignited the well. After getting the fire out, the well is now at 2,050 feet. It is

in Sec. 1-11N-20E. They have not reached the Mississippi lime. The Grenola Oil & Gas Co. No. 3 Largent is casing at 1,375 feet in Sec. 28-11N-19E. Near Keefeton, Briggs, Pearson et. al. are at 1,784 feet, and got some oil at 1,767 feet.

In Stephens County, in the Loco Pool, the Oklahoma-Diamond Oil & Gas Co. is reported to have a 2,000,000 cfgpd gasser at 2,055 feet on the Blake Farm in Sec. 14-3S-5W.

In Pittsburg County, near Scipio, the Choctoka Oil Co. of Sheets & Co. No. 1 Walker was abandoned at 1,700 feet in Sec. 20-7N-13E.

In Coal County, the Clarion-Brooksville Oil Co. is at 1,640 feet on the Markham Farm in Sec. 17-2N-11E.

In Atoka County, the Gap Oil & Gas Co. has a rig erected in Sec. 12-2N-13E. The Garatoka Oil Co. had a small showing at 190-220 feet in Sec. 33-1N-14E, and this interval will be shot.

In Bryan County, near Bennington, J.E. Forbes, of Muskogee, has a block of leases in T. 6 S. - R. 12 E., and will start a test within 30 days. In this vicinity, a few years ago, two tests were abandoned that were reported to have a showing of crude.

In Johnston County, near Bromide, Robert Galbreath has 2 tests drilling.

In Kiowa County, in the Gotebo Pool, where drilling was started in 1904, the school-land leases were recently turned over to Boyland & Co. by E. W. Marland, and are now attracting attention. The first well was completed 2 weeks ago. The Thomas Hollis Oil Co. No. 2 Roth in Sec. 34-7N-16W is good for 12 bopd. It is an offset to West & Rosser's No. 3 Schmidt. W.B. Badgett completed a 500,000 cfgpd well on the Watkins Farm in the SE 1/4-Sec. 27-7N-16W. It will be used to supply the town of Gotebo.

In Grady County, the Alberta Oil Co. has a rainbow of oil at 850 feet on the Pate Jones Farm east of Chickasha in Sec. 8-6N-6W. The Ben Hur Oil Co. has a rig on the Cooper Farm in the NW-1/4-NW-1/4-Sec. 18-5N-5W, 0.25 miles east of Alex.

In Caddo County, the Cement Oil & Gas Co. had a flow of gas at 1,050 feet.

In Marshall County, many leases are being taken near Kingston, Lark, and Madill. Three years ago, when the Madill Pool was in the limelight, 50 wells were completed, two of which were drilled to 2,700 feet. The pool was confined to a small strip, with only 8 producers, 6 of which were on one 40-acre lease.

Many wells are drilling in Garvin, Caddo, Beckham, Roger Mills, Custer, Ellis, Woodward, Blaine, Pawnee, Jefferson, Jackson, Logan, Pontotoc, Carter, and Stephens Counties.

In Okmulgee County, near Eram, Reynolds & Co. have a 240 bopd well on the Alexander Tract at 1,264 feet in Sec. 18-13N-15E, three miles east of the Boock sand development. It is probably producing from that sand, and is an important discovery well.

p. 30. The Passing of Dennis Hastings. Dennis Hastings was born in Wellsville, N.Y., in 1867. His parents were poor, coming from Ireland. The father died when Dennis was a small boy, and Dennis went to work as a water boy on a pipe line. At age 22, he was made superintendent of the Hope Gas Co. It was then that he married. He remained with that company for many years, and when natural gas was found in Oklahoma, he took service with the Oklahoma Natural Gas Co. and was in charge of laying all of the lines for the company in Oklahoma for the past 7 years. For 2 years, he made his headquarters in Oklahoma City, but 5 years ago he removed to Tulsa. He was director of the Tulsa Commercial Club for one term, and director of the Central National Bank for 4 years, and director of the Oklahoma Iron Works and other manufacturing establishments. He was a devout member of the Catholic Church and the Knights of Columbus and the Elks. He was an old friend of Glenn T. Braden, with whom he grew up and worked with back east, and came to Oklahoma when Mr. Braden became president of the Oklahoma Natural Gas Co. Dennis passed away a few days ago, and brief services were held in the Catholic Church at Tulsa, and he was buried in Toledo, Ohio, Wednesday afternoon. He is survived by his wife and 6 children, the oldest being barely of age. Mr. Braden was deeply grieved, as he has been in poor health for more than a year, as well

as his wife in the care of a physician, there has not been a word as to succession in the company.

p. 32-33. Gas. (by J.A. Pollard of the U.S. Bureau of Mines.) In Marshall County, the Texas Gas Co. well near Lark is at 5,000,000 cfgpd in Sec. 35-7S-5E.

There were 58 gas wells completed in Oklahoma in February 1914, with a new volume estimated at 432,600,000 cfgpd. Much of this was from Cushing, with 185,000,000 cfgpd new gas production.

p. 33. Advertisement. Chas. N. Gould. Former State Geologist of Oklahoma. Twenty years Experience. Examinations and Reports on Developed and Undeveloped Oil Properties. 304 Ohio Building, Tulsa, Okla. 408 Terminal Building, Oklahoma City. Whittington Hotel, Ardmore, Okla.

p. 35. La Brea Fossil Remains. Three years ago, the discovery of many bones and fossils imbedded in the asphalt occurred when washouts occurred, in the southern part of the Salt Lake Field at Ranch La Brea. Scientists from the University of Southern California studied the fossils, and since then there has been a steady interest. Recently the skeleton of a human being was found, in a sitting position, near the skeleton of a large bear and by the trunk of a petrified tree. About 10 to 20 feet of earth is above the fossils. The complete skeleton of a large wolf was also found nearby the human skeleton. The bones are thickly encrusted with asphalt. Prof. Frank S. Daggett of the Museum of History, Science, and Art has taken charge of the find which will be sent to the Smithsonian Institute. Some think that the age of the skeleton is 200,000 years. The skeleton is 3 feet high, and may represent a pigmy. Some think the age is more recent, because more recent bones have also been found. Mr. Hancock, who resided near the pits for many years, said that the asphalt had been mined for many years, and that stray animals fell into the pits. The pools are in constant eruption from escaping gas, and in some places the numerous seepages resemble a boiling cauldron.

p. 35. Incorporations. The Paris Co., of Paris, Texas, has been organized with $100,000 stock, to drill for oil in Oklahoma. L. W. Wells, of Terrell, Texas, is president of the company.

Vol. 12, No. 40, March 12, 1914, p. 6. Noted in Passing. Business men of Paris, Arkansas, a small town near Fort Smith, have organized an oil company, and have a well down to 1,200 feet. They have 7,000 acres under lease.

The Nevada Oil Co. is the name of a new concern to drill wells in Vernon Co., Mo. The company was organized by J.A. Price, of Okmulgee, and his brother, A. E. Price, of Nevada, Mo. The company has 5,000 acres under lease.

The Savoy Oil Co. is controlled by the Hirsh interests of New York City. They have 72 producing wells in Oklahoma on 541 acres, and 3,123 acres of undeveloped leases, and a section of land in the Caddo Field of Louisiana. They made $626,245.66 in 1913 on sales of oil and gas.

The Jones Brothers, B.B. and M., and Mr. J. Garfield Buehl, have purchased a controlling interest in 50,000 acres of leases near Toyah, Texas, and will begin development work at once.

p. 8. Production Over 200,000 Barrels. The daily output of Kansas and Oklahoma fields is now at 204,000 bopd, the highest production recorded in this region. The figures are alarming, pointing to the probability of overproduction, especially since large gusher wells are coming in at Cushing, and in the deeper parts of the older fields, causing a steady increase in production. Healdton will probably continue to show increased production.

p. 10, 12, 14. Oklahoma. In Osage County, a new field may have been discovered in Sec. 27-22N-7E on Subdivision 92, where the Gypsy Oil Co. has 200 bopd at 2,458 feet in 4 feet of sand of the Bartlesville sand. It is 3 miles northwest of the Boston Pool, and is an entirely new development.

In Wagoner County, in the Coweta Pool, Chase, Zeigler & Co. No. 1 Rampey is making 45 bopd at 1,050 feet, from 6 feet of sand. It is 1.25 miles west and south of the pioneer well.

In Pontotoc County, in the Allen Field, Pew & Markham No. 1 Huddeston in Sec. 26-5N-8E has a 25 bopd well at 700 feet. The well is 700 feet south of the Kurtz Oil & Gas Co. well that came in several months ago. There are 11 wells being drilled in this area. The pioneer well is making 25 bopd after 4 months. Kurtz & Associates have a well in the sand in Sec. 2-4N-8E, where the hole has filled up with 90 feet of oil. It is now being shot.

In Pittsburg County, the Homer Oil & Gas Co. completed a 7,000,000 cfgpd gas well south of Ashland, bringing to 7 the number of wells completed in this area by this company, for a total of 25,000,000 cfgpd production. A right-of-way has been secured to McAlester, and a contract for laying lines will be let in a few days. The company supplies Ashland and other nearby towns.

In Atoka County, a large amount of acreage has been leased and filed for record. There has been some work going on for the past 8 months, but as yet only one showing has been found to encourage the operators. Near Redden, the Garatoka Oil Co. test in Sec. 33-1N-14E had a showing of oil at 190-220 feet. It is reported that some of the crude from the well was brought to Tulsa, where it tested 38 gravity. On the west side of the McGee Creek, near Redden, Jones, Bass & Co. of Houston, Texas, drilled a 1,700-foot hole a number of years ago, where 3 sands were encountered, two of them showing oil and gas. There are reported seepages of oil and gas over quite an area in that locality, the sand being fairly well regulated. New York parties secured 20,000 acres during the week in McGee Valley and expect to start a test at once. The Brown Brothers of Toledo, Ohio, have considerable acreage in partnership with George Priestley, and expect to do considerable work during the next few months. With 7 rigs running, the next two months should be interesting ones.

In Kiowa County, in the Gotebo Pool, a pipe line is being laid to Gotebo to transport oil. The pool is southwest of town, and was found in 1904. The oil is 36 gravity and darker in color. About 150 wells have been drilled, most of which were dry holes, and the wells average 3 to 15 bopd per well. The producing sands are generally about 500 feet deep, but some are shallower, and some at 1,000 feet or more. The Thomas Hollis Oil Co. No. 3- P.R. Roth Farm has a well in the NW 1/4- Sec. 34-7N-16W, and expects the Rogers sand at 450 feet. A showing of oil was seen at 345 feet. Residents of Gotebo are burning gas from the field and have an ample supply.

p. 16. Healdton Pool Extended. The most important well finished in the past 3 weeks in the Healdton pool is that of the Twin State Oil Co. on the Bess Tucker Farm, south of the north line of the NW 1/4- Sec. 36-3S-4W, for 200 bopd at 1,165 feet. It extends the pool 1.25 miles to the northwest, toward the Loco Field.

p. 25. Doheny and Rothschild Have New Oil Supply Base. Doheny and other American interests have entered into a deal with the Rothschild interests to make New Orleans a refining and oil supply center. The Doheny interests have purchased ground for erection of steel storage tanks, and the building of docks, and the European interests have purchased a site for a refinery and storage of oil as well as shipping facilities. The Europeans will operate under the name of the International Storage & Warehouse Co. The International will use Mexican and Gulf Coast oil, and install a line to the Caddo Field, with a possible extension to Oklahoma. According to Joseph Bogaerts, one of the incorporators, work will begin in 30 days. The company has 3 steamers each with a capacity to carry 8,500 tons of oil. Arrangements have already been made to ship 10,000,000 gallons of oil from Mexico to New Orleans. The opening of the Panama Canal was instrumental in making the decision to locate at New Orleans rather than the east of west coast of the United States. Mr. J. A. Landry, a well-known New Orleans man, has been made manager of the New Orleans branch of the new concern.

p. 26. The Fields of Mexico, by George Blardone. At present, the daily average production in Mexico is 178,500 barrels of oil per day, but many wells are shut in or pinched down, due to a lack of transportation and the war. In January 1914, 1,780,518 barrels were exported. There is 12,078,000 barrels in storage. Most of the oil is shipped out at Tampico and Tuxpan. Some wells can

yield more than 100,000 barrels a day, so the actual figure for daily production is much higher if the oil could be transported to market. Most of the wells are completed between 1,000 and 3,000 feet, in about 5 fields; Panuco, 68,500 bopd; Topila, 4,000 bopd; Ebano and Chijol, 6,000 bopd; and Southern Fields, 100,000 bopd. The Southern Fields are in the State of Vera Cruz, where the Mexican Eagle Oil Co. and the Huasteca Petroleum Co. have most of the production.

p. 32. New Gas Company. The Ardmore City Gas co. has been incorporated by W. A. Ledbetter, A. E. Parsons, and A. L. Stewart, all of Oklahoma City, for $250,000. They will pipe natural gas from the new pool in Carter County to Ardmore and other cities in southwestern Oklahoma.

p. 32. Gas for Putnam. The Pioneer Gas Co. has tapped its main line and has piped gas to Putnam, Callahan County, Texas, from the Moran Field.

p. 32. Dennis Hastings. Dennis Hastings was buried on March 3, 1914 in the family lot in Calvary Cemetery, Toledo, Ohio, after services at St. Francis de Sales Cathedral. He died in Tulsa, Oklahoma, where he was in charge of pipe lines for the Oklahoma Natural Gas Company since 1907. As a constructive genius he was one of the greatest in the gas industry. About 27 years ago, he was actively connected with the Northwestern Ohio Natural Gas Co. when the pipe lines were extended to Toledo. He was a resident of Toledo for many years before coming to Oklahoma. His wife, the former Miss Delia Ford of Toledo, and seven children survive. Mr. Glenn T. Braden, president of Oklahoma Natural Gas Co., and many old friends attended the funeral, including representatives from nearly all of the gas companies east of the Mississippi River.

p. 42, 44. Oklahoma. Wells. Twenty-one wells were completed in southern Oklahoma in February 1914, mostly from Carter County. (Details given). In Kiowa County, in the Gotebo Pool, the J.A. Ward No. 1 had 4 bopd in Sec. 7-7N-16W. The Boyland et al No. 1 had 3 bopd in Sec. 33-7N-16W. The Badgett et al No. 1 had 4 bopd in Sec. 27-7N-16W. About 180 wildcats or developmental wells were being drilled outside of the regular fields of northeastern Oklahoma, in Carter, Hughes, Comanche, Tillman, Stephens, Marshall, Jefferson, Kiowa, Payne, Cherokee, Seminole, Pontotoc, Lincoln, Choctaw, Pittsburg, Atoka, Coal, Blaine, Oklahoma, Love, Murray, Garvin, Grady, Caddo, Johnston, Garfield, Cotton, Jackson, and Beckham Counties, including 35 miscellaneous wells scattered in the above and other counties. About 849 wells were completed in February in Oklahoma, including 135 dry holes and 88 gas wells, with 997 rigs working or being erected. (Details given on each well).

p. 47. Life of Oklahoma Wells. Eastern operators have frequently asked about the life of Oklahoma wells, so the Journal has made an investigation of the older pools in Oklahoma. Many fields that were opened about 10 years ago are still doing well. Today there are 38,094 producing wells in Oklahoma, with a daily output of 197,000 bopd. Close to 43,000 wells have been completed. Most wells fall off from the initial production, but many wells are still good producers after 10 to 12 years or more in the Glenn, Bird Creek, Bartlesville, Cleveland, Cleveland Deep, Cherokee Shallow, Cherokee Deep, Nowata, Delaware, Chelsea, Alluwe, and other fields. (Details given). In Washington County, the Cudahy Oil Co. completed the Nell Johnstone in Sec. 12-26N-12E in September 1897, which was shortly plugged because of litigation. On Aug. 17, 1913, the plug was drilled out, and the gas sand reached at 1,252-1,267 feet, and the oil sand reached at 1,303-1,345 feet at total depth. It started off at 35 bopd, and is now making 5 bopd.

The Los Angeles-Cherokee Oil Co. completed a well on Oct. 25, 1905, on the Burgess Farm in Sec. 32-21N-13E, in the Bird Creek Field of Tulsa county, in the type Burgess sand at 1,367 to 1,381 feet, for 75 bopd. It is now producing 20 bopd. This was the first Burgess sand well to be completed in the Bird Creek Pool, the sand getting its name from the Burgess Farm.

p. 47. A Mile and One-Fifth Deep. The People's Gas Company is at 6,300 feet, four miles from McDonald, Washington County, Pa. The hole is 4 inches wide at total depth. The water at the bottom of the hole is very hot.

p. 47. Favorable for Wildcatting. In view of the fact that the Petrolia, Electra, and Burkburnett Fields in Texas, and the Healdton Pool in Oklahoma, have been discovered in recent years, the U.S. Geological Survey in co-operation with the Oklahoma Geological Survey is making a study of southwestern Oklahoma. The first work of this kind was done late in 1912 in the Grandfield District in Tillman and Cotton Counties. The field work was done by M. J. Munn, using spirit-level elevations on a formation called the Auger conglomerate lentil. The work is published as a U.S.G.S. Bulletin 547. The major feature is the Devol Anticline. It was difficult to know if the Auger bed was consistently used, because of lack of exposures, which has doubtlessly led to errors in contouring. Each township is separately described, and a structure map was compiled. The book is free of charge.

Vol. 12, No. 41, March 19, 1914, p. 1. Mid-Continent Production. Production is now at 294,000 bopd in the Mid-Continent, mostly coming from Oklahoma from the Cushing Pool. Operators are not curtailing drilling. The pipe lines from Cushing are full to capacity. The producers will have to cease drilling. Almost all tank storage is filled.

p. 5. Personal Mention. B. B. Jones, one of the large Mid-Continent producers, has established offices in Oklahoma City.

Dale Shaffer, manager of the Shaffer interests in the Cushing Pool, has transferred his headquarters to Oklahoma City.

Mrs. C. J. Wrightsman, who has been spending the winter in Los Angeles, will soon join her husband at Oklahoma City, where they will make their home.

George E. Bennett has returned to Tulsa from his old home town in Beaver, Pa. His family expects to join him in Tulsa in the Fall and make their home in Oklahoma.

Fred C. Scott, who was superintendent of the Emery Refinery at Bradford, Pa., for 15 years, is not located in Tulsa. He is in charge of the production of Kiskaddon & Black.

p. 6. Noted in Passing. During 1913, Texas produced 15,544,046 barrels of oil, and Louisiana produced 12,901,703 barrels.

J.E. Crosbie is now the owner of Hotel Tulsa, having purchased the property at a sheriff's sale, Saturday, March 14, 1914, for a consideration of $250,000, it having been appraised at $375,000.

Senator John P. Hickman, of Stillwater, head of the Texas & Okmulgee Oil Co., has purchased a site for a refinery at Ardmore. The new plant will cost about $100,000, and work will start at once.

Edward Barnes, drilling for the Braden companies one mile east of Kendall College in Tulsa, reports that at a depth of 2,018 feet, after the drill had penetrated the Mississippi lime for 420 feet, a vein of hot salt water was encountered. It was so hot that it would scald his hands in the bailer. To his knowledge this was the first time in 10 years of drilling in Oklahoma that he experienced this phenomenon, and this maybe the first time it has been reported in Oklahoma.

p. 6. Recent Deaths. A. H. Russell, aged 89 years, died at his home in Cleveland, Ohio, Wednesday, March 11, 1914, from disease due to old age. He was a pioneer operator in the Pennsylvania and West Virginia oil fields. He was the father of W. L. and A. H. Russell, prominent operators in the Eastern and Mid-Continent fields.

p. 8-10, 12. Oklahoma. In Osage County, the Barnsdall Oil Co. completed a well at 1,600 feet for 3,100 bopd on Lot 298 west of Bigheart, in their No. 23. Their No. 22 was shut in for 7,000,000 cfgpd.

In Carter County, at Healdton, there is overproduction. The Magnolia Pipe Line Co. has offered to pay 70 cents a barrel for oil under 32 gravity and $1,05 a barrel for that above 32 gravity. Production is now estimated at 5,000 bopd, and Magnolia

can only handle about 60 percent of the production. About 80 rigs are now working in the field. Fifty wells have been drilled so far, with 7 day holes.

In Washington County, a pool has been discovered by Barnsdall & Low in the SW 1/4-Sec. 18-27N-14E, on the Mary Wilson Farm, with 50 bopd at 1,223-1,242 feet in the Bartlesville sand. This is the only Bartlesville discovery in this area.

In McIntosh County, about 12 miles northwest of Eufaula, Flanagan & Co. on the Estes Farm had a showing of oil at 550 feet in the SW 1/2-NW 1/4-Sec. 26-11N-15E. This was their second test. The first test was drilled this past year on the same tract by Mr. Flanagan for a 4,000,000 cfgpd well. The Scioto Oil Co. had a showing at the same depth on the Moore tract in Sec. 1-10N-15E. The Green River Oil Co. is erecting a rig in the NW 1/4-Sec. 32-11N-17E, 600 feet from its gas well in Sec. 29-11N-17E.

In Pontotoc County, the Allen Pool is being extended. Bartlett & Oglesby have a 25 bopd well on the Means Farm in the 724-foot sand, in the NE-1/4-NE-1/4-Sec. 13-5N-8E, showing that the field is at least 3 miles wide. There are 11 rigs drilling within a 4 mile radius of Allen.

In McClain County, the Zelma Oil Co. has abandoned its test near Newcastle, having found an ocean of salt water at 2,300 feet. The rig will be moved a half mile east for a new test. Harry B. Houghton, of the Alert Oil Co., is the moving spirit behind the Zelma Oil Co.

In Oklahoma City, several new companies have organized and are located in the Colcord Building. The Bankers Guarantee Oil & Gas Co. was incorporated on March 10, with $100,000 stock, at Oklahoma City, by O. J. Wildem, president; W. C. Bickford, vice-president; and R. J. Bell, secretary-treasurer. It has taken over some acreage in the Wann Pool and in the Mounds District. The London City Oil & Gas Co. is newly organized, and is selling stock and leasing land. It has 10,000 acres in Kansas, 20,000 acres in Oklahoma, and a small block in Texas. Most of the holdings are wildcat propositions. The Oklahoma Diamond Oil & Gas Co. has moved offices from the State National Bank building to the Colcord Bldg. This was one of the early companies that secured acreage at Healdton. Last week the company closed a deal with Lone Star Gas Co. for the gas rights to 9,000 acres in the Healdton Pool for $75,000. C. J. Wrightsman recently took a big block of stock in the company for $10,000, and purchased a controlling interest in the Giant Oil Co. which has 2,700 acres in the Healdton Pool. Oklahoma Diamond and Giant are promotions of Mr. C. F. Colcord, who invested early in the Healdton Pool.

p. 34. Deep Well Described. The deepest well in the world drilled with cable tools is located about 4 miles northwest of McDonald, Pa., on the R. A. Geary Farm. The well is being drilled for scientific research. The well is owned by The Peoples Natural Gas co., and drilling has been going on for more than 2 years. They are at 6,435 feet. Charles Schwab and E. R. Alfred are the drillers, from Irwin, Pa., and the tool-dressers are Frank Mackey, of Canonsburg, Pa., and V. G. Wherry, formerly from Scenery Hills, Pa. The rig was specially built, and is 90 feet high, of oak lumber, with a 50 hp. Ajax steam engine. The hole is now reduced to 3-1/2 inches.

p. 35. Blanket Osage Lease. The old Foster lease was granted by the Osage Council on March 16, 1896, to Edwin B. Foster, of New York City, and was to extend for 10 years from date of approval by the Secretary of the Interior, covering 1.4 million acres. It called for an oil royalty of one-tenth, and an annual rental of $50.00 from each gas well where the output was utilized. The lease was renewed as to 680,000 acres for 10 years from March 16, 1906, by the Indian Appropriation Act of March 3, 1905, increasing the gas royalty to $100 per year for rental, and an oil royalty to be fixed by the President. The oil royalty was increased to one-eighth on June 3, 1905. The Act of March 3, 1905, and approval of March 16, 1906, was reaffirmed on June 28, 1906. Mr. Foster's company was the Indian Territory Illuminating Oil Co., and he had many sub-leases to other companies. The sub-leased companies had to give I.T.I.O. one-sixth royalty on oil, and give them all of the gas from the gas wells drilled. The 680,000 acres renewed was that portion of the original lease upon which development work had been done. The

original lease said that all improvements will remain on the property, but that derricks, engines, and tools can be removed by I.T.I.O. The controversial part of the original lease, was that if the Indian title is extinguished, I.T.I.O. would have 60 days to vacate the property and the lease would be void, provided that the extinguishment shall not apply to lands which shall be allotted in severalty to the Indians, in which case the royalty shall be paid the allottees instead of the National Treasurer of the Osage Nation. However, by Congressional enactment, the royalties of allotted lands are now paid into the tribal fund, making this latter part of the clause of little force. The sub-lease operators also had to pay for any costs for renewals. If the Department of the Interior does not renew the lease, I.T.I.O. could lose everything.

Vol. 12, No. 42, March 26, 1914, p. 3-4. Personal Mention. Frank Jennings, of Roswell, N.M., was in Ardmore, and has interest in the Healdton and Loco Fields. He is a brother of Al J. Jennings, of Oklahoma City.

E. P. Boyle, State Mine Inspector, was in Tulsa. He has been in charge of this department for the past 6 years.

H. K. Ronnie and family have arrived in Tulsa from Taft, Cal., where he was manager of the McKittrick branch of the Oil Well Supply Company for the past 16 years. He will now be connected with the Oil Well Supply Co. in the Mid-Continent.

Colonel Mardis, of Hutchinson, Kansas, was in Tulsa, returning from the new development near Madill. He reports the bringing in of a big gas well, followed by a small oil well, and said that leases close-in are bringing high prices. He secured some acreage and expects to do some development work later.

p. 4. Noted in Passing. The vice-president of Standard Oil Co. has issued a statement that on a gross business of $100,000,000 done with China since 1906, their bad debts amounted to only $440.00.

Business men of Jonesboro, Arkansas, have raised $4,000 for prospecting for oil in Craighead County, Ark. C. C. Shaufelberger, of Jonesboro, is the manager of the company. Leases have been secured on a large acreage, and a well will be drilled soon.

In the Healdton District of Carter County, sheriff "Buck" Garrett recently raided one of the oil camps, breaking up a social game of "draw", and seized 140 gallons of "white cider", an Oklahoma substitute for whiskey.

The Lone Star Gas Co. will hold its annual meeting in Fort Worth on April 14. They recently invaded southern Oklahoma, purchasing the gas rights on 9,000 acres in the new Healdton development for $75,000 from the Diamond Oil & Gas Co. Col. Calvin N. Payne, of Titusville, Pa., is one of the large stockholders in Lone Star.

Geologists returning from the Athabasca District, north of Edmonton, Alberta, Canada, report that the asphaltum area is 175 miles square, and contains 200 billion tons of paving material. The deposits are 50 to 300 feet deep. An analysis is: Heavy asphaltic oil, 30%; asphaltum, 30%; sand, 50%. A value of $1.00 a ton is placed on the deposit.

p. 4. Recent Deaths. Henry R. Willis, president of the Seneca Oil Co., was killed in an automobile accident near Drumright, March 20, 1914. While crossing a railroad grade, the car overturned.

p. 6, 8, 10, 12. Oklahoma. In Creek County, the Cushing Pool is now producing 62,000 bopd, with 45,000 bopd from the Bartlesville sand, and 17,000 bopd from the Wheeler and Layton sands. The pipe-line companies are running to their capacity. There are more than 300 locations for new wells to be drilled in the area.

In Carter County, the Healdton Field is producing about 6,000 bopd. Most of the wells are in Secs. 5, 8, 9, 4S-3W; 32-33-3S-3W; 36-3S-4W. The deepest tests to date are only about 1,400 feet deep. The operators now want to go deeper. Many tests have started in other parts of Carter County. (Details given).

In Marshall County, south of Mannsville, the Russwood Oil Co. is at 560 feet in the NW 1/4-SW 1/4-Sec. 35-4S-4E, on the Blair Tract. Other wells are also drilling in Marshall County.

In Washington County, the Wann Pool was drilled deeper to the Bartlesville sand last fall by W. E. Guiler, of Franklin, Pa. and C. E. Deloe, of Clarion, Pa., on the Hiram Haff Farm in Sec. 16-28N-14E, getting several hundred barrels of oil a day at 1,200 feet. The older production was at 550 feet. This opened the field again to deeper production, and many wells are now drilling in the area. The second operator to follow was the Paraffine Oil Co. of Flynn & Weiss. Capt. Weiss, of Beaumont, Texas, is president, and Bill Flynn, of Bradford, Pa., is vice-president. They leased the Robert L. Holland property west of the Haff Farm, and got many nice producers. Many wells are being drilled in Secs. 3, 9, 15, 18-19, 21, 29, 30, and 34. (Details given). In Sec. 34, the area is designated the Blue Ribbon Pool, and some think that this will connect to the Wann Pool. Both pools also have gas wells. The Wann Pool now has better than 1,700 bopd from the Bartlesville sand. (Blue Ribbon is in Nowata County).

p. 30-31. Report of the Arkansas Natural Gas Company. The assets of the company was $11,643,778 on Dec. 31, 1913. They have 185,278 acres under lease in Arkansas. They supply gas to Little Rock, Hot Springs, and smaller cities in Arkansas and Louisiana.

p. 31. Indians Must Pay Tax. The legal department of the U.S. Government has decided that the Osage Indians must pay income tax. This is in line with the statute of 1902 which declared the Indian to be a citizen of the United States. Later, with admission of Oklahoma into the Union, all fullblood Indians were exempt from all forms of taxation, and because of this act, millions of dollars of property has not been taxed. Under the act of 1902, the lands of the Osage Nation were to be held in common for 30 years, and all revenue would go to the tribe, and apportioned evenly to each tribal member. When the Osage were removed from Kansas to Oklahoma, the U.S. Treasury deposited $8,000,000 for the Osage Nation, and this has not been touched in 25 years, and the Government does not know what to do with it. The Indians have since died, or moved, or own other property, and the laws become complex. The value of the Osage Nation now is more than $100,000,000 because of oil. The Indians are upset over this latest ruling.

p. 31. Refinery For Healdton Oil. The Healdton Refining Co. was chartered with $300,000 stock, to build a refinery at Ardmore. The president is Senator John P. Hickham; vice president, James A. Harris; C. M. Sarchet, treasurer; and E. C. Howe, secretary. The officers along with Jake L. Hamon compose the Board of Directors.

Vol. 12, No. 43, April 2, 1914, p. 4. Tulsa. The Growth of One Oil Town. Five years ago, Tulsa was hardly known 12 miles away. Since completion of the Federal census of 1910, Tulsa has doubled in growth, with 41,000 people. The city has 8 banks with combined deposits of $10,050,000, with two of the banks being the largest in the state. Clearings for 1913 were $60,511,840, an increase of 57% over 1912. For January, February, and March, of 1914, the clearings were 74%, 61.5%, and 93.1% more than the corresponding months in 1913. Reports from the postoffice and building inspector show the same percent of growth.

p. 8. Noted in Passing. Brownwood, Texas, is soon to have natural gas, the same to be piped from the Bangs Pool, 12 miles from Brownwood.

The Beaver Oil Co. is down 700 feet in its test near Arkansas City, Kansas. The test is located near Hardy on the Mowatt Ranch.

Production in an oil well declines because the pores of the sand are closed with paraffin. By flooding with benzine, or hot salt water, or reshooting, this situation can be overcome. A new electrical heater can be lowered into the well and the sand heated until the paraffin melts and can be pumped out. This new method was tested in Butler County, Pa., and is being taken up by producers in that area. A generally increased production in the older oil fields is predicted.

The Barnsdall Oil Co. has a $9,000,000 mortgage due in August to the Standard Oil Co. The Barnsdall Oil Co. was organized in 1905, with an authorized capital stock of $8,000,000, with 300,000 acres of leases with the Indian Territory Illuminating Oil Co., and leases in the Cherokee Nation. The production was 3,000 bopd

in 1905, increasing to 16,000 bopd later, and is now 8,000 bopd. At times they were drilling 40 wells at once. Mr. T. N. Barnsdall, president of the company, is cutting back to make arrangements for a renewal of the mortgage.

p. 8-9. Recent Deaths. William P. Clayton, aged 81 years, died Saturday, March 21, 1914, in Shreveport, LA., at the home of his son C. P. Clayton, the superintendent in Louisiana for the Producers Oil Co. Another son, Clifford Clayton is in charge of the Jennings Field for the company.

Mrs. Edward H. Argue, of Tulsa, died in Los Angeles on Tuesday March 24, 1914, following an operation. Mr. and Mrs. Argue and their young son left Tulsa 4 weeks ago. The funeral and burial were in Los Angeles. The family had been residents of Tulsa for several years, coming from New York State. Mrs. Argue for many years resided in Bradford, Pa. Mr. Argue is a well-known producer with the firm of Argue & Compton.

William L. McCready, aged 83 years, died at Bartlesville on Wednesday, March 25, 1914, after an illness of several years. He had been making his home with his son Charles H. McCready in Bartlesville since last October, coming to Oklahoma from Beaver County, Pa. The body was taken to Pennsylvania for burial. He leaves 6 children; J.E. McCready, of Okmulgee; Mrs. George Johnson, of Pittsburgh, Pa.; J. C. McCready, of Tulsa; Mrs. John D. Harper, of Coraopolis, Pa.; Mrs. A. C. McCheaster, of Ambridge, Pa.; and C. H. McCready, of Bartlesville.

p. 11-12, 14, 16. Oklahoma. Carter County, Fox area. Another test will be started near Fox (2S-3W). More than a year ago, the J. M. Guffey Petroleum Co. (Gypsy Oil Co.) drilled a dry hole on the Kimball Farm near Fox, a little past 900 feet and abandoned. Now the Kicama Oil Co. has 3,000 acres under lease and will drill in the next few weeks.

Marshall County. A small well is reported to be making 47.5 gravity oil at 405 feet near Aylesworth near the eastern border of the county. Three other tests are also drilling near there and are reported to be near 500,355, and 340 feet, but their identity cannot be learned. Within a few days a test will be due in Sec. 17-5S-4E by the Emancipator Oil Co. Southeast of Mannsville, the Mannsville Oil & Gas Co. is at 925 feet on the Colbert Farm, 2.5 miles southeast of Mannsville. J. Alexander, of Oklahoma City, is at 655 feet on the Woods Farm in the NW-1/4-SE-1/4-Sec. 2-5S-4E. Other tests are drilling, but their location cannot be learned.

Pontotoc County. The Mac Thwaite Oil & Gas Co. completed a gas well for 4 to 10 million cfgpd, one-half mile west of Ada (4N-6E). It is shut in. They are erecting another rig one-half mile farther east. The Hercules Oil Co. has a rig near the South Canadian River in Sec. 12-5N-4E, where it has 13,000 acres of leases in Pontotoc, Seminole, and Pottawatomie Counties. Franada Oil & Gas Co. has a rig southeast of Francis. The Buckhorn Oil Co. has a rig on Spring Brook Creek near Center in Sec. 15-4N-5E.

Mayes County. O.W. Killam & Co. are preparing to start a test 3 miles west of Locust Grove in Sec. 24-20N-19E. (The section may be incorrect.) Three wells have been drilled in this area, two of which found gas, one at 107 feet and the other at 240 feet. The gas is being used as fuel on the Killam Farm.

Muskogee County. Near Webbers Falls, the Dibble-White Oil Co. reached the Mississippi lime at 2,261 feet and abandoned the well on the William Neff Allotment in Sec. 1-11N-20E. The company has 5,000 acres under lease in the area. There was a showing of gas at 1,840 feet, and they will soon start another test, about 1 mile south of town.

Near Porum, another dry hole has been drilled, making three in a row by Lewis E. Holman, on the holdings of the Grenola Oil & Gas Co.'s block of leases covering 15,000 acres. The latest is on the W. S. Largent Allotment in Sec. 28-11N-19E at 2,610 feet. The first dry hole was on the Johnson Farm in the SW 1/4-NE 1/4- Sec. 6-10N-19E at 2,846 feet. The second, at 2,575 feet, was on the Foster Farm in SE 1/4-SW 1/4-Sec. 11-10N-18E. The last was in the C-NW 1/4-SW 1/4-Sec. 28-11N-19E.

Lincoln County. A report is that there was a showing of oil in a test near Agra at 3,300 ft. The Kendrick Oil & Gas Co. is reported to be at 300 ft in the SE 1/4-NE 1/4-Sec 9-15N-5E adjoining Kendrick. The Oil Flat & Land Co. is at

2,200 feet near Fallis in Western Lincoln County.

Many other tests are being drilled in Pushmataha, Cherokee, Stephens, Carter, Oklahoma, Jefferson, and other counties in southern Oklahoma. Many developmental wells are being drilled across the river in the Electra, Burkburnett, and Petrolia areas (Details given.).

p. 24. Drilling Ceased in Deep Well At 5,830 feet. The well at Derrick City, 4 miles east of Bradford, Pa., has been abandoned at 5,830 feet. The well was drilled by the Bradford Deep Well Co., composed of citizens of Bradford, Oil City, and Titusville, and promoted by R. J. Hoffman, former Mayor of Bradford. The well spudded on Aug. 20, 1912, with a 16-inch hole. The company wanted to find the Medina sand. The Bradford sand was at 1,120-1,189 feet. The Kane sand was found at 4,140 feet. They did not find the Medina sand. They offered the well to the U.S. Geological Survey if the Survey wanted to go deeper, but the Survey refused. It cost $20,000 to drill the well, over a 19 month period. V. F. Kipgen and F. C. Wheeler, both of Bradford, were the drillers in charge. (Details given).

p. 24-25. Quapaw's New Station. The Wichita Pipe Line Co. completed a 50 mile line of 16-inch and 18-inch pipe from the Cushing Field, to the Quapaw Gas Co. pumping station 3 miles north of Bigheart. The line will carry 50,000,000 cfgpd. The Wichita firm was financed by $2,000,000 in bonds by the Colonial Trust Co. of Pittsburgh, Pa. The Quapaw Gas Co. is a J.C. McDowell promotion, in which the Doherty interests of New York City are involved. The Creek County Gas Co. supplies the line, with a capacity of 400,000,000 cfgpd production. The Cushing Field is 10 miles long and 4 miles wide, with a rated capacity of 600 million cfgpd. The Wichita Pipe Line Co. supplies gas to Joplin, Mo., and to Winfield, Wellington, Hutchinson, Arkansas city, Wichita, Newton, Kansas, and smaller towns in Oklahoma, Kansas, and Missouri. The Quapaw Gas Co. supplies gas to Bartlesville, Okla., and Joplin and Webb City, Mo., and to the Kansas Natural Gas Co.

p. 25. Bullet Through Pipe Line. Midway between the Kiamichi Mountains and the Arkansas State line, someone shot a steel bullet into the oil line of the Oklahoma Pipe Line Co., resulting in a loss of $2,500 in oil. A test was made with a rifle loaded with steel bullets, confirming that this could happen. Now there is more vigilance along the line.

p. 32. Gas. Oklahoma. In March, Oklahoma produced 375,500,000 cfgpd new production, much of which was discovered in the Cushing Field, with 135,000,000 cfgpd new production. Some wells in the Wheeler sand had 18 to 48 million cfgpd. Mr. C. B. Shaffer has the majority of the gas in the Cushing Field.

Vol. 12, No. 44, April 9, 1914, p. 4. Personal Mention. C. N. Lowell, of Bellaire, Ohio, is at Waynoka, Woods County, where he is starting a wildcat well on a block of 12,000 acres of leases.

John J. Carter, of Titusville, Pa., president of Carter Oil Co., is in Tulsa. He has extensive holdings in many of the oil fields of the country.

Col. W. W. Johnson, president of the Forest Oil Co., is back in Wichita Falls, Texas, after spending the winter in Corpus Christi and Mineral Wells.

J.F. Hutson, and wife, who recently located in Tulsa from north Texas, have moved to Muskogee, to be nearer his production in the Beland Pool.

L. L. Hutchison, former State Geologist of Oklahoma, and Benjamin Gessell, returned to tulsa from a trip along the Pacific Coast of South America, where they made an investigation of the oil fields of Ecuador.

John Crawford, president of the Parkersburg Rig & Reel Co. of Parkersburg, W. Va., is in Tulsa on business connected with his different interests in Oklahoma. He is also president of the Muskogee Refining Co.

W. W. Silk, manager of the Five Rivers Oil Co. has been in Tulsa for several months, looking after operations at Inola and Sapulpa. He has moved back to Wichita Falls, Texas.

William Hood of Birmingham, Ala. is president of the Five Rivers Oil Co.,

and is in Independence, Kansas, looking over his holdings in the Wayside Pool. The company recently purchased leases in the Iowa Park, Texas area. Mr. Hood was spending the winter in Florida.

Col. George C. Priestley, of Bartlesville, and Eugene Battle, and Bob Brady are in the Panama Canal Zone, fishing.

Victor H. Hughes, E.M., assistant State Geologist of the University of Missouri, has resigned to accept a position with Valerius & McNutt, geologists and mining engineers of Tulsa. For the past 6 years he has studied the lead, zinc, iron, barite, coal, and ground water of Missouri, and has correlated many deep holes in Missouri. He has worked on a structure map of the Pennsylvanian beds in Missouri.

p. 4. Noted in Passing. The Anglo Persian Oil Company announces the completion of its 200-mile pipe line from the interior of Persia to its refinery at Abadan, one of the principal ports of Persia. The refinery is now making regular shipments of refined oil.

The new oil town on the Ringling Road in Carter County has had to change its name from Wilson to New Wilson, because there is another postoffice of Wilson in Oklahoma.

Automobile thieves are getting busy in Tulsa. Several machines have been stolen in the past few days. Among them was the large Chalmers Touring Car of J.I. Gillespie. It was No. 438, and was taken last Friday night in front of the Drew Building.

Four years ago, on April 1, 1911, the first big oil strike was made in the Electra Field of Texas. It was drilled on the Waggoner Ranch by the Producers Oil Co. It was thought to be an April fool joke. At that time, Electra had 500 people. Now it has a population of 3,000. Production is now 26,000 bopd. Wichita Falls was also a small place, and now has 15,000 people.

p. 6. Recent Deaths. Mrs. Frank B. Long, aged 32 years, died at home in Tulsa on Monday March 30, 1914, from pneumonia. The body was taken to Rushville, Indiana, for burial. Her husband is secretary-treasurer of the Gem Oil Co., and was an Indian Agent and later owner and publisher of the Nowata Advertiser.

Simon J. File, aged 73 years, died at his home in Rouseville, Pa., on Sunday March 22, 1914, following an illness of 4 months. He was a tooldresser, driller, and rig builder in the early oil excitement of Pithole, Pleasantville, and Shamburg, Pa. For many years he was a pumper at Rouseville, but of late years he was a carpenter. He leaves the following children: Frank J. File, Bartlesville, Okla.; Mrs. Libbie Nunn, St. Catherines, Ont.; Charles H. File and Mrs. Cora B. Sugharson of Rouseville; and Mrs. Gertrude Eckmeder of Erie, Pa.

David L. Sleeper, aged 58 years, died in Tulsa on Monday March 31, 1914, of heart disease. He was a classmate of ex-President Taft and filled many positions of honor and trust in Ohio, serving as speaker of the 72nd General Assembly. He came to Tulsa in 1903, practicing law, and being interested in the oil business. His wife, and a son Charles, of Tulsa, survive him. The body was taken to Lawton for burial.

p. 8,10,12,42-46. Oklahoma. The Prairie Oil and Gas Co. has purchased land near Terlton, Pawnee County, 14 miles northeast of the Cushing Field, on the St. Louis and San Francisco Railroad, and will erect a number of 35,000 and 55,000 tanks to handle the Cushing oil. This will still not take care of the current output of 65,000 bopd. The Bartlesville sand has staying power, and other companies are building additional lines and tank farms. The Chanute Refining Co. will build a refinery at Cushing north of the Consumers refinery. This will be the fourth refinery at Cushing.

Seminole County. The Wewoka Oil & Gas co. got 5,000,000 cfgpd at 1,428 to 1,500 feet on Lot 10, Block 38 in Wewoka. This well is 150 feet from the old well that was drilled on Block 53 a number of years ago.

Marshall County. Near Aylesworth a gas well was completed for 10,000,000 cfgpd by Madill parties. W. H. Keltner, of Reck (Carter Co.), was the driller. The depth cannot be learned as yet. Near Woodville (7S-6E), there has been

considerable leasing during the last few weeks, and it is reported that some work will be started soon.

Hughes County. Near Dustin, there are 2 gas wells furnishing the town with gas. One is in Sec. 5-9N-12E and the other in Sec. 8-9N-12E. There are 5 dry holes. Resig & Co. are drilling in Sec. 1-9N-12E, and had a gas pocket at 400 feet.

Atoka County. Considerable acreage is being leased near McGee Valley. New York parties were the first to secure some acreage near McGee Creek, and George Priestley, of Bartlesville, is the latest individual to become a leaseholder in that locality. He recently finished a duster in Sec. 5-2S-9E, but has moved to the Kerr Ranch in Twps. 2 and 3 S.-R. 14 E., and will develop that. With Mr. Priestley is associated the Brown Brothers of Toledo, Ohio, and a number of others. North of Redden, the Olive Oil Co. has contracted with Huber & Co. of McAlester to drill to 1,800 feet. The Olive Oil Co's No. 1 is now drilling in Sec. 33-1N-14E, and had some encouraging features. Near Reynolds, the Oklatoka Oil Co. is drilling in Sec. 7-3N-13E, and 5 other strings are running in the pool (Reynolds is south of Kiowa by 3 miles, in 2N-13E?). (3N-13E is in Pittsburg County).

Pushmataha County. The Impson Valley Oil Co. has a derrick in 1N-16E, but the section is not reported. Also, there is supposed to be a test 10 miles northeast of Antlers, but nothing has been learned about this well.

Carter County. The Healdton Pool, is now making about 10,000 bopd, and the Magnolia Pipe Line Co. will build a refinery at Fort Worth, Texas, to handle much of this oil. They are offering 70 cents a barrel. With new wells coming in, the production will soon be 20,000 bopd, and the new refinery will have that capacity. This will be the third refinery at Fort Worth, the others being the Gulf Refining Co. and the Pierce Fordyce Association Refinery.

Many other tests are being drilled in Carter, Mayes, Woods, Lincoln, Payne, Comanche, Kiowa, Cherokee, McIntosh, McClain, Pontotoc, Hughes, Cotton, Creek, Oklahoma, and Pittsburg Counties, in addition to the regular northeastern developmental wells. (About 155 wells are listed on p. 42, 44, 46, in above counties).

p. 27-28. Oklahoma's Deepest Well. Some time ago, the deepest well ever completed in Oklahoma, at 3,754 feet, was that of the 101 Ranch Oil Co. on the Primeaux Farm south of Ponca City, Kay County, in Sec. 4-25N-2E, ending in a dry hole. At 1,552-1,662 feet was the Ponca City sand. At 1,814-1,858 feet was a black shale. At 2,740-2,780 feet was the Cleveland sand. At 3,625 feet, 23 feet of sand believed to be the Bartlesville was found. (Details given).

p. 32, 47. Pipe Line Systems of Four States. Four large pipe line companies and 40 smaller pipe line companies each with refineries in Oklahoma, Kansas, Northern Texas, and Northwestern Louisiana, handle the Mid-Continent oil, representing an investment of more than $100,000,000. On April 1, 1914, the daily average production in the Mid-Continent was about 300,000 bopd. Approximately 50 refineries are running, handling 90,000,000 barrels of oil a year, representing $200,000,000 a year of final products, employing 10,000 people on a monthly payroll of $1,000,000. The four great companies have 6,000 miles of 8-inch pipe alone. They are the Prairie Oil & Gas Co. & the Oklahoma Pipe Line Co. & the Standard Oil Co. of Louisiana; the Magnolia Pipe Line Co.; the Gulf Pipe Line Co.; and The Texas Co. (the first three are with Standard). The Prairie and other Standard lines take one-half of the oil, and Magnolia, Gulf, and Texas take about one-fourth, and the other 40 companies take one-fourth. The Prairie was formed on Dec. 15, 1900, in Kansas, with $300,000 stock, but now increased to $20,000,000. They have 16,000 producing wells in Kansas and Oklahoma, averaging more than 20,000 bopd, on 6,000 acres of leases, with 4,500 miles of trunk lines and 1,240 steel tanks, with 45,000,000 barrels of oil storage capacity, and now holding 44,000,000 barrels of that. They also have 2,000 miles of their own telegraph and telephone lines. They pipe to refineries at Neodesha, Kansas, Kansas City, Missouri, Wood River, Ill., Whiting, Indiana, and Baton Rouge, La., where Standard Oil Co. has its main refineries.

The Gulf Pipe Line Co was organized in 1907 with $3,500,000 capital and the Gulf Pipe Line Co of Okla. was organized in 1909 with $1,000,000 capital.

They have 417 miles of 8-inch line from Watkins, Oklahoma, to Sour Lake, Texas, and 38 miles farther to Port Arthur, where their refinery is located. They have many trunk lines to the many fields in Louisiana, Texas, and Oklahoma. They have a storage capacity of about 9,000,000 barrels. They have 967 miles of telephone and telegraph lines to the home office in Pittsburgh, Pa. The company is capitalized at $50,000,000. They have a small refinery at Fort Worth that can handle 5,000 bopd, but the large refinery at Port Arthur can handle 55,000 bopd. They employ about 2,000 people, with a monthly payroll of $200,000.

The Magnolia Petroleum Co. was organized in 1911, with a capital of $3,000,000. The Magnolia Pipe Line Co. was organized in Dec. 1913 for $500,000. The Corsicana Petroleum Co. is an affiliated company. The Magnolia Petroleum Co. has recently increased its stock to $5,000,000. It has 555 miles of 8-inch line from Addington, Okla., to Beaumont, Texas, and a 25-mile line of 6-inch pipe to the Healdton Field from Addington. They may go northward to the Cleveland Pool in Oklahoma, and tap the Cushing Pool. They handle about 20,000 bopd, and refine about 500,000 bop month. They have about 353 miles of gathering lines to Electra, Petrolia, Burkburnett, Iowa Park, and Corsicana, Texas. They will build a refinery at Fort Worth, to handle 5,000 bopd. The other two refineries are at Corsicana and Beaumont, handling 20,000 bopd. They employ about 1,000 people, with a monthly payroll of about $100,000.

The Texas Co. was organized in 1902, with $1,000,000 stock, which has now been increased to $30,000,000. It has refineries at Lockport, Ill., West Tulsa, Okla., and Dallas, Port Neches, and Port Arthur, Texas. It has about 825 miles of 8-inch line and 550 miles of 6-inch line and 1,000 miles of gathering lines, to Sour Lake, Saratoga, Humble, Markham, Electra, and Petrolia Fields in Texas, and Caddo, Jennings, and Vinton Pools in Louisiana, and many pools in Oklahoma. The Oklahoma-Texas line handles about 20,000 bopd and the West Tulsa refinery handles about 5,000 bopd, and the Dallas refinery handles about 5,000 bopd. The Port Neches refinery handles about 6,000 bopd and the Port Arthur refinery has a capacity of 35,000 bopd. The Lockport, Ill. refinery handles about 5,000 bopd. The company has about 1,000 miles of telegraph and telephone lines. They handle about 1,500,000 barrels a month. The Port Neches refinery handles Mexican oil also. The company employs about 2,500 people with a monthly payroll of $250,000.

The Pierce Fordyce Oil Association has an 8-inch line from Cushing to Sand Springs, Okla., and has refineries at Fort Worth and Texas City, Texas. The Sand Springs refinery handles 8,000 bopd, the Fort Worth refinery handles 8,000 bopd, and the Texas City refinery handles about 5,000 bopd, the latter handling Mexican crude mostly.

The Sun Pipe Line Co. operates mostly in the Gulf Coast. It operates under the name of the Twin State Oil Co. in Oklahoma. It handles about 250,000 bop month, and ships it to Marcus Hook, Pa., by oil tanker. It has about 60 employees with a monthly payroll of $10,000.

Many other smaller companies operate in the Mid-Continent, too numerous to mention, such as the United Oil Refining Co. of Beaumont, The Louisiana Oil Refining Co. of Shreveport, the Security Oil Co. of Louisiana, the Producers Oil Co. of Texas, the National Refining Co. at Coffeyville, Kans., the Cosden refineries, and the Uncle Sam Oil Co.

Vol. 12, No. 45, April 16, 1914, p. 5. Mexican Crude Was Burned. Large quantities of crude oil were burned in storage at Tampico, Mexico, during the fighting between the rebels and Federal forces. Compensation will have to be decided upon later.

p. 5-6. Noted in Passing. The Oklahoma Petroleum Company, with $1,200,000 capital, has been organized by Governor Haskell and Joseph L. Hall, of Cincinnati, Ohio, with principal offices in Muskogee, Okla.

The Standard Oil Co. of New York has closed a big contract with the Chinese Government for fuel oil, presumably to be used on the National railroads.

Miss Kate Barnard, State Commissioner of Charities and Corrections, bid for some oil and gas leases on State School Land. If successful she said that she would use the money for the building of a home for friendless working women,

and donate the home to the State of Oklahoma. She was awarded the bid on the basis of 15-1/2 per cent royalty on oil and 7-1/2 percent on gas.

The Indo-Burma Petroleum Co., drilling in Upper Chindwin District at Indaw, Kindet Township, Burma, India, has discovered oil in 3 tests. One well is reported at 2,000 bopd. This is a new field in a wild area. The company will build a pipe line to the Mu Valley, thence south along the Irrawaddy River to a point opposite Mandalay, for 170 miles. American pipe will be used. The 1913 production of oil in Burma is estimated at 8,000,000 barrels.

p. 8-10, 12. Oklahoma. With increased production, the price of crude is now about 70 cents a barrel. Healdton is up to 15,000 bopd, and Cushing is about 65,000 bopd. At Healdton, there have been 60 completions and only 9 dry holes, in one week.

In Osage County, at Bigheart, the Osage & Oklahoma Gas Co., on Lot 108, completed a well in the Mississippi lime for 250 bopd, this being the first good Mississippi lime producer in the area. The top of the lime was at 1,900 feet, and the pay zone was at 2,200 feet, in the limestone. It is well No. 200, and is a sublease of the Barnsdall Oil Co. It may be an initial well of a new pool.

In Washington County, there are about 7,085 producing wells, with 25,497 bopd production. The first well that was completed in Washington County was in 1897, and it is still producing. (The Cherokee Shallow Sand District has 11,284 producing wells, with 16,325 bopd to the east). The Wann Pool is the latest attraction, with 1,320 producing wells in the Wann and Copan Pools. The Bartlesville and Dewey Pools have 5,171 producing wells. The Hogshooter Pool has 594 producing wells. There are 8 producing sands, and the Mississippi lime. A 70-foot sand is considered a freak. The shallow sands are at 200 and 450 feet. The Wayside sand is at 650 feet. The Peru sand is at 700 feet. The Squirrel sand is at 1,050 feet. The Bartlesville sand is from 1,150 to 1,250 feet. The Tucker sand is at 1,300 feet. The Burgess sand is at 1,400 feet, lying on top of the Mississippi lime. The largest pool is the Caney River Bottom Pool, 18 miles long, from Bartlesville, through Dewey and Copan, to the Kansas line. Other pools are the Squirrel Pool, Matoka 7 miles from Bartlesville, and Blue Ribbon Pool.

Bartlesville is the main city in the county, with a population of 15,000. Three of the largest smelters are near the town, with a capacity of 300 tons of ore a day, employing 1,000 men, and using 19,000,000 cfgpd. There are 10 miles of paved streets. The Prairie Oil & Gas Co., Barnsdall Oil Co., Gypsy Oil Co., Uncle Sam Oil Co., National Refining Co., Cudahy Oil Co., and Central Fuel Co. have headquarters there. There are 4 movie houses there. There is an electric street car service to Dewey. There are also many supply stores there.

In Seminole County, the Wewoka Oil & Gas Co. has a paying oil well on Lot 10, Block 38, in Wewoka, at 1,597 feet. It is said that oil came to within 5 feet of the top of the hole. The well is shut in. This will mean the opening of a new pool. At 1,428 to 1,500 feet, about 5,000,000 cfgpd was also found.

In LeFlore County, the Bokoshe Oil & Gas Co. is close to 2,000 feet near Bokoshe.

In Pontotoc County, in the Allen Pool, work continues steadily. (Details given).

In Comanche County, near Lawton, work progresses steadily. (Details given).

In Atoka County, Oil has been found in many instances just a few feet below the surface. Considerable acreage has been leased, and rigs are being moved to new locations. It is reported that oil was found at 98 feet near Tushka. At Bentley, oil was found at 75 feet. At Farris, oil was found at 60 feet in Sec. 6-4S-14E. AT 204 feet a pay sand was found at Redden. The Redwood Oil Co., of which George Priestley is affiliated, will drill in Sec. 28-1N-14E, north of the well recently completed by the Olive Oil Co. at Redden. The Olive Oil Co. is erecting a rig in Sec. 8-1S-14E, two miles southwest of where they had a good showing. The Garatoka Oil Co. will do the drilling. Priestley & Co. will soon start on the Kerr Ranch in Sec. 20-3S-14E, three miles east of where a small showing was encountered by the Smith Brothers near Farris. The Oklatoka Oil Co. is drilling in Sec. 7-3N-13E. The eastern part of Atoka county seems to be the favored spot, and that is where most of the activity prevails. Near Lane, considerable

acreage has been secured, and work will be started.

In Pushmataha County, the Impson Valley Oil & Gas Co. is spudding in Sec. 19-3S-15E. There is another test reported to be drilling near Antlers.

In Jefferson County, near Terral, the Terral Oil & Gas Co. will start a test near town to 2,000 feet. They have 5,000 acres in that area. Many tests are drilling in the county. (Details given).

p. 30-31. Historical Sketch of Oil in Mexico. Mr. E. DeGolyer read a paper before the Mexican Oil Association in Tampico on March 11, 1914, and the paper is here reviewed. Mr. DeGolyer is chief geologist of the Mexican Eagle Oil Co., Ltd., with headquarters in Tampico.

In 1520, Friar Sagahun began writing a description of Mexico, and mentioned pitch or chapopote. This is 100 years before a Franciscan missionary mentioned an oil spring in the State of New York in 1629. Friar Sagahun said that chapopte is a bitumen which comes from the sea, coming to the surface from the bottom upon certain fixed days, according to the stage of the moon. When burned, it gives off a great odor, much appreciated by women. Those who live near the sea go out and collect it. it is a good incense when mixed with resin and copal. The word chapopote is an Aztec word, and no doubt the Indians knew about it, the word being derived from two words, taaus, meaning paste or cement, and popchile, referring to perfume. Apparently all early people had a knowledge of bitumen, and used it as a cement for bricks and slabs and boats. Babylon, Ninevah, the ruins of Yucatan, and the pyramids in the Valley of Mexico all had bitumen in their construction. The Indians of northeastern United States used oil for medicinal purposes. The earliest Chinese and Japanese writings refer to petroleum being used for heating and lighting. The Axtec symbol for the goddess of healing resembles a pan of chapopote. Bernal Diaz mentions the use of torches of chapopote and wood at Tabasco. Indian mounds are found in proximity to the more important seepages in the Huasteca Veracruzana. Most early people worshipped fire, and the use of oil and gas in religious ceremonies was perhaps used more generally than what has been suspected. It was so used by the Greeks, Persians, Israelites, and Egyptians. At Baku, Russian, the first worshippers maintained a sacred flame for centuries. The Seneca Indians in Pennsylvania used bitumen as incense in their religious ceremonies. Sagahun mentions that the Aztecs used pitch as an incense in their religious ceremonies.

The human race was extremely slow to utilize oil and gas commercially. In 1864, Ildefonso Lopez was granted permission to exploit petroleum in the San Jose de las Husia area of the State of Tamaulipas, as published in the Mémoria de Fomento of 1865. This appears to be the first time petroleum was commercially used in Mexico. He was also granted permission to exploit at chapopote, south of Aldama, Tamaulipas. Similar permission was granted to Paradez in 1865 to exploit chapopote at Carrancitos at Macienda of Bejarano, Tamaulipas. In 1868, a Dr. Autrey discovered the Cougas Oil Springs at Furbero, where ancient Indian workings were known to the Indians. In 1869, the Cia. Explotadora del Golfo Mexicana was formed in Mexico City, the Cougas deposits were denounced, and drilling and refining equipment was brought in, and a well was drilled to 125 feet. This is the first drilling record in Mexico. The well was a failure, and a tunnel was drilled into the hill next to the seepage, and 4 to 5 bopd was produced. The company failed and the operations were abandoned.

In 1872, John C. Spear described petroleum at Chapo and San Cristobal, in the Isthmus of Tehuantepec. In 1873, Sr. Prieto described seepages along the Tamesi River in Tamaulipas, stating that these were denounced by residents of Tampico, but the work was soon abandoned. In 1873, the asphalt of Porero El Cristo near Tempoal in the canton of Tantoyuca was mined. In 1878 and 1879, John W. Foster described seepages in an exposition of the Secretaria of Hacienda. In 1879-1880, Dr. Autrey denounced the old workings at the Cougas Springs, and set up a still in the village of Papantla. He packed the oil on mule back from the springs to Papantla, and made about 4,000 gallons of kerosene. Some of the kerosene was used to light the National Theater in Mexico City, it was reported. This is the first report of the transportation and refining of oil in Mexico.

From 1880 to 1883, several wells were drilled in Mexico. One was near Guadalupe, in the Valley of Mexico, where a few bottles of light oil were obtained. Two wells were drilled by a Boston company at Chapopotal, about 2 miles from the famous Potrero Field, to a depth of about 400 feet. One well had gas and oil, and since a bonus of 50,000 pesos was offered if both were successful, the superintendent ran a pipe from the first to the second well to make sure he got his bonus. The first well was still flowing in 1908, making about 4 bopd. A few other wells were drilled in 1883 and 1884.

In 1898, El Cougas, Fubero region, and 2,500 hectares of land were leased to an American oil man, this being the first record of a lease in Mexico, based on a mining law of 1883. In 1900, many companies were beginning to lease and drill for oil. The first wells began to produce in 1904. The following production for each year since is given:

1904--	200,000	1909--	2,765,742
1905--	300,000	1910--	4,099,632
1906--	500,000	1911--	13,655,488
1907--	1,000,000	1912--	16,844,066
1908--	3,481,410	1913--	24,174,929

In 1914, Mexico was third in importance for world production, with Russia second, and the United States first, with Mexico producing about 6% of the world's oil. At the end of the year, Mexico's production should be about 40,000,000 barrels, and in 1915 or 1916, Mexico should be second in world wide production if transportation facilities are increased to reach the shut in wells. The true production is far in excess of what is transported out of the country, or what is sent to the Pearson refinery at Miniatitian which was built in 1908. In 1909, the Huasteca Petroleum Co. built a pipe line to Tampico. In 1910, the Aguila Co. completed a line to Tampico. In 1911, the first Mexican crude was imported by the United States, from Tampico. In 1912, several companies had a fleet of tankers, and the Mexican Government placed a tax on oil of 20 centavos per ton. In 1913, they raised the tax to 75 centavos per ton, and a bill was introduced to nationalize the Mexican oil industry. By this time, almost 40 oil companies were formed in Mexico, many with Mexican capital, but some with foreign capital from such people as William Randolph Hearst. Many large wells were discovered; some with production in excess of 110,000 bopd, and many fields were discovered. (Details given).

p. 33. More gas For Ardmore. The Ardmore City Gas Co. of Ardmore, is laying a gas line from the new wells at Healdton it its trunk line to the Wheeler Field. The company has a franchise to build an oil line, and they will probably build a line to the city when a new refinery is built.

Vol. 12, No. 46, April 23, 1914, p. 2-3. Personal Mention. J. N. Crawford, of Tulsa, has been leasing in Roger Mills County. He says that there is considerable activity in Western Oklahoma and the Texas Panhandle.

W. R. Guiberson and his wife of Los Angeles, will make Tulsa their new home. He has recently opened headquarters in Tulsa for the sale of fishing and drilling tools of his own patent.

W. G. Long has moved his family from Wichita Falls to Tulsa. He has quite a lot of acreage scattered over the Mid-Continent. He will probably retire from the writing of oil specials.

R. M. Dunn leaves next Sunday night for his old home in Rew, Pa., after 14 years in the oil and mining business in California. He claims to be the oldest man in the oil business, not excepting John D. or anybody else. He began work at Titusville, Pa., on June 1, 1860, and except for 3 years in the Civil War, he has been engaged in the oil business continuously since then. His operations extend from Pennsylvania, West Virginia, Ohio, and Indiana, to California.

p. 3-4. Noted in Passing. The Quaker Oil & Gas Co. has declared a cash divident of 500 per cent. The Pure Oil Co. owns 99.3 percent of the stock of Quaker. Quaker has some fine properties in the Cushing District.

According to Associated Press dispatches, oil has been discovered in a shallow water well near Tyron, McPherson County, Nebraska. Local capital will now drill a deep test.

J. H. Pew, Jr., president of the Sun Company, has purchased a lot in Ardmore, Oklahoma, for an office building. Sun may build a refinery at Ardmore, and build a pipe line from the Healdton Field to Ardmore.

A company has been organized by Chicago capitalists, with 80 local stockholders, to prospect for oil and gas in the Buddy Creek District in the Sheep Creek Basin of Montana. The capital is $16,000, and work will begin at once. Several years ago a shallow well was drilled nearby with a good showing of oil.

Citizens of Altus and Olustee, Oklahoma, have subscribed $10,000 to drill a well for oil near Olustee, in Jackson County. An "oil wizard" with a locating apparatus declared that there was oil at 529 feet, near an old abandoned gas well that at one time had considerable gas at 200 feet.

The International American Oil Co., of Dover, Delaware, has been incorporated with $50,000,000 capital. It is not known who the interests are behind the company. The new company can carry on a general oil business in all branches in the United States. One rumor is that it will build a pipe line to the Mid-Continent.

Near Vernal, Utah, is sand asphalt country. During the past year, mining claims were filed on most of the territory, and some propectors have sunk tunnels 60 feet into the sand. Heavy oil seeps into the tunnels. The sand is used for pavements and sidewalks in its natural state. Salt Lake residents will drill a deep test this coming summer.

p. 6, 8, 10, 12. Oklahoma. In Seminole County, the Oklahoma-Tennessee Oil Co. is reported to have a showing of oil at about the same depth as the well in Wewoka. The test is about 3 miles southwest of Wewoka in the NW-1/4-Sec. 1-7N-7E.

In Marshall County, there is considerable work around Madill, Aylesworth, Mannsville, and Lark. Near Aylesworth, Richards & Richards, of Okmulgee, are reported to have a 10-bopd well at 260 feet, with 22 feet of pay, in Sec. 17-6S-7E. The Richard Brothers have 2,000 acres under lease in the area. This is about 8 miles east of Madill where oil was found at 675 feet.

In Choctaw County, 3 miles east of Hugo, the Lusher Drilling Co. is at 720 feet in shale, the work being taken over from Shaffer & Co.

In Atoka County, the Garatoka Oil Co. is preparing to drill a deep test in Sec. 8-1S-14E, near Redden. The Redwood Oil Co. is preparing to start a test in Sec. 22-1N-14E.

In Pittsburg County, the Oklatoka Oil Co. is at 810 feet on the Bell Farm in Sec. 13-3N-13E, 4 miles west of Kiowa. The Gap Oil, Gas & Mineral Co. is at 400 feet in Sec. 12-3N-13E.

In Creek County, the Cushing Field continues to expand. In several months, the production could be up to 200,000 bopd. Tanks are slopping over, and oil is running down Tiger Creek at the rate of 3,000 to 5,000 bopd. Dams are being erected across the creek, and as much as 50,000 barrels of oil are stored behind the dams. The courts will have to decide who owns the oil. From Cushing to Drumright, there was a mile and a half of teams hauling steel tanks to Drumright. The teamsters get $6.00 to $9.00 a day and are reaping a harvest. The storage capacity is now about 5,000,000 barrels, which is not enough, and the six refineries are now trying to double their capacity. About a dozen companies own most of the field. It costs about $10,000 to drill a well, and the companies are losing about one-fourth of what they could make because of the lowering of prices because of overproduction. However, the production is so good that the companies have started something that they cannot stop. The Cushing Field is now about 10 miles long by 5 miles wide and covers about 30,000 acres, and the deep Bartlesville sand is still a good producer. Also, there is about 500,000,000 cfgpd available, and many times that amount could be available if there was a market for it. Many wells can produce from 10,000,000 to 50,000,000 cfgpd, with rock pressure of 1,540 psi. The gas is sold at 2 cents a thousand at the well, and the gas company sells it retail at 10 cents a thousand to manufacturers and 25 cents a thousand to the public. Drumright is the main oil town, with 1,500 people, but 6,000 people get their

mail there. All styles of architecture from Indian tepee to brick buildings are represented. Its narrow dirt streets are filled with mixed populations, day and night. Oil is not the only thing played in the area. Some of the adjacent camps such as Dropright, Gasright, Alright, and Damright have road houses, gambling rooms, and open bars. The drillers get $7.00 a day, and the tooldressers get $6.00 a day, so there is a large amount of money changing hands.

p. 24. Organizing Field Workers. From 1859 to 1914, oil producers have not had to worry with labor organizations. Now it is different. The Industrial Workers of the World began recruiting drillers, tooldressers, rostabouts, and teamsters in California at the beginning of 1914, and now they are in the Mid-Continent. Jack Law with Local No. 586 began recruiting in Tulsa in February 1914, with headquarters in the basement of the Crescent Hotel, and now has 350 members. The secretary is George Fenton. The Tulsa office covers Kansas, Oklahoma, Louisiana, and Texas. James Quinn and C.L. Phillips are recruiters. The I.W.W. supports 8 hours a day work, with $3.50 a day minimum age, and meals at 25 cents maximum. Cots in tents should be sanitary and at least 2 feet apart, and one tent should be for reading and writing. The company must pay transportation to all jobs. One tent must be for bathing. Stand-by time is at full pay. Working in water is double-time. For Sunday work, the workers get time and a half.

p. 24. France Follows Suit. France is preparing a Government bill for an oil monopoly of refined petroleum products, similar to the bill before the German Reichstag. The German bill is still hanging in the balance.

p. 24. State Officials Interested. State officials of Oklahoma are all getting into the oil game. Governor Cruce is interested in Healdton. Secretary of State Ben Harrison is interested in the Allen Pool. Game Warden John B. Doolin, Treasurer Bob Dunlop, Labor Commissioner Charles Daugherty, Commissioner of Charities Miss Kate Barnard, Commissioner of Agriculture G. T. Bryan, Attorney General Charles West, and ex-State officials such as Charles N. Haskell, Leo Myer, John C. Elliott, and B. J. Waugh. Many lesser officials are also interested.

Vol. 12, No. 47, April 30, 1914, p. 4. Oil Demand and Production. Jo P. Cappeau of the firm Jo P. Cappeau & Sons said that oil consumption in the world is a little in excess of production. Local conditions have much to do with this, especially the lack of proper transportation and pipe lines. The price of crude oil has been out of proportion to the price of the refined product, and there is no reason why the refined prices should be affected. The present setback in the petroleum trade is only temporary, probably due to a low consumption of fuel oil.

p. 5. Noted in Passing. The independent refiners are about the only class of people in the oil business that are not making a fuss over the recent reductions in the price of crude oil.

The Paris Oil & Mineral Co., drilling near Paris, Arkansas, is at 1,600 feet, where they claim to have a show of oil.

Leasing has been active near Snyder, Ashley County, Arkansas. F. E. West and others have shipped a drilling rig to the locality, and will drill at once. They think that the formation is similar to that of the Caddo District, La.

The recent credit-balance reduction is the price of Eastern crude oil, coupled with war news, caused Standard stocks to tumble almost $30 a share.

Northwest of Haskell, in Sec. 28-16N-15E in Muskogee County, Anders & Cory found a heavy oily substance at 400 feet, but not like oil.

The recent reduction in credit balances for oil has caused many oil-well supply companies to cut back and lay off some workers.

The Quaker Oil Co. will erect at least 10, 55,000-gallon tanks at Norfolk, northeast of Cushing, from where they will ship oil by tank cars to the Pure Oil Company refinery at Philadelphia, Pa.

p.6. Recent Deaths. Mrs. Jane Austin Melvin, aged 69 yrs., widow of the late P.H. Melvin, died in Tulsa Fri. night April 24, 1914 following an operation for gall stones. Burial will be at Clarion, Pa. on Mon. Apr. 27. She is survived by the following children: Thomas P., manager of The Phoenix Refining

Co.; Helena M., Edward A., and Catherine B., all of Tulsa; and Michael M., of near Oil City, Pa.

S. P. Mosher, aged 65 years, died in Tulsa Tuesday April 21, 1914, following an operation for appendicitis. He was one of the pioneer oil operators in Kansas. He was engaged in the insurance and real-estate business in Tulsa, having lived in Tulsa for the past 7 years. He was born in Genesee Valley, New York. For many years he was a clerk in the United States District Court. The body was taken to Fort Scott, Kansas, for burial.

Wesley Smith Guffey, aged 73 years, died at his home in Pittsburgh, Pa., Thursday April 23, 1914. He had been ill for some time. He was a unique figure in the oil industry. Tall and dignified, with a heavy white mustache and goatee, always correctly garbed, he was a type of business man that is rapidly passing. He had a wonderful vocabulary which was picturesque as his personality. His one hobby was art. He was born in Westmoreland County, Pa., on Feb. 22, 1841. When a boy, the family moved to Guffey's Landing, on the Youghiogheny River, which was his home until the early eighties, when he located in Pittsburgh. He was a lad on the farm when the oil excitement began. He and a few associates began work in the Pithole District, where they struck one of the big gushers of that day. From that time on, he remained a leader in the oil business, having been interested with his brother, Col. J. M. Guffey, in the oil industry in Pennsylvania, Ohio, West Virginia, and Oklahoma. He was one of the first men to pipe Pittsburgh from the Westmoreland County Districts. He was prominent in State and Government politics, but he never ran for office. He never married. His sister, Mrs. Nancy A. Johnston, presided over his palatial residence. Besides his brother and Mrs. Johnston, a sister, Mrs. Alvira Irwin, of Irwin, Pa., survives. Funeral services were held at his home Friday evening, with burial in West Newton, Pa., Saturday morning.

P. 8-10. Oklahoma. At Cushing, the production has increased to 71,000 bopd and is still increasing. One operator said that he can make a profit at 85 cents a barrel, but that he would have to shut down at 75 cents a barrel or lower. At Healdton, the production is over 15,000 bopd, and increasing with the completion of many good wells this week.

In Tulsa County, southeast of Keystone, a new pool was opened by Charles Page along the M.K. & T. Ry., 3.5 miles southeast of Keystone, on the Sandy Johnson Farm in the NW-1/4-Sec. 11-19N-10E, for 100 bopd at 1,710-1,750 feet. It is the first well in that vicinity.

The daily production in Oklahoma is now about 221,800 bopd.

p. 25. A. M. Funkhouser died in his room at the Whittington Hotel in Ardmore, Oklahoma, on Tuesday, April 28, 1914, at age 65. His home was in Fort Smith, Ark., but he was working in the Healdton Pool in Carter County. The body was taken to Fort Smith for burial.

p. 25. Drilling in Oregon. J. R. Zumwalt and Z. L. Phelps, of Bakersfield, Cal., are drilling near Vale, in Malheur County, Oregon, near the Idaho line. For several years there has been prospecting near Vale and Ontario, in the same locality. Local companies have drilled a number of tests in this locality, some of them developing large quantities of gas, with some showings of oil. The gas is now being used for domestic purposes. A number of Los Angeles and Coalinga, Cal., capitalists are also interested with Messrs. Zumwalt and Phelps.

p. 29. U.S. Survey Reports. The U.S. Geological Survey has published Bulletin 541-B, covering "The Structure of the Fort Smith-Poteau Gas Field, Arkansas-Oklahoma", and "The Glenn Oil and Gas Pool and vicinity, Oklahoma", by Carl D. Smith.

An areal geologic map is given for the Fort Smith area, covering Mansfield, Arkansas, and Poteau, Oklahoma. Some wells are as high as 4,250,000 cfgpd per well.

A structure map is given of the Glenn Pool and vicinity with contours on top of the Ft. Scott Limestone or "Oswego lime". The stratigraphy is also given.

Vol. 12, No. 48, May 7, 1914, p. 6. Personal Mention. D. W. O'Hern, geologist, was in the Cushing Pool last week, making an investigation of general conditions.

Miss Willa Richards, registrar of deeds for Jefferson County, the first woman to hold that office in Oklahoma, has recently made quite a comfortable fortune in transactions in oil.

F. L. Maire, of Lima, Ohio, is in Tulsa. He is the owner of the Maire Hotel in Bartlesville. His producing firm, Ebling & Maire Bros., has considerable production in the Bartlesville District.

p. 6. 8. Noted in Passing. The Royal Dutch Combine is reported to have recently brought in a large well in Egypt, increasing its production from 700 bopd to 7,500 bopd.

The Oklahoma State Geological Survey has issued a map of the Cushing District showing the elevations and formations of that area.

The Sac & Fox Oil & Gas Co. was recently formed at Cushing, with capital of $100,000. They have 2,000 acres of leases southeast of Cushing.

Probably the first woman director of any large oil company is Mrs. E. L. Doheny, who was recently elected a director of the Mexican Petroleum Co.

In Union County, Arkansas, a showing of oil has been found in a test. The discovery is under investigation by the Arkansas State Geological Department.

During a cloudburst in the Healdton Field, some earthen dams were washed away, allowing 30,000 barrels of oil to float down the stream.

The Arkansas Oil Refg. Co., at Fort Smith, has been sold at a receiver's sale for $32,000 to Will Owens of Muskogee, Okla. The sale included substations in 13 Arkansas towns. The concern will be reorganized. This is the only industry of this kind in the state.

The Japanese Minister to China formally protested the concession given to the Standard Oil Co. by China. Japan had made two previous formal requests for the same concession and was turned down.

Sir Marcus Samuel has been talking about establishing one of the largest refineries in the world near the Suez Canal. The Royal Dutch holds very important agreements with the Egyptian Government. The Anglo-Egyptian Oil Co., a subsidiary of the Royal Dutch Shell, recently brought in a large well at Hurgade, and it is expected that there will be a substantial increase in Egyptian production.

The Crystal Oil Co. lost 6,000 barrels of oil in earthen storage in the Healdton Field following the recent cloudburst in the area.

p. 8. Recent Deaths. Herman Frasch, aged 62 years, died in Paris, France, Friday May 1, 1914. His work on chemical research and invention for the Standard Oil Co. is well known. He was the first man to treat Canadian oil successfully. In 1895 he started the Empire Oil Co. at Petrolia, Ontario, Canada, removing the high sulphur content of the Canadian oil. He did the same with Ohio oil. His greatest achievement was the invention used in the mining of sulphur at Sulphur, La., using superheated steam to melt the sulphur, and running the sulphur water to the surface under high pressure. This invention brought great wealth to Mr. Frasch. Of late years, he lived in New York City, but spent much of his time abroad.

p. 12, 14, 16-17. Oklahoma. In Creek County, the Cushing Field is mostly being shut in, even though drilling continues. The Bartlesville sand alone has 69,600 bopd, and the maximum amount taken was 55,411 by all parties. Many tanks and lines are being erected. Some have even drilled deeper than the Bartlesville sand, but have not found much in the Tucker, Burgess, and Mississippi lime. The deepest well drilled was at 3,210 feet, by T. B. Slick, and was a dry hole for these lower beds, in the SE-1/4-SE 1.4-Sec. 2-18N-7E. The Mississippi lime was at 3,154 feet. (Several pages of details given).

In Kiowa County, in the Gotebo Pool, W. B. Badgett completed a test one-half mile south of town, for 20 bopd in the 440-foot sand, and is being pumped.

In Lincoln County, the well of C. N. Haskell and the Scioto Oil Co. in the NE-1/4-Sec. 8-14N-7E, south of Stroud, was at 2,835 feet, and the casing collapsed, and the well was junked. This cost $23,000, and the well took more than a year to drill.

In Garvin County, the Garvin County Oil & Gas Co. test on the Cox Farm in Sec. 18-2N-3E, near Wynnewood, had a showing of oil at 1,400 feet.

In Coal County, J. R. Greenlees is drilling on the Dunn Ranch 1.5 miles northeast of Clarita, and is at 800 feet. The contractor is W. F. Young.

In Latimer County, Wheeler & Co. are at 200 feet in the SE-1/4-SW 1/4 Sec. 8-5N-18E, about 6 miles west of Wilburton, on the Kemp Farm.

In Pontotoc County, the Allen Pool is progressing slowly. H. U. Bartlett & Co. are pumping their well on the Means Farm in Sec. 13-5N-8E, rated at 10 bopd. The Jones Farm Oil Co. has a rainbow of oil at 300 feet in Sec. 24-5N-8E, and is now at 404 feet.

p. 29. Oklahoma Natural Gas Co. Election. The Oklahoma Natural Gas Co. held its annual election on Thursday at Pittsburgh, Pa., and all of the oil officials were re-elected. Glenn T. Braden is president and general manager, assuming the duties of Dennis Hastings who recently died. J. H. Evans is vice-president, R. H. Bartlett is secretary-treasurer, and R. E. Alexander is assistant general manager.

p. 29. McEwen Manufacturing Company Had a Prosperous Year. At the annual meeting in Tulsa last Monday, the following officers were elected: J. H. McEwen, president; G. T. Braden, first vice-president; J. H. Evans, second vice-president; William Sadewasser, secretary; and F. M. Grove, treasurer. The Tulsa plant manufactures the McEwen gas engine, the McEwen pump, and the McEwen pumping jack, and a general line of lease supplies.

Vol. 12, No. 49, May 14, 1914, p. 4. Personal Mention. A. D. Longfellow, of Bradford, Pa., is in Tulsa. He is interested in a test now being drilled near Madill.

John Dyson, of Wichita Falls, is in Tulsa. He drilled the first well in the Cleveland Pool, Oklahoma.

Glenn T. Braden has been elected to the directorate of the Central National Bank of Tulsa, replacing Dennis Hastings who died.

Frank A. Gillespie, one of the largest individual producers in the Bird Creek Field, left Sunday for New York City to take a ship for Glasgow, Scotland. He expects to be gone about 4 weeks. Persistent rumors say that he might dispose of a part of his holdings. He was accompanied by John S. McCarty, a well-known Mid-Continent producer.

p. 4-6. Noted in Passing. The test well of the People's Gas Company on the Geary Farm near McDonald, Washington Co., Pa., has reached a depth of 6,925 feet, a greater depth than has ever been attained with cable tools.

At Pine Bluff, Arkansas, while drilling for water for the Arkansas Packing Co., drillers got a good showing of oil at 2,000 feet. There will probably be a thorough test for oil in the area.

According to the Daily Ardmorite, Hindman & Abbott of Houston probably will build a pipe line from the Healdton Pool to Ardmore, and put in a skimming plant.

It is reported that oil has been discovered near Morrison, North Dakota, at a depth of 1,500 feet, in the Dakota sandstone.

The Ardmore City Gas Co. has connected its Healdton line into the main line, and Ardmore is well supplied with gas. The rate is 12-1/2 cents per thousand for those who use more than 200,000 cubic feet a month.

The Standard Oil Co. of New York earned $75,000,000 in 1913, and had net earnings of $15,312,985.

p. 6. Recent Deaths. Frederick P. Kahle, aged 91 years, died at his home in Lima, Ohio, Sunday May 2, 1914, from infirmities of old age. He was born in Clarion Co., Pa., and later moved with his parents to Jefferson Co., Pa., where his father founded the town of Kahletown. He was one of the early teamsters and oil operators in Venango County, Pa. For a number of years he lived at Franklin, Pa., moving to Lima, Ohio in 1907. He is survived by his widow and 10 children; Benton T. Kahle, dealer in oil well supplies; Frederick L. Kahle, attorney, both from Pittsburgh, Pa.; Mrs. Minnie Henderson, Dr. Raymond D. Kahle, and Phillip A. Kahle, attorney, all from Lima, Ohio; Dr. Albert Wesley Kahle and Francis U. Kahle

of Buffalo, N.Y.; Dr. Charles Edgar Kahle and Harry V. Kahle, of Oklahoma City, Okla.; Clarence Kahle of Bartlesville, Okla.; and Dr. William A. Kahle, who was a surgeon in the U.S. Army and who was killed in the Spanish-American War near Havana, Cuba. The body was taken to Franklin, Pa., for burial.

p. 8, 10, 12, 14. Oklahoma. approximately 236,500 bopd production is now in Kansas and Oklahoma, and it is the largest ever registered. In the Cushing Field the production is up to 82,500 bopd, and at Healdton it is 25,000 bopd, which is more than what can be handled, and there are still more wells being drilled.

In Bryan County, a new location has been made near Bennington by Disney, Nelson & Co. in the center of the west line of the SW1/4-Sec. 23-6S-12E, for a 2,000 foot hole.

In LeFlore County, 3 miles east of Poteau, the LeFlore Gas & Electric Co. completed a 5,000,000 cfgpd well, and the gas will be piped 30 miles to Ft. Smith.

In Stephens County, C. N. Haskell and associates reported a showing of crude oil at 800 feet in Sec. 33-1S-4W, near Alma. Many wells are drilling in the county.

In Muskogee County, a wildcat test has struck oil in the SE-1/4-NE-1/4-Sec. 21-14N-16E about 4 miles east of Boynton, at 1,540 feet, with oil slopping over the casing. A.A. Cameron & Co. is drilling the well on the Della Roberts Farm. Tankage is being erected, and considerable acreage is being leased. In the past 3 months some small wells have been completed near Boynton.

p. 29-30. The Dutch-Shell Company in America. Since dissolution of the Standard Oil Combination in December 1911, the royal Dutch-Shell Combine has invested more than $25,000,000 in United States oil enterprises, especially in California, Oklahoma, and Texas, in addition to Mexico. British shipping interests have secured control of the General Petroleum Co. and the Union Oil Co. which control about one-third of California's oil.

The Rothschilds and the Deutsche Bank are the backers of the Royal Dutch-Shell Combine. A bill is now before the German Reichstag for a State monopoly of the oil business in Germany, to take over the Standard Oil Co. interests in Germany. Geologists today claim that there is more oil in the ground than what was ever thought of a few years ago, and many new fields will be opened. The Standard is now opening China, and the separate new Standard companies have reaped large profits. Reports of new oil concessions and discoveries are occurring almost daily. As one expert writes, this is the "Age of Oil". Oil is replacing coal. The internal combustion engine and the use of fuel oil have become a necessity in automobiles, locomotives, and ships, including the navies of the world. Every corner of the world will be exploited for petroleum.

The United States produces two-thirds of the world's oil, so the United States is fortunate in this respect. England has to import oil for its domestic use and for its navy, and the English oil companies will be supported by their Government. Other countries without oil will have to do the same. Is there any danger of an international oil war? Would there be radical fluctuations in profits and stocks? The most formidable rival of the Standard Oil Co. throughout the world is the Royal Dutch-Shell interests, about which American investors know very little.

In the United States, at present, the Royal Dutch-Shell controls about 25,000 to 50,000 barrels of oil per day production or 12,500,000 or more barrels per year. Although the group had been quietly acquiring producing properties in Oklahoma and Texas for some time through the Roxana Petroleum Co., it was not until last year that much interest was evidenced when the combine formed the American Gasoline Co. on the Pacific Coast. This new concern was to provide fuel for their ships on return voyages. However, the combine has announced their intention to build refineries and to extend their markets. The combine established gasoline stations along the Pacific Coast, and imported 3,000,000 gallons of gasoline from Roumania last June at San Francisco. The production acquired in California amounted to 8% of the total production of California. They bought a British concern, the California oilfields, Ltd. for $13,000,000, and they are now investing $5,000,000 in pipe lines and a refinery. They have options on leases amounting to $3,000,000 also. They now have 7,010 acres of leases, of which 4,960 acres are oil bearing. In

1912, the production was 4,248,849 barrels, with sales of $2,000,000. The old company did no refining. The Royal Dutch-Shell has a contract with the General Petroleum Co. for 6,000 bopd or 7,000,000 barrels a year.

In Oklahoma, about 12% of the total production is foreign owned, mostly by the Roxana Petroleum Co., with an output of about 7,000,000 barrels a year.

In Texas, they have about 1,000,000 barrels a year production.

The production of the combine in the world is unknown, and last year the U.S. Geological Survey estimated that Shell produced 6,150,000 barrels of oil in the United States in 1913. The company has gasoline stations in San Francisco, Los Angeles, Seattle, and Montreal, Canada. There is talk of building a pipe line from Oklahoma and Texas to the Gulf Coast.

In Mexico, the combine began in 1913, through La Corona Oil Co., which was formed at the Hague in November 1912, with $2,000,000 capital, all held by the Bataafeche Petroleum Co. They held a long term lease covering 20,000 acres, and recently a well was brought in at more than 150,000 bopd, but it is shut back to about 25,000 bopd. Many of the big Mexican gushers have maintained this high flow. The Mexican Petroleum Co's Casiano well has been flowing at 22,000 bopd since September 1910. With this one well, Shell would have an annual output of 7,000,000 barrels. The total production of the combine was about 27,000,000 barrels in 1913 in the world, and 22,000,000 barrels of this was from the United States and Mexico. There will be a tremendous increase in 1914.

p. 43, 45. Oklahoma Wells. About 23 rank wildcat wells were completed this week in Marshall, Jefferson, Pontotoc, Cotton, Payne, Cherokee, Kiowa, Comanche, and Miscellaneous Counties in Oklahoma. (Details given). About 224 wildcats and stepouts in southern Oklahoma and other wildcat areas were being drilled this week, in Carter, Love, Greer, Murray, Garvin, Grady, Caddo, Johnston, Garfield, Cotton, Jackson, Beckham, Coal, Oklahoma, Cherokee, Seminole, Lincoln, Choctaw, Pittsburg, Atoka, Kiowa, Logan, Hughes, Jefferson, Marshall, Stephens, Comanche, Tillman, Latimer, Sequoyah, LeFlore, Pottawatomie, Pushmataha, Mayes, and Pontotoc counties, including 16 miscellaneous wells in other areas. (Details given).

In Atoka County, for example, is listed:
Sec. 16-3S-10E, J. M. Givens et al No. 1
Sec. 25-1N-14E, Olive Oil Co. No. 2
Sec. 8-1S-14E, Olive Oil Co. No. 3
Sec. 33-1N-14E, Olive Oil Co. No. 1
Sec. 28-1N-14E, Redwood Oil Co. No. 1
Sec. 33-1N-14E, Garatoka Oil Co. No. 1
Sec. 20-3S-14E, Priestley et al No. 1 Kerr Ranch
Sec. 7-2S-10E, Conewango Oil Co. No. 1 Danehour
Sec. 13-3S-10E, Oklatoka Oil Co. No. 1

In Coal County:
Sec. 31-1S-10E, Velvet Oil Co. No. 1 Paschel
Sec. 31-1S-10E, Swimmer et al No. 1
Sec. 17-2N-11E, Clarion-Brookville Oil & Gas Co. No. 1 Markham

Vol. 12, No. 50, May 21, 1914, p. 8. Recent Deaths. A. T. Smith, president of the Smith-Coleman Oil Co. of Kingston, Oklahoma, died at Sherman, Texas, Sunday May 17, 1914, from apoplexy. The body was buried at Cooksville, Texas.

Milton J. Thompson, aged 59 years, died at his home in Chanute, Kansas, Sunday, April 26, 1914, from a sudden stroke of apoplexy. He was born in Butler Co., Pa., and was engaged in the oil well contracting business until 10 years ago. He was buried in Chanute, Kansas. He is survived by his widow and 7 children; Mrs. Willis McCall, Scenery Hill, Pa.; Mrs. A. B. Painter, New Brighton, Pa.; Mrs. Roy McFarland, Chanute, Kansas; Ross and Percy of Oklahoma; and Miss Illa and Miss Blair, at home.

p. 10, 12, 14. Oklahoma. In Oklahoma and Kansas, the daily production this week is 235,500 bopd. A number of important wells were completed. In the Cushing Pool, at the end of this week, the production from the Wheeler, Layton, and Bartlesville sands was 106,738 bopd, with 95,738 bopd from the Bartlesville. Five wells have been completed since the report was made, increasing the total

production to 115,000 bopd in the Cushing Field. There is considerable excitement at Cushing with the report that the Charlton Oil Co. has an oil well in the NW-1/4-SE-1/4-SE-1/4-Sec. 23-18N-4E, on the Broyles farm, northwest of Cushing, at 1,859 feet, in the Layton sand. This will add at least 6 miles to the untested territory of the Cushing area, or at least to the Layton sand.

At Healdton, the production is now up to 35,000 bopd, with 300,000 barrels in storage. Oil is now being produced from 5 different horizons. The deepest pay is at 1,100 feet, with other pays at 450, 700, 800, and 900 feet.

In Muskogee County, at Haskell, Anders & Corey have a 40 bopd pumper in Sec. 21-16N-15E, one-half mile south of the discovery well in Sec. 16-16N-15E. There are 3 producing wells in the Haskell Field, the third being in Sec. 29. In Sec. 28 there is a small gas well. Eight rigs are now operating here.

In Pontotoc County, in the Allen Pool, there are 5 oil wells, one gas well, and 6 dry holes. The discovery well by Kurtz & Co. on the Robinson Farm in Sec. 23-5N-8E was completed last November 1913 at 763 feet for 25 bopd, and is now being pumped. Within two months, a dozen wells were drilling, within a radius of 3 miles from Allen. The last of the first 12 wells was recently completed by the Gibson Oil Co. near the Railroad Y in Sec. 25-5N-8E, at 840 feet, for 25 bopd. Nearly all of the oil has been found in the 800-foot sand. The deepest hole was 1,300 feet deep, which was dry. The wells completed after the discovery well were: Justice Farm Sec. 23-5N-8E; Daugherty Farm Sec. 26-5N-8E; Means Farm Sec. 13-5N-8E; Gibson Well Sec. 25-5N-8E. The Jones Farm test in Sec. 24-5N-8E will probably produce 5 bopd. Dry holes were completed on the Stewart Farm Sec. 23-5N-8E, the Perkins Farm Sec. 18-5N-8E, on the Doneghy Farm Sec. 30-5N-9E the deepest hole at 1,300 feet; and in Secs. 17 and 28-5N-9E, the latter in Hughes County.

In Jefferson County, the first producer is the Twin State Oil Co. No. 1 Bess Tucker in Sec. 36-3S-4W, with 50 bopd at 1,160 feet. Many companies are drilling near there. Near Asphaltum, the Nippon Oil Co. is at 500 feet in Sec. 26-3S-5W, on a 2,000 foot contract with Y. Higashi, a Japanese oil driller.

In LeFlore County, the LeFlore County Gas & Electric Co. No. 1 Albert Billy was completed in Sec. 27-7N-26E for a gas well, and it is the fourth gas well to be completed by the company. It is 5,000,000 cfgpd, and it is the most easterly gas production in Oklahoma. The gas is piped 30 miles to Fort Smith, Arkansas. Near Panama, unknown parties are drilling on the Hickman land. The Bokoshe Oil & Gas Co. is drilling at 2,000 feet, near Bokoshe.

In Johnston County, Robert Galbreath is at 1,300 feet, and is preparing to start another. These are the first wells to be drilled in this section of the county.

In Wagoner County, especially north of town, some shallow wells have been completed from 600 to 700 feet deep. In Sec. 30-18N-18E, there are 9 producing pumpers and 2 gas wells. In the NE-1/4 Sec. 36-18N-17E, there is one small oil well. In the NW-1/4-Sec. 31-18N-18E there is a small oil well. In the NW-1/4-Sec. 29-18N-18E, there is a 5,000,000 cfgpd gas well. In Sec. 32-18N-18E, there is a small oil pumper. A well was completed in Sec. 22-18N-18E and another small oil well was completed in Sec. 19-18N-18E. Some good showings have been found in Sec. 21-18N-18E. In Sec. 9-17N-17E, a small oil pumper was completed.

p. 14, 16, 18. North Texas. Drilling continues in all of the fields, with wildcats being drilled within a 100 mile radius of Wichita Falls, in 10 counties. About 1,763 wells have been drilled, with total production of 30,031 bopd, including 48 wells shut in. This does not include dry holes or gas wells. One ton of coal is equal to 17,000 to 19,000 British Thermal Units, which equals 16,000 cubic feet of gas or 3.5 barrels of Electra light oil. It costs about $1,500 to drill a shallow well, and about $6,000 to $8,000 to drill to 2,000 feet. Fishing jobs can run the cost up to $20,000. At Electra, the wells are completed at 600, 1,200, and 1,800 to 2,000 feet. In the Petrolia Pool, oil is produced at 265 feet of 32.8 gravity; at 350 feet of 35.9 gravity; and at 1,750 feet of 44.9 gravity.

p. 18. East Texas and Louisiana. The Caddo operations continue to expand with companies going deeper. Fourteen wells were completed in the Caddo Pool and nine in the DeSoto Pool. The Caddo Pool produced 22,869 bopd and the DeSoto

Field produced about 6,119 bopd.

p. 23. Death of C. G. Kiskaddon. Charles G. Kiskaddon, aged 45 years, died in his apartment in Hotel Tulsa Tuesday May 19, 1914, of a heart attack. He came to Tulsa from Pittsburgh, Pa. about a year ago, joining his brothers, Harry and Fred, in the oil business in Oklahoma. Another brother George is a lawyer in Oklahoma City. His mother resides in Grove City, Pa. He was unmarried.

p. 24. Old Well, Colorado. The United Oil Co. No. 49 well was drilled from Oct. 13, 1890 to Nov. 22, 1890, located on the outskirts of Florence, Colorado, and completed at 1,955 feet for 200 bopd. It is just south of the United refinery. This was the average depth of the producing wells in the field. Dr. F. E. Knoch provided the information on the well. He is the superintendent of United. The pay zone is in shale. The producing rates continued for 6 years, starting on Nov. 26, 1890 until July 31, 1896, with total production of 401,685 barrels. At the end of 1896, the rate fell off to 80 barrels a day. In July, 1907, the well was almost nothing, and the well was cleaned and deepened to 2,480 feet in September 1907. In August 1913, the well was shut down again, and cleaned and deepened, and in December 1913 it was abandoned with collapsed casing. The total production was 619,834 barrels. The derrick was moved 6 feet over to the southwest, and a new hole was drilled to 2,515 feet, with oil at 2,400 feet, and since last March 1914 the well has produced 105 bopd. Prof. Knoch believes that this is the largest total production of any pumping well in the world, and the end is not in sight.

p. 26. Rock Salt in New Mexico. The Carlsbad Oil & Gas Co. has encountered large deposits of salt a few miles east of Carlsbad, at 500 to 820 feet, changing to a mixture of lime and salt at 830 feet, and striking another salt bed at 950 to 1,000 feet. There were indications of potassium nitrate at several depths, and this is $40.00 a ton and is imported from Europe, and is more valuable than oil.

Vol. 12, No. 51, May 28, 1914, p. 6. Once Owned It All. John H. Galey recently visited Tulsa, after an absence of 20 years. At one time the firm of Guffey & Galey had a lease on all of the acreage between the Glenn Pool and the Kansas line, and had 1,800,000 acres under lease in Kansas. The Kansas lease was transferred to the Forest Oil Co., and they transferred it to the Prairie Oil & Gas Co. The other leases were given up.

p. 6, 8. Personal Mention. F. C. Henderson, of Nowata, Okla., president of the Superior Oil & Gas Co., has opened an office in Tulsa.

D. J. Kelly, of New York City, president of the Manhattan Oil Co., was in Tulsa over Sunday.

George F. Getty, president of the Minnehoma Oil Co., is in Tulsa. He gave testimony before the Government Pipe Line Commission.

D. W. O'Hern, former State Geologist of Oklahoma, was in Tulsa. He located the new well west of Cushing.

John J. Crawford, of Parkersburg, W. Va., recently completed a deep test in the cushing Field to 3,577 feet.

p. 10, 12, 14. Oklahoma. Production in Oklahoma and Kansas this week is estimated at 258,000 bopd. Healdton is up to 35,000 bopd.

In Stephens County, near Loco, the Washita Oil & Gas Co. had a showing of oil at 1,030-1,042 feet in their No. 2 Well in the NE-1/4-Sec. 10-3S-5W. The well is now at 1,060 feet. The Diamond Oil & Gas Co. had a show of oil at 250 feet, and 4,000,000 cfgpd at 415 feet in Sec. 15-3S-5W. The well is at 560 feet now.

In Comanche County, east of Lawton, O'Hara & Hall struck some oil in a sand at 765-775 feet and 777-822 feet in the NW 1/4-Sec. 32-2N-10W.

In Pontotoc County, in the Allen Pool, Shaffer & Co. got 2,000,000 cfgpd at 776 feet in the SW 1/4-Sec. 27-5N-8E. Bradstreet & Co. in the NW 1/4-NW 1/4-Sec. 25-5N-8E has about 25 bopd at 910 feet.

p. 29-30. Government Commission's Hearings. Gore Resolution. Resolved that the Secretary of the Navy and the Secretary of the Interior are hereby authorized and directed to investigate and report as to the feasibility, expense, and

desirability of the Government constructing, maintaining, and operating a pipe line for the transportation of oil from the Mid-Continent oil field in Oklahoma to some convenient port on the Gulf of Mexico, together with a view to providing and conserving at all times an adequate and available supply of oil for the use of the Navy, and other purposes. Adopted January 13, 1914.

Hearings on the above resolution started in Kansas, and are now being held in Oklahoma to June, and then will go to Texas, ending at Baton Rouge, La. The hearings center around whether the Government shall engage in the oil business or not. Most people did not object to a pipe line, but they did not like the idea of the Government producing and refining oil, or in any way getting into the oil business.

Vol. 12, No. 52, June 4, 1914, p. 6. The Oil Fields of Persia. The British Admiralty will obtain control of the Anglo Persian Oil Co., if Parliament subscribes $110,000,000 of new capital. The company has an oil concession for nearly the whole of Persia, on which it gets 16 percent net profits. The British Admiralty has for some time been laying plans for a great supply of oil for fuel for warships in time of war. The Secretary of the Colonies sent a letter last February to all dominions, colonies, and protectorates, stating that a majority of the directors of all oil companies working deposits must be British, giving the Crown the right to all oil in time of war. The Admiralty would take over these fields and operate them, and no oil would be exported for domestic use. Canada refused to honor the bill.

p. 12, 14, 16. Oklahoma. At the end of the week, the production in Kansas and Oklahoma was 264,500 bopd, with 6,750 being in Kansas, and no end in site for drilling new wells.

In Kay County, near Blackwell, Jones & Buehl operating under the name of the Hercules Oil & Gas Co. have an oil well on the Swenson Farm, NE-Sec. 32-29N-1E, for 80 bopd at 3,445-3,451 feet. The Blackwell Field has so far only produced gas, and the field is about 10 miles long and 2 miles wide, and produces about 60,000,000 cfgpd. This is the first oil well. The sand may be Bartlesville, but some think that it is the Burgess and others think it is the lime.

In Carter County, in the Healdton Pool, 212 wells have been completed since last October, and 60 wells are drilling. The pool is now 3.5 miles long NW-SE, and 2.5 miles wide. Production is at least 25,000 bopd.

In Kiowa County, in the Gotebo Field, small wells continue to be found. The Nickelson Oil Co. on the Thiesen Farm has a showing in the Rogers sand at 460-484 feet in the extreme northern end of the field. The Thomas Hollis Co. on the Voth Farm has completed No. 9 for a stripper well in Sec. 33-7N-16W. Oil from this lease is being shipped to a refinery in Texas.

In Bryan County, the Bennington Oil & Gas Co. has started to drill a well near Bennington in Sec. 28-6S-12E. Two wells have been drilled in this area, which proved barren, but there were reported showings at 800 feet.

Many wildcats and new wells are being drilled in Comanche, Marshall, Jefferson, Stephens, Cherokee, Sequoyah, Oklahoma, and other counties. (Details given).

p. 24-25. Mr. Galey Visits Tulsa. Red Fork Field, 1889. John H. Galey, age 74 years, visited Tulsa after 20 years, when Tulsa had a population of 1,000, with some one-story shacks. About 1890, Guffey & Galey had 1.8 million acres of land leased in Kansas, and most of the land north of the Glenn Pool to the Kansas border. At Red Fork, they drilled some small shallow wells in 1888 or 1889, getting oil at 400 feet, with 200 bopd wells falling off to 5 or 6 bopd within a month. It cost more to ship in machinery than what could be made from selling the oil, so eventually they gave up their leases, selling the Kansas leases to the Prairie Oil & Gas Co. These wells were some of the first ones drilled in Indian Territory. They drilled the Thayer Pool and Neodesha Pool in Kansas, but the wells only made about 15 to 20 bopd, which was not enough to meet expenses. After drilling 15 or 20 producing wells, they shut down.

In 1901 when Spindletop came in in Texas, Guffey & Galey went there and they bought the famous wildcat or Lucas discovery well for $1,750,000 when it

was making better than 100,000 bopd. They drilled more wells and had production up to 300,000 bopd. The 700 acres on Spindletop Hill could have produced more than 2,500,000 bopd if there was enough storage, and if the field was developed properly. With overproduction, wasted gas, and fire, the field was ruined. Oil was 3 cents a barrel. Guffey & Galey then went to West Virginia and Indiana, and in 1905 to Gallup, New Mexico, Wyoming, and Utah, and finally to Mexico, where Mr. Galey has remained. Even with a war going on in Mexico, the exports have been about 1,000,000 barrels a month, and when peace is restored, the production should go up to 2,500,000 barrels a month, and when better facilities are built, could go to 4,000,000 barrels a month. There is a great prejudice against Americans, and they are insulted on the streets, and the American flag is burned, and the consulate office is frequently stoned. The property and lives of all other foreigners are safe, but an American is never safe and his property is considered fair loot to both the Federals and the Constitutionalists. As long as the pacifist policy of President Wilson is maintained, the more intense will be the feelings against Americans.

Mr. Galey departed for Pennsylvania, and will spend some time in Pittsburgh. His first stop will be Oil city where he first got into the oil game. He will return to Mexico when order is restored.

p. 29-30. Gas. In Oklahoma for the month of May, about 351,650,000 cfgpd of new gas was discovered, of which 164,750,000 was in the Creek Nation. In the Healdton Pool, the Coline Oil Co. No. 1 in Sec. 6-4S-3W was completed for about 35,000,000 cfgpd. In LeFlore County, two wells came in for a total of 7,000,000 cfgpd.

p. 30. Gas for New Orleans. The Texas Company has purchased the 50 year franchise of the Mississippi Valley Oil & Gas Co. to pipe natural gas to New Orleans from the Caddo Field 300 miles away, at 45 cents a thousand. The Busch-Everett interests of St. Louis, Mo. obtained the franchise in 1909 and organized the Mississippi Valley Oil & Gas co., but never completed the contract, which was signed on March 31, 1909.

p. 32. Conditions in the Healdton Pool. by A. J. Hazlett. The discovery well was completed on August 6, 1913. On May 29, 1914, 212 producing wells were completed, and 73 were being drilled or on location. The production is about 40,000 bopd according to the producers, and 25,000 bopd according to the pipe-line people. The only pipe line into the pool is that of the Magnolia Pipe Line Co., and they are taking 8,000 bopd and will soon take 12,000 bopd. There are about 200,000 barrels in tanks, and perhaps 200,000 in earthen dams, and at least 100,000 barrels has gone down Whiskey Creek to Walnut Bayou or a branch of Mud Creek in Jefferson County, with the heavy rains. Farmers downstream set the oil on fire so that it will not hurt their crops. So far, no deep tests have been drilled, but deep tests a few miles from the pool reveal another sand at 1,700 feet. Geologists figure that 3 sands will be found below the 1,000-foot producing sand of the Healdton Field, one at 1,700-1,780 feet, another at 2,400-2,520 feet, and a third at 3,200-3,300 feet on top of the Mississippi lime. The district has been a puzzle to geologists, who condemned the pool area before the discovery.

A. T. McGhee, a local geologist in Ardmore who claims credit for the location of the pool, says that there are 6 or 7 sands in the district, but that there is only one true Healdton sand from 900 to 1,200 feet, which is steeply dipping in places, and is on a broad anticline 250 miles east-west by 100 miles north-south, with the Healdton Pool a little west of center. The Healdton is on edge in some places and is cut by a post Silurian unconformity. He agrees that there are probably 3 deeper sands, and that many other pools will be discovered. There are about 20 wildcats drilling within a radius of 10 miles from the pool, but there are many dry holes around the pool, and the pool may be delineated. Amateurs and old-timers are operating in the area. The old-timers are patient and do not argue with the pipe line people and do not overproduce. The earthen dams are mostly owned by the amateurs. The pool is 3.5 by 2.5 miles, with the main axis northwesterly.

The average cost to drill a 1,000-ft. well is $5,000. There is a floating

population of 1,200 workers, about 800 of whom live in Ragtown in the field, living in tents and one-room shacks. The camp is infested with the usual undesirables, and officer A. G. Chapman has to keep the peace. About 100,000,000 cfgpd is escaping in the air and there is a real danger of some drunk lighting a match in the wrong place. Three years ago, unallotted lands sold for $3.50 to $12.50 an acre. About 20% of the producing area are departmental leases. Several Indians will receive royalties later. The Dundee Oil Co. has a suite of offices in Ardmore like 26 Broadway in New York City. Skelly & Sankey, contractors, have 8 rigs working, and their camp is east of Ragtown, on a hill, with shade and water, bunk houses, dining hall, store, and commissary department, and the men are treated well, the firm having no trouble in finding good men.

A log of one of the first wells drilled gives some idea of the formations; 163-165 feet, sand, showing of oil; 290-325 feet, sand, showing of oil; 580-607 feet, sand, some oil and strong gas; 700-725 feet, sand, big gas, one well making 33,000,000 cfgpd; 829-862 feet, oil pay; 880-900 feet, oil pay; 912-988 feet, oil pay. In some tests oil has been found at 1,180 feet.

p. 34-35. Serious Condition of Oklahoma Field. In Oklahoma, almost 1,200 wells a month are being drilled. There is an over supply of 75,000 bopd beyond market demand. There is no control on drilling, and there is a danger of many new pools being discovered. Mexico and California have overproduction also. There is room for at least 100,000 new wells to be drilled in Oklahoma. In Canada, the Government helps the producer, but in the United States the opposite is true. England cannot understand this process. The U.S. Navy would like to engage in the oil business instead of letting the companies supply the Navy with our own American oil. The English could not understand the fanatical opposition by the U.S. Government to everything that pertains vitally to the prosperity of the United States. No such opposition to business in England could last.

Crude oil is one of the most valuable resources of the world today. More than 500 items are made from it, giving us light, heat, power, and lubrication. Oklahoma and California alone produce one-half of the world's supply. Three things seem to be coming about (1) the separation of pipe line operators from producers, (2) the declaration of pipe lines as common carriers, and (3) the fixing of the price of crude oil. With more development in Roumania, Sumatra, Borneo, and Mesopotamia, the overproduction in the United States has no outlet. Some producers have asked the Government to set prices on various grades or gravity of oil, but this has never worked very well. The Government instead has almost taxed the producer to death, due to misrepresentation in Washington.

Vol. 13, No. 1, June 11, 1914, p. 1-2. Mid-Continent Production. The estimated production of the Mid-Continent at the close of last week was 338,000 bopd, with Oklahoma and Kansas at 280,000 bopd, Electra 25,000 bopd, and Caddo 33,000 bopd. Cushing is at 137,250 bopd, with 125,250 bopd credited to the Bartlesville sand.

p. 1. Mexico. Great Britain, Holland, and the United States have agreed to protect the oil interests in Mexico. The Constitutionalists at Tampico have set a tax of 20 cents a ton on oil, following the Madero Administration, instead of 75 cents a ton set by the latest Huerta decree.

p. 6. Noted in Passing. Interested parties in Muskogee have received a telegram from Venezuela that a large oil well has been completed at a shallow depth by the Carribean Oil Co. on the east shore of Lake Maricabo. It is said to compare with some of the Mexican gushers in size and grade of oil. A small party of Tulsa and Muskogee people will visit the area.

p. 8, 10, 12. Oklahoma. In Kay County, north of Blackwell, the Jones & Buehl No. 1 Swenson in Sec. 32-29N-1E is making 350 bopd at 3,445-3,457 feet. The company has a 40,000 acre block, with 2,800 acres purchased in fee.

In Payne County, 3 miles northeast of Cushing, the Fortuna Oil Co. struck 10,000,000 cfgpd at 3,030 feet in Sec. 25-18N-5E, in what is thought to be the Bartlesville sand. The Charlton Oil Co., Broyles, in SE-23-18N-4E is at 2,000 feet.

In Marshall County, there are 3 producing wells in the Madill Pool or

Arbuckle Pool, and California parties are interested in this pool, and would like to drill more wells. A report from Kingston is that the Smith-Coleman Co. No. 2 well about 6 miles from Woodville was completed for 3,000,000 cfgpd at 506 feet in Sec. 32-7S-6E. This is the second gas well to be finished in that locality. The Coleman O & G Co. No. 1 gas well was completed several months ago and is spraying oil. The Coleman Oil & Gas Co. has 5 rigs working in the area.

In McIntosh County, near Checotah, the Green River Oil & Gas Co. No. 2 was completed in Sec. 32-11N-17E at 2,065 feet for a 35,000,000 cfgpd gas well. This is the second gas well to be completed by the company, and both are shut in.

In Bryan County, Truman, Foltz & Co. are drilling at 405 feet near Bennington. Two wells have been drilled in this locality, and were dry.

In Johnston County, near Bromide, Robert Galbreath has started operations after being shut down at 1,500 feet.

In Beckham County, La Vista Oil & Gas Co. has made a location in Sec. 5-8N-25W.

p. 29. Use of Gas Pumps. Gas pumps are as old as the gas game itself, and every effort has been made to keep them out of the fields. They drain the land in a short time, but some companies still use them. Several suits have been filed in District Court at Bartlesville against H. F. Tyler and the Dewey Portland Cement Co. of Dewey, Washington County, for use of the pumps in the Dewey Field.

p. 42, 44-45. Oklahoma. Wells. About 93 wells were completed during May in Carter, Lincoln, Kiowa, Marshall, Pontotoc, LeFlore, and miscellaneous Counties in Oklahoma, with 74 of them in Carter County. In LeFlore County, the LeFlore County Gas & Electric Co. No. 3 Billy and No. 4 Billy in Sec. 27-7N-26E were gas wells. About 229 wells are drilling in southern Oklahoma and miscellaneous counties in Carter, Love, Greer, Garvin, Grady, Caddo, Johnston, Garfield, Cotton, Jackson, Beckham, Coal, Oklahoma, Cherokee, Seminole, Choctaw, Pittsburg, Atoka, Logan, Delaware, Hughes, Jefferson, Marshall, Stephens, Comanche, Tillman, Latimer, LeFlore, Pottawatomie, Pushmataha, Mayes, Bryan, Kiowa, Pontotoc, and Sequoyah counties. In Atoka County, the Lavaca Oil Co. No. 1 rig is on Sec. 18-3S-11E. In Tillman County, the North Fork Oil Co. No. 1 is drilling in Sec. 25-4S-18W.

In Oklahoma in May, 1,043 wells were completed for 102,727 bopd new production, in addition to 70 new gas wells and 178 dry holes, and 1,131 new wells were drilling or erected.

In North Texas, there were 70 wells completed for 2,116 bopd new production, and 127 wells drilling or erected in May, with 25 dry holes and 1 gas well.

In Northern Louisiana, there were 62 wells completed for 12,932 bopd new production, with 13 dry holes and 7 gas wells.

p. 47. Osage Indian Reservation. In the past 13 years, Osage County has produced about 64,000,000 barrels of oil. For fiscal 1913-1914 ending June 30, 1914, the productions was about 11,000,000 barrels. Since the beginning under the Foster lease, the Indians have been paid oil royalties of $1,174,696.64 and gas royalties of $5,508.20. From March 16, 1896 to June 30, 1905, the oil royalty was one-tenth, and the gas royalty was $50 a year per well from which gas was used. Since July 1, 1905, the oil royalties have been one-eighth, and the gas $100 a well. Nearly all of the production has come from about 6 spots. The Boston Pool is the richest in Sec. 1-21N-7E, where 12 wells have been drilled on a 160-acre tract, and each well produced from 1,500 to 5,000 bopd initial production. The western half of the country has not been drilled. Near Grayhorse there is a well-defined anticline. Until recently, all of the operations have been conducted by the Indian Territory Illuminating Oil Co. of the Foster lease, with its subleases. On Sept. 29, 1913, the Department of the Interior leased 123 subdividions of 10,541 acres total to the highest bidder, on a one-sixth royalty for oil and gas. This proved to be a lemon.

From March 16, 1906, to Dec. 31, 1913, there were 14,770 wells drilled in the Osage Nation, of which 10,102 were oil wells, 693 gas wells, and 3,975 dry holes.

If the U.S. Government wants to supply the Navy with oil, it is possible that they will build a pipe line to the Gulf Coast from Osage County, and they

may not release the Foster lease to the I.T.I.O., and they may lease the unleased lands of Osage County. The I.T.I.O. has not violated any agreements, and the U.S. Government has received no complaints about the company. With the oil market flooded, the Government does not contemplate leasing out more land.

Vol. 13, No. 2, June 18, 1914, p. 3. Weekly Field Review. The Mid-Continent production at the close of last week was 360,000 bopd, with 306,000 bopd in Kansas and Oklahoma, 25,000 bopd at Electra, and 35,000 bopd in the Caddo Field. Cushing is at 142,160 bopd.

p. 4. Hongkong. The first cargo of crude oil from the United States to be imported into Hongkong has just been received from California, and now American oil will be sold there. Heretofore, the oil has come from the Dutch East Indies.

p. 5-6. Noted in Passing. The Neodesha Oil & Gas Co., a Kansas City, Mo. firm, is drilling near Brownwood, Texas, and has brought in another big gas well in the new Bangs Field. The company will pipe the gas into Brownwood.

Argentina is now producing about 30,000 barrels of oil a month from 10 wells owned by the Government. The Government is now installing a refinery, and will use much of the fuel for their Navy.

Last week about 619 teams were hauling oil supplies at one time on the road between Cushing and Drumright. There are 158 wells drilling in the field, and the chances are that 150 will be completed at an average of 1,000 bopd per well. It is rumored that there is a deal pending for $18,000,000 to buy the principal producing properties in the field.

p. 6. 8. Personal Mention. Fielding H. Yost, the famous University of Michigan coach, is in Tulsa for a few days. He is interested in the oil game.

W. C. McBride, of St. Louis, Mo., is in Tulsa on a visit. He is considered the largest independent producer in the world, having interests in Pennsylvania, Illinois, Texas, and Oklahoma. He has just finished a large well 2 miles northwest of the Cushing Pool.

Frank A. Gillespie and John S. McCarthy returned to Tulsa Sunday from a 6 week's trip to Scotland, England, and France. They met some of the leading oil men of Europe. Mr. Gillespie predicts a worldwide boom in oil properties within the next year or two.

p. 8. Recent Deaths. Capt. William Weiss, aged 75 years, died at his home in Beaumont, Texas, Friday June 12, 1914, from Bright's disease. He was one of the richest men in Beaumont, and was president of the Paraffine and Reliance Oil Companies. The Paraffine Oil Co. opened up the rich Batson Pool in Texas, and now has production in the Wann, Mounds, and Healdton Districts in Oklahoma.

p. 10, 12, 14. Oklahoma. In Pontotoc County, in the Allen Pool, the Kurtz Oil Co. No. 1 Harjo in Sec. 26-5N-8E has a 30 bopd pumper at 735-775 feet.

In Coal County, the Clarion-Brookville Oil & Gas Co. No. 1 in Sec. 17-2N-11E was a dry hole at 1,500 feet. There are a number of small gas wells around Ashland and preparations are being made to pipe the gas to McAlester and Durant. The recent dry hole is 6 miles south of the gas area. The gas is found at 1,200 feet, and the volume of each well is between 1,000,000 and 4,000,000 cfgpd.

In Stephens County, near Loco, the Oklahoma Diamond Oil & Gas Co. in the NW-1/4-NW-1/4-Sec. 15-3S-5W has a 2,000,000 cfgpd well in three gas sands at 700, 900, and 1,200 feet.

p. 20. Facts Concerning Caddo. It has been 6 years since the first drilling for oil was attempted in northern Louisiana. There are 1,049 producing wells in the Caddo District, with a total production of 23,586 bopd, of which 785 wells are deep, producing 19,353 bopd light oil, and 264 are shallow, producing 4,233 bopd of heavy oil. In the DeSoto Field, which is less than a year old, there are 51 producing wells producing 8,370 bopd. The cost of drilling is between $3,000 and $10,000 a well.

There are 3 producing sands in the Caddo Field with average depths of 900 feet with 22 gravity oil and much gas for lighting and heating; 1,200-1,600 feet

in the chalk-rock sand with irregular or freakish production with 27-36 gravity oil in pockets; and the deep sand at 2,200-2,404 feet with high gravity oil and gas with gasoline, with the oil having a paraffine base. Drilling is almost exclusively done by the rotary method. Roads are bad and generally 4 mules are used for each team, costing $10.00 a day, for transportation.

p. 25-26. Royal Dutch-Shell in America. In 1890, the Standard Oil Co. of New Jersey entered the German oil market, especially furnishing illuminating oil to Germany. In 1913, Germany imported 5,500,000 barrels of oil, of which 4,300,000 came from America, mostly from Standard Oil. The bill before the Reichstag proposes to float 60,000,000 marks in stock, letting German banks take the stock and run an import operation, whereby the corporation would purchase oil refined products and distribute the products to retailers, at a standard price so that everyone would make a small profit. Mr. John D. Archbold, president of the Standard Oil Co. of New Jersey, said that his company would have nothing to do with the proposal. Independent American refiners said that they would supply Germany. The Deutsche Bank has purchased 1,500,000 barrels of oil from America this last winter, and will probably purchase the same this winter, apparently solving the problem. The Deutsche Bank would be one of the main stock holders in the new corporation. This is apparently another move by the Rothschilds and the Deutsche Bank against the Standard. The Royal Dutch-Shell combine is gaining a strong foothold in America, and that company would supply Germany from the United States. Officials in Washington are much concerned over the proposal. This has caused some officials to question the breaking up of the Standard Oil cartel in 1911 by the American Government, weakening an American company, but allowing foreign companies to take over. The foreign countries do not like the Standard Oil Co. of New York entering China, thinking that one of the original Standard companies should not have this type of strength or influence. The Royal Dutch or Japan would have liked to control the Chinese market. American bankers and other businessmen are now looking to China for investments, similar to that of the Rothschilds in America. More than 400,000,000 people live in China, but 100,000,000 have never used oil as yet. Geologists are enthusiastic over Chinese prospects. Light paraffine-based oil has been produced, from which kerosene and gasoline can be produced. The other company operating in the Orient is the Asiatic Petroleum Co., Lt., a subsidiary of the Royal Dutch-Shell combine, which has supplied China with oil from the Dutch East Indies. The Royal Dutch-Shell is as strong as the Standard was before dissolution. The Royal Dutch-Shell has been systematically trying to gain control over oil supplies and installations for many years in the Dutch East Indies, United States, Russia, Roumania, Egypt, Persia, Mexico, Trinidad, and any other new places. In 1912, the Royal Dutch-Shell had 21,000,000 barrels of oil, of which 10,850,000 was from Java, Borneo, and Sumatra, and 7,000,000 was from Russia which will be greatly increased because they have taken over 80% of the French Rothschilds holdings in the Baku Field. In 1913, the output of Baku was about 50,000,000 barrels. In 1912, in Roumania, the Royal Dutch controlled 3,450,000 barrels out of 12,991,913 barrels total production, but this will be increased because they purchased Astra Romana through their subsidiary Bataafsche Petroleum Co. for $12,000,000. In 1913, the Royal Dutch-Shell had 37,000,000 barrels or 7.5% of the world's output, and this figure will be greatly increased in 1914. Sir Marcus Samuel, at the last meeting of the Shell, said that the company shall not be dependent upon any one field, one country, or one government for survival. They have 65 vessels. The principal market for the Shell Transport & Trading Co. is England, with Sir Marcus Samuel as chairman of the company. At the close of 1913, the Royal Dutch Petroleum Co. and the Shell Transport & Trading Co. were capitalized at $64,650,000, with operating capital well over $100,000,000, and counting $87,000,000 for the Bataafsche Petroleum Co. and the Anglo Saxon Petroleum Co. capital, and other subsidiaries, the total assets of the combine are more than $300,000,000. The Royal Dutch and Shell concerns were combined together in 1907, and in all subsidiaries, the Royal Dutch owns 60% and the Shell owns 40% of the assets. The principal Dutch company was the Bataafsche Petroleum Co., with $32,500,000 capital, which took over all oil fields, refineries, concessions, and interests in the subsidiaries. The

English concern was the Anglo Saxon Petroleum Co., with capital of $19,500,000, which was formed to take over all steamers and installations. Each has broadened its scope and capital base. The English firm had control over the Shell Transport & Trading Co. All of the main growth of the Royal Dutch-Shell combine was after 1911, when the Standard combine was dissolved.

p. 35. Oil and Gas Explorations. Oklahoma. The U.S. Geological Survey is making investigations of untried territory. Carroll H. Wegemann has been studying about 250 square miles in southern Oklahoma, in cooperation with the Oklahoma Geological Survey, north of Petrolia and Burkburnett, Texas, and west of Healdton, and east of the Grandfield District described in Bulletin 547. The area is mostly in T. 4-5S, R. 8-11W, in Cotton and Jefferson Counties.

Vol. 13, No. 3, June 25, 1914, p. 4. Canal Tolls Are Too High. It costs 17.5 cents a barrel toll on petroleum through the Panama Canal. Oil producers are just now beginning to realize that this is prohibitive.

p. 5. New Well Every Seventeen Minutes. In the Month of May 1914, 2,600 wells were completed east of the Rocky Mountains, or 84 a day, or one every 17 minutes, with no let up in sight. Business men will have to control their own affairs and will have to place some control on drilling, to stop the overproduction. The U.S. Government and the State administrators should not try to regulate the industry.

p. 5-6. Personal Mention. Ben C. Belt, a geologist who has been with the Pearson interests in Mexico, has opened an office in Tulsa.

Lee Hager, a well-known Gulf Coast geologist and president of the Tidewater Oil Co., is in Tulsa. His company owns some valuable fee land in the Healdton District.

L. W. Wells, of Terrell, Texas, was in Tulsa. He is president of the Terrell Oil Co. and is also interested in the Dallas-Osage Oil Co.

C. J. Wrightsman, of the W. & F. Oil Co., operating in the Healdton Pool, is in California, and his associate, J.B. Foster, spent several days in Dallas.

F. M. Aiken, of the firm Curtis & Aiken, returned to New York City last week. He was accompanied as far as St. Louis, Mo., by Don Baxter, manager of the Okmulgee refinery. While in Tulsa, Mr. Aiken closed the deal for the Yarhola lease in the Cushing Pool.

Henry O. Loebell, of New York, industrial fuel engineer for Henry L. Doherty & Co., is looking over his company's interests in Kansas and Oklahoma. The company controls the Quapaw-Wichita Gas Co., and has one of the most complete systems in this end of the country.

p. 6, 8. Noted in Passing. The Magnolia Pipe Line Co. is now taking 12,000 bopd from the Healdton Pool, with 5,000 bopd in storage.

The new 10-story Daniels Building in Tulsa on Third Street west of Hotel Tulsa, will be completed in October. It will be the headquarters for the Pierce Oil Corporation, the Prairie Oil & Gas Co., the Twin State Oil Co., and the Cosden Refining Co.

The new city of Ringling has a newspaper, the Ringling News, which was formerly the Cornish News. The town has raised $1,200 to build a road to the Healdton Pool, six miles to the north.

Jones & Buehl are now running oil regularly from the Swenson well 17 miles southwest of Arkansas City, through a 4-inch line to Middletown on the Frisco railroad, and thence to the Lesh Refinery at Arkansas City, Kansas. Jones & Buehl now have 9 rigs working in the area north of Blackwell, Kay County.

Oil derricks are now being built higher and stronger. The Drake well in 1859 was 34 feet tall. By the early 1890's the derricks were 72 to 84 feet tall. Now most of them are 106 feet tall and are rotary. A rig is being built in Maricopa Flats, California, 130 feet tall, believed to be the tallest in the world.

p. 10, 12, 14. Oklahoma. In Atoka County, the Great Western Petroleum Co. will start in the NE-1/4-SW-1/4-Sec. 8-1S-14E, about 2 miles southwest of where the showings of oil at Redden were found some months ago. This company is advertising its stock for sale throughout Kentucky and other portions of the country and may not

start until enough stock is sold. J. S. Wick of Tulsa will start shortly in Sec. 36-4S-13E. Russell & Co. will drill in Sec. 15-3S-13E. Hunter & Co. of McAlester expect to drill in Sec. 5-1N-15E. The Southwestern Petroleum Co. has taken over the holdings of the Garatoka Oil Co. in 1N-14E and expects to drill at least 8 wells. Leasing has been quite active the past few weeks for land east of Stringtown.

In Pushmataha County, The Choctaw Oil & Gas Co. is close to 350 feet in Sec. 17-3S-17E.

In Marshall County, developments continue at Madill, Kingston, Aylesworth, Woodville, and Mannsville. Armstrong & Co. have a gas well on the Woods Farm in Sec. 2-5S-4E, but are going deeper for oil. The Smith-Coleman well in Sec. 32-7S-6E is showing a volume of 2,000,000 cfgpd, about 6 miles from Woodville. They will have at least 5 rigs working for the next few months.

p. 28. Gas in Montana. While drilling for water near Havre, Montana, a farmer struck natural gas at 580 feet, for 862,000 cfgpd at 460 psi pressure. A company has been organized to test the territory.

p. 28-30. Recollections of an Oil Scout. In 1878 the consolidated pipe lines commenced issuing certificates and the new Oil City Oil Exchange was opened in Pennsylvania. A certificate called for 1,000 barrels of oil to be delivered on demand, with a storage charge of one-half of one percent per month to be paid for storing the oil. Banks took these as security for loans and they were transferable. At one time there were 40,000,000 barrels of oil represented by these certificates. In 1882, there was an Oil City clearing house, similar to the New York Stock Exchange, and people speculated in marginal or futures oil certificates, on a daily basis. The Standard Oil Co. stopped this by paying cash for all oil, and by purchasing all certificates and paying cash for those, so that by Jan. 22, 1895, this futures marginal market was closed. There was no stability in oil prices, and speculators could form syndicates and cause rumors to start a bull or up market or to start a bear or down market, and buy or sell ahead of the public, causing many people to lose a lot of money, based upon a false economy. By 1880, exchanges were set up at Bradford, Pa., Pittsburgh, Pa., and finally the Consolidated Oil & Stock Exchange of New York City, and everyone had a brokerage office in some small town, and the practice was widespread. As much as 50 to 60 million barrels a day would exchange hands on the speculative market, having nothing to do with the price of oil, but causing panic in the oil business. (by James C. Tennent).

p. 34. Birth of a New Town. Calhoun City is the name of the newest oil town in the Caddo Field of Louisiana. The completion of the big well on the Marston property in Red River Parish was responsible. It is on the T. & P.R. railroad.

p. 34. Texas Town to Have Gas. In Brown County, Texas, a 16 mile line is being laid from the Bangs Field to Brownwood, and will be completed by Nov. 1, 1914. The rate is 50 cents a thousand.

Vol. 13, No. 4, July 2, 1914, p. 5-6. Personal Mention. W. F. Leschen has returned to Tulsa after spending a month in St. Louis, Mo., the headquarters of the Leschen Wire Rope Co. and the Laclede and Leschen Oil Companies. He is in charge of these companies in Oklahoma.

William G. Skelly, of Tulsa, was called to Oklahoma City Saturday, by the death of an uncle, A. M. Sweetman, who died in Arkansas. The body was shipped to Oklahoma City for burial. The relatives of the deceased had not heard from him for nearly 20 years. He left considerable wealth.

J. M. Critchlow, of Titusville, Pa., has been spending some time in Tulsa and Ardmore. He is president of the Dundee Oil Co., which has extensive holdings in the Healdton Field, having drilled the discovery well. Their offices are in Ardmore and occupy one whole floor of a large block.

J. A. Murphy, of Philadelphia, Pa., son of Mike Murphy, president of the Pure Oil Co., is a visitor in Tulsa. Since the death of his brother James, Mr. Murphy has been looking over his interests in Oklahoma and Kansas, especially Cowley County, Kansas. The Pure Oil Co. controls the Quaker Oil & Gas Co., one of the leading producers in the Bartlesville sand play in the Cushing Field.

p. 8. Noted in Passing. According to the Little Rock Gazette, the Pierce Oil Corporation has filed on 12,000 acres of leases at Ozark, Arkansas, in Franklin County. The company's geologists have a favorable report on the area.

In the Bradford Era, Pa., paper, is mentioned a successful demonstration of the use of compressed air for drilling purposes at Coleville, where Hyatt Bros. & Nellis completed the no. 48 Howard & McCallum at 1,760 feet. Air instead of steam was used all the way down, and the well was finished with an average of 78 feet per hour. The pressure was 90 psi.

p. 10. Summaries of Field Operations for June 1914. In the United States for June 1914, 2,342 wells were completed, of which 189 were gas wells and 403 were dry holes, with 189,631 bopd new production added, and 2,911 new wells being started or drilling. In Oklahoma, there were 829 wells completed, including 53 gas wells and 115 dry holes, with 128,853 bopd new production discovered, and 942 new wells started or drilling, with Cushing and Healdton furnishing most of the new production, with Cushing at 82,459 bopd and Healdton at 20,353 bopd new production. In North Texas, there were 59 wells completed, including 2 gas wells and 13 dry holes, and 2,219 bopd new production, and 110 new wells started or being drilled. In northwestern Louisiana, 61 wells were completed, 2 of which were gas wells, and 16 dry holes, with 19,477 bopd new production, and 169 new wells started or drilling.

p. 12, 14, 16. Oklahoma. In Creek County, the Cushing Pool is producing about 149,000 bopd, of which 137,500 is from the Bartlesville sand, and 11,500 is from the Wheeler and Layton sands.

In Carter County, the Healdton Pool is producing about 30,000 bopd, from 178 producing wells, with 48 rigs drilling or being erected.

In Jefferson County, many rigs are working. B. B. Jones and Robert Gilliam have secured a large block of acreage near Grady, and they will have L. C. Hivick & Co. drill the wells using large California rigs for deep drilling. One test is to be on the Baker Farm in the SW-1/4-NW 1/4-Sec. 18-6S-4W. The other will be on the Oscar Seay Fam in the center of Sec. 28-6S-5W, on a southwest-trending anticline into Petrolia and Burkbunett, Texas. Tarkenton & Co. will drill a 2,500-foot test on the Brummitt Ranch northeast of Waurika about 6 miles.

In Marshall County, about 40 dry holes have been drilled around Madill, but only 3 small wells are now producing high-grade oil of 47.5 gravity. Armstrong & Co. on the Duren Farm has a gas well at 532 feet for 2,500,000 cfgpd in Sec. 2-8S-5E, south of Kingston. The Twin Oaks Oil Co. on the Lairy Farm has a rig in Sec. 6-8S-6E. The Indian Chief Oil Co. has a rig in Sec. 31-7S-5E. The Coleman-Smith Co. is at 700 feet in their No. 2 in Sec. 35-7S-5E with 2,000,000 cfgpd at 400 feet. Their No. 3 is drilling at 400 feet in Sec. 22-8S-5E. The Waskon-Thorn Oil Co. has a rig in Sec. 36-7S-5E.

In Atoka County, the West Virginia Petroleum Co. on the Marley Farm is at 1,600 feet in Sec. 1-4S-9E.

In Comanche County, the Lawton Pool, about 5 miles east of Lawton, has some gas wells that supply Lawton, and 2 oil wells, each with about 25 bopd. Kuhn & Beldows on the Parker Farm in Sec. 31-2N-11W reportedly have a 25 bopd well at 820-885 feet, with some gas and 44 gravity oil. The O'Hara, Hivick & Hall well on the Miller Tract in the NW-1/4-Sec. 32-2N-10W was completed several weeks ago at 820-910 feet, with oil filling the hole, but it has not been shot because the property is in the hands of receivers. In Sec. 36-2N-11W, on the F. M. Marple Farm, there is an old well that has been producing about 1 bopd for 10 years, which started the Lawton play. A test is now going down on this land, the F. M. Marple No. 3 Fee, 500 feet south of the north line and 250 feet east of the west line, and is at 700 feet. J. M. Mayer has a 5-bopd well in the SW-1/4-Sec. 21-2N-11W at 400 feet. Many other wells are being drilled in the area.

In Latimer County, Wheeler et al near Wilburton are drilling at 2,350 feet, and they will go to 3,500 feet.

In McIntosh County, north of Hanna, in Sec. 14-9N-13E, C. J. Baugh et al had a 1,000,000 cfgpd well at 1,050 feet, but will drill deeper.

In Sequoyah County, the Nigger Creek Oil & Gas Co., just southeast of the corporate limits of Vian, is at 1,850 feet, having struck salt water at 1,700 feet. It was said to be radium water, but it was salt water. There was a small showing of oil at 1,500 feet a few weeks ago, and someone reported that it was an oil well.

In Beckham County, the LaVista Oil Co. of Erick, is at 650 feet, on a block of 10,000 acres around Erick. The company is financed by Ardmore parties. The test is 2 miles south of Erick in the SE-1/4-Sec. 5-8N-25W.

In Johnston County, Robert Galbreath is at 1,750 feet near Bromide.

p. 16. Texas. Electra. The most important event of the week in North Texas was the discovery of oil in a deeper sand near Electra, 8 miles south and 2 miles east, on the Waggoner Brothers lease on Beaver Creek, owned by J. C. Strauss, Reese Allen, and the Pierce Fordyce Oil Co. The sand is at 1,960-1,975 feet, and gas and high-gravity green oil was found. The well is 0.75 miles south of the Beaver Creek Oil Co. No. 1 well. J. C. Strauss was formerly the local manager of the J. M. Guffey Petroleum Co., and he is credited with finding this new development.

p. 30, 32-34. Corporation Commission's Order. Stop Drill Resolution. Producers Agree on a Shutdown. On May 6, 1914, the State Corporation Commission issued an order to cease drilling for 90 days in Oklahoma, unless the order caused an operator to lose a lease or caused undue hardship. All pipe lines were relieved as common carriers. George A. Henshaw issued the order after consultation with many producers in Oklahoma. There were clauses to prevent someone from taking advantage of leases on property with good locations or offsets. A committee of well-known oil producers would police the order. About 500 producers met in Tulsa and were behind the resolution, the final agreement being on June 24, 1914, which will be an illuminating date in oil history, showing that business men can do something if they get together in the right spirits. Judge J. J. Shea, of Bartlesville, was chairman of the proceedings. Overproduction, conservation, fire, storms, low prices, and many other subjects were discussed, and the problems ironed out.

p. 35. Importance of Well Logs. by V. H. McNutt. Many producers do not keep careful logs of their wells. A careful driller will give proper location, time of beginning and finishing the well, character of drilling, amount of supplies, casing points, depth and thickness of sands, productive or non-productive sands, amount of nitroglycerine, and initial production. In addition, the color and type of rock should be noted, especially a limestone, and the character of the sand should be noted, in addition to any changes in character. Also water content should be recorded, along with gas, and type of oil.

Vol. 13, No. 5, July 9, 1914, p. 3. Mid-Continent Production. At the end of June 1914, the total production in the Mid-Continent was 405,000 bopd. Kansas and Oklahoma was 343,000 bopd, Electra, Texas 22,000 bopd, and Caddo, La. 40,000 bopd. The Cushing Field was at 158,500 bopd.

p. 6. Oil Production 1913. The oil production in the United States for 1913 was 248,446,000 barrels at an average price of 95 cents a barrel. California was first at 97,700,000 barrels, Oklahoma was second at 63,579,384 barrels, Illinois was third, and Texas was fourth at 15,009,478 barrels.

p. 7-8. Noted in Passing. Since the discovery of oil at Ozark, and indications of oil at Paris, Arkansas, the Pierce Oil Corporation of Missouri has leased more than 25,000 acres of land near those places. The area will be thoroughly tested.

The Corporation Commission in Oklahoma has fixed the price of gasoline at 12 to 15 cents a gallon.

p. 8. Recent Deaths. Davis Krotzer, aged 72 years, an operator for many years in the oil business, died at his home near Hot Springs, Arkansas, July 1, 1914. He began as a driller in the Venango and Clarion Fields, Pa., and subsequently followed the producing business in the Bradford and McDonald, Pa., areas and elsewhere. He leaves 2 sons and 1 daughter, Robert Krotzer of Hot Springs. Albert

Krotzer of Oklahoma who works in the oil business, and Mrs. Nellie Bowser of Kittanning, Pa.

p. 10, 12, 14. Oklahoma. In Atoka County, a small showing of oil is reported near Redden, but it has not attracted attention.

In Muskogee County, near Boynton, Leidecker, Wilson & Co. have a 75-bopd well at 1,535 feet in the SW-1/4-Sec. 15-14N-16E. They also have a 5-bopd well on the Crane property in the same section at 1,530 feet.

In the first 6 months of 1914, there were 5,502 wells finished in Oklahoma, with new production of 416,984 bopd, with 325 gas wells and 924 dry holes. There was much extension drilling and much wildcatting, but no new pools were found.

p. 14. Healdton. Much Oil is Wasted. From Ringling, it is learned that oil in earthen storage is showing a loss of 65 percent through seepage and evaporation. The soil will not hold oil well, and in some places the earth is soaked 60 feet deep. In steel tankage, the loss is not very great.

p. 16. Cushing Operators Shutting Down. About one-third of the Cushing Field is shut down, and about 50 wells have ceased drilling. There will be no secret price cutting and no bargain-day inducements, and about 16,000 bopd will be cut off at first. A committee of operators are doing this, with no outside pressure, in consultation with Corporation Commissioner Henshaw. The biggest problem is that of the daily worker and the local businesses such as the boarding houses and grocery stores, who will be hurt by a 90-day shut down. Some measure of relief has to be utilized by the producers to sustain the workers through the shut down.

p. 26. New Company Formed. The New York - Oklahoma Oil Co. has been organized at $1,200,000 under the laws of Maine, to take over the Oklahoma properties of the Keeler-Morton Oil Co. and those of Asa D. Morton, including 50 oil wells, 15 gas wells, and 3,000 acres of leases, mostly near Bartlesville. The board of directors are: Asa D. Morton, president and general manager; Hartwig N. Baruch, of Baruch Bros., treasurer; Dr. Herman B. Baruch, director; Frederick H. Minard, mining engineer, director, and consulting engineer; Franklin E. Searle, of New York, corporation attorney, director, and general counsel; George B. Keeler, a banker of Bartlesville, director; and Douglas Beardsley, of New York City, secretary.

p. 26. Calgary is Stock Mad. The only producing oil well at Calgary is the Dingman Well, producing 60-gravity oil at 2,718 feet. The oil is rich in gasoline which sells for 19 cents a gallon at the well. It produces about 10 to 12 bopd at 300 psi pressure, and about 8 other wells are drilling. The wildest period of stock speculation is now going on at Calgary, with some stock jumping from $15 to $55 a share over night, and then back to $25, caused by rumors of shows of oil. About 50 strings of tools will soon be working in Alberta.

p. 28. Kansas Oil Man Goes to Holy Land. Arthur D. Dana and family, of Sedan, Kansas, went to Constantinople, on a mission for the Standard Oil Co. of New York. From there he will go to Joppa, Palestine, where Standard has some large concessions. About 3 months ago, a foreign syndicate completed a 15,000-bopd well in northeastern Egypt near the Suez Canal. Between there and the Dead Sea, there are outcroppings of rock saturated with petroleum, and this has been used and burnt like coke. Dr. A. Forder, a missionary at Jerusalem, said that there are many places around the Dead Sea like that. Forty miles northeast of Haifa and 18 miles from the Sea of Galilee, at Yamrouk on the Damascus Railroad, there is a well now drilling at 600 feet. At present, the region is supplied with oil from Russia. Drilling rigs and several packard cars are being shipped to Joppa by special ship. The country is under Turkish rule, and the condition of the people is pitiable. They are ignorant, bigotted, and poor, and 2,000 years behind the times, and not much different than in the days of Christ. Oil may lift these people from their deplorable state. The Standard is also sending out similar parties to Peru and Colombia, South America.

p. 30. Petroleum Production in the United States in 1912 and 1913. The U.S. Geological Survey published an estimate and comparison of production of oil in the United States by states for 1912 and 1913. In Oklahoma, for 1912, 51,427,071 barrels were produced at 67 cents a barrel. In 1913, 63,579,384 barrels were produced at an average price of 94 cents a barrel.

Vol. 13, No. 6, July 16, 1914, p. 1. Cosden Refining Company. The financing of the Cosden Refining Co., with capital stock of $10,000,000, in New York, London, and Paris, is another evidence that confidence in Oklahoma investments has been restored. Heretofore it has been difficult to dispose of securities in foreign markets because of the impression that legislation was inimical to ventures of this character, but a better understanding has been brought about, as is proven by recent flotation of several Oklahoma companies abroad.

p. 2. Invented the Key Tongs. W. R. Lay, of Oil City, Pa., is in search of desirable production. His father, the late C. H. Lay, of Oil City, invented the key tongs or square sharp-cornered hard steel key insert in the jaw of a set of pipe tongs, for screwing up sections of pipe. When one corner was dulled, another corner was shifted, so that the pipe tongs never became dull. In the 1870's he sold the patent for $700 to a supply company, and that company sold it for many thousands, and now the device is in general use.

p. 4. Personal Mention. Frank A. Gillespie and family, his brother J.C. Gillespie and family, and Charles W. Grimes and wife, left in a private car Sunday night for Park Rapids, Minn., where they will spend the next 3 months, the guests of F. A. Gillespie. He has rented six cottages, a dining hall, and kitchen, located near a cool lake.

Mrs. Phoebe Sinclair, mother of H. F. Sinclair, has gone to Battle Creek, Michigan, for a stay of 2 months.

H. L. Spencer, of Duluth, Minn., was in Tulsa last week. He represents the Duluth & Oklahoma Oil Co., that has taken over the leases of the Blackwell Oil & Gas Co., comprising 12,000 acres near Blackwell, and lying principally southwest of the Buehl & Jones Well. He has made a location in Sec. 6-28N-1E and expects to have a rig on the ground this week.

p. 4, 6. Noted in Passing. Albert Jones, a driller recently arrived from Shreveport, La., is ill at San Angelo, Texas. His sickness has been diagnosed unofficially as bubonic plague and much excitement has been caused.

Near Havre, Montana, a water well was being drilled but gas was struck at 460 feet, for 800,000 cfgpd at 460 psi pressure. The area will be tested.

Clarence Leonard and Clifford Johnson, of Gainesville, the organizers of the Dexter Oil Co., in Texas, will develop the Dexter Oil Field. Contracts for test wells have been let.

On July 7, 1914, the High Court of Justice in London, England, issued a decree ordering the affairs of the Diesel Oil Engine Co. to be wound up. Dr. Rudolf Diesel, inventor of the Diesel oil engine, disappeared from the steamer Dresden while on his way from Antwerp to London in September 1913. Later a body was found that was supposed to be that of Dr. Diesel. The case was regarded as a suicide, due to depression over business reverses.

p. 6. Recent Deaths. John R. Stephens, 72 years old, died at his home in Reno, Pa., on July 4, 1914. He lived mostly in Venango County, Pa., and was connected with the oil industry. He is survived by his wife, four sons, and four daughters; also two brothers and two sisters. Of these, George Stephens and Mrs. E. Coe, are residents of Tulsa.

p. 8, 10, 12. Oklahoma. In Latimer County, near Wilburton, Wheeler & Co. on the Kemp Farm in Sec. 8-5N-18E, have a dry hole at 2,910 feet. This may be the last test in that county for some time.

In Pontotoc County, about 2 miles west of Ada, the McThwaite Oil Co. No. 2 Floyd Farm in Sec. 31-4N-6E is about a 10-bopd pumper at 950-977 feet. The No. 1 was a 2,000,000 cfgpd gas well, and No. 3 has the tools in the hole. This is an important strike and opens a large strip of untested territory.

In Atoka County, there are occasional reports of oil being found, but the quantity is small. The latest is that of the Olive Oil Co. No. 3 in Sec. 8-1S-14E, McGee Valley, where the first sand was struck at 312 feet to 360 feet, and the second at 404-446 feet, where a small showing was reported. This well has had the best showings of any, and deeper drilling will be interesting. Considerable acreage has been taken in McGee Valley. The price of oil has dropped, so there is not much interest in drilling at present. Four wells have been drilled in the vicinity of Redden, all of which showed some oil, and this may mean that a new pool may be opened.

In Adair County, near Stillwell in the Cherokee Hill Valley area, unknown parties are drilling at 1,250 feet. Considerable compact limestone, called marble, has been drilled through.

In Haskell County, near Kinta, unknown parties are drilling at 1,250 feet.

In LeFlore County, near Poteau, Thomas Wall & Co. are drilling at 200 feet. The State Geologist has made a favorable report on this county, and there has been considerable acreage leased during the past few months. Two other tests are drilling in this locality. Previously, some gas has been found and piped to Arkansas for fuel.

In Comanche County, east of Lawton, many companies are drilling. The Rocky Mountain Oil Co. No. 1 Curtis in the SW-1/4-Sec. 36-2N-11W had gas at 718-740 feet and oil at 845 feet for about 30 bopd, and will be put on a pump.

In Seminole County, in Wewoka on Lot 12, Block 38, the Wewoka Oil & Gas Co. completed a well several weeks ago at 1,570 feet, and have about a 10-bopd well, which will be put on a pump.

p. 19. Field Notes. Arkansas. The Standard Oil Co. has made an interesting location in Ouachita County, Arkansas, in the SW-1/4-Sec. 22-12S-17W, on a 24,000 acre tract leased from the Moline Timber Co., about 6 miles north of Camden, east of the Ouachita River. In 1910 and 1911, there were several wells drilled west of the river, about 3 to 5 miles south of this location, and said to have some showings of oil. The derrick is up on location.

p. 24. Cosden to Enlarge Business. The Cosden Refining Co. is being organized to take over the properties of J.S. Cosden & Co., with an increase in stock from $1,000,000 to $10,000,000, financed by financiers from New York, Paris, and London. J.S. Cosden & Co. now owns and operates three refineries in Oklahoma. The first refinery is at Bigheart, with a capacity of 1,000 bopd, with a pipe line to nearby production. The second is the Colonial Refining Co. plant at Cushing with 1,500 bopd capacity on the Santa Fe and Katy railroad systems. The big plant of the company is at West Tulsa on 105 acres, completed on Jan. 1, 1914, which can handle 7,500 bopd, and has access to all of the railroads in Tulsa. The company owns 75 miles of pipe lines and 318 tank cars, and 8,000 acres of undeveloped leases, and a controlling interest in 17,000 barrels of monthly production, and an option on a large acreage in the Cushing District. In March, 1914, they had a profit of $22,866, and in April $53,420, and estimates for May are $65,000. The additional money will allow them to build an 8-inch line from Cushing to the West Tulsa plant and to enlarge that refinery, and to secure more leases in the nearby producing areas. The company will market in Europe through Gulf and Atlantic ports. Mr. J. S. Cosden will be the managing director, and the general offices will be maintained in Tulsa. Mr. Cosden is back East closing the deal.

p. 26. Humason's New Bit. Shreveport, La. G. A. Humason has returned from California where he succeeded in interesting oil operators in his new invention, the expansion drill bit, which can fit into casing and is locked in a steel barrel, with a wedge at top, which, when pushed, will allow the bit blades to expand to drill a hole as much as 20 inches in diameter from a hole 5-1/4 inches wide. When the blades wear out, the bit can be contracted and pulled back out by cable, avoiding pulling the entire drill string. The Union Oil Co. tested the new bit, under direction of Frank Hill, superintendent, and Mr. Brown, manager.

p. 43, 45. Wells. Oklahoma. Fourteen wells were completed this week in Cotton, Coal, Seminole, Stephens, Kiowa, Pontotoc, and miscellaneous counties,

with 7 producers listed in Kiowa County. There were 216 wells being drilled or starting in miscellaneous counties, including wildcatting, outside of the regular districts in Carter, Love, Greer, Murray, Garvin, Grady, Caddo, Johnston, Garfield, Cotton, Jackson, Beckham, Coal, Oklahoma, Cherokee, Seminole, Lincoln, Choctaw, Pittsburg, Atoka, Hughes, Jefferson, Marshall, Stephens, Comanche, Tillman, Latimer, Sequoyah, LeFlore, Pottawatomie, Pushmataha, Mayes, Bryan, Kiowa, Pontotoc, and Adair Counties. (Details given on each). Sixteen wells were being drilled in Marshall County. Fourteen wells are listed in Atoka County;
1N-14E-Sec. 25, Olive Oil Co. No. 2
1N-14E-Sec. 28, Redwood Oil Co. No. 1
1N-14E-Sec. 33, Southwestern Petroleum Co. No. 1
1N-14E-Sec. 33, Olive Oil Co. No. 1
1S-14E-Sec. 8, Olive Oil Co. No. 3
1S-14E-Sec. 8, Great Western Oil Co. No. 1
2S-10E-Sec. 7, Conewango Oil Co. No. 1 Danehour
3S-10E-Sec. 13, Oklatoka Oil Co. No. 1
3S-10E-Sec. 16, J. M. Givens et al No. 1
3S-11E-Sec. 18, Lavaca Oil Co. No. 1
3S-13E-Sec. 15, Russell & Co. No. 1
3S-14E-Sec. 20, Priestley et al No. 1 Kerr
4S-9E-Sec. 1, West Virginia Petroleum Co. No. 1 Marley
4S-13E-Sec. 36, J. S. Wick & Co. No. 1

p. 47. Ozark, Arkansas, Oil in Water Well. Ozark is about 150 miles northwest of Little Rock. For years the water well at Ozark was running good water, but lately it did not taste as good. A lamp was lowered into the well, after the water was pumped out, and at 10 feet an explosion took place, jarring loose a flow of black oil from the bottom of the well. The oil flowed to the top, and bailing operations began, placing the oil in barrels. Oil operators in the Mid-Continent will test the area. How the oil forced its way into the well after so many years is unknown. The showing has caused quite a flurry.

Vol. 13, No. 7, July 23, 1914, p. 4-5. Personal Mention. T. B. Slick is in England. David Gunsburg, who has been in Europe for some time, has joined him. They are combining business with pleasure in their foreign travels.

Walter F. Brown, of Toledo, Ohio, is in Coffeyville, Kansas, looking after his holdings. He was formerly a well-known politician. He is affiliated with the Clauss, Brown & Wolfe Co. and the Western Oil & Gas Co., active in Montgomery County, Kansas.

George O'Hara is in Tulsa for the first time in a year. He recently brought in a fair well in Comanche County. He was located at Wichita Falls, Texas. He has some leases near the latest completion of the Wichita Gas Co. in Augusta, Kansas.

p. 5-6. Noted in Passing. Juneau, Alaska, has only 20 miles of good roads, yet it boasts of 14 automobiles and 11 motorcycles. A storage plant for gasoline is being constructed, and two auto agencies have been established there.

D. W. Franchot, who has bought 22,000 acres of unalloted land on Mountain Fork River, Oklahoma, has offered a donation of $1,000 for the construction of an automobile road from his ranch to Cove, Arkansas, 20 miles distant.

Cushing is to have a new refinery. The Hillman Refining Co. has been organized, with C. F. Hillman, president; H. Askin, vice-president; C. R. Edgecombe, secretary-treasurer; and W. Clausen, superintendent.

In the Uinta Basin in Northwestern Colorado and Northeastern Utah are vast deposits of bituminous shale, from which 22.5 gallons of oil can be obtained from each ton of rock. Dr. David T. Day, of the U.S. Geological Survey, has been investigating the shale.

p. 8, 10, 12. Oklahoma. In Osage County, a new pool was opened up three miles southwest of Nelagoney by the Indian Territory Illuminating Oil Co. in the NE-1/4-Sec. 35-25N-9E at 2,039-2,070 feet in the Bartlesville sand, for 150 bopd, after initial production of 300 bopd.

p. 12. Cushing's Pipe Lines. At present the capacity of the pipe lines to Cushing is 123,000 bopd. White & Sinclair has 25,000, the Prairie Oil & Gas Co. has 20,000, McMan Oil Co. 15,000, Quaker Oil Co. 15,000. The Texas Co. 10,000, the Gulf Pipe Line Co. 8,000, and 7,500 barrels per day for each of Gunsburg & Forman, T.B. Xlick, Devonian Oil Co., and Cushing Gasoline & Petroleum Co.

p. 12. I.T.I.O Blanket Lease Turned Down. The Osage Council at Pawhuska unanimously refused to approve the renewal of the blanket lease of 688,000 acres for 10 years beginning in May 1916 of the Indian Territory Illuminating Oil Co. They also upheld the regulation that natural gas could not be transported out of Osage County. This ends the matter until a year from now.

p. 30. The Mexia Gas Field. There are 31 gas wells in the Mexia, Texas, Field, averaging about 8,000,000 cfgpd. Two wells are supplying Mexia, two the city of Teague, and two at Groesbeck. Fifteen percent of the total can be drawn without endangering the life of the field. The wells could produce about 37 million a day and the proposed lines to Waco, Mart, Marlin, Tempe, and Belton could easily be supplied. On July 10, near Mexia, the Mexia Oil & Gas Co. well on the Desenberg lease got 10,000,000 cfgpd at 655 feet.

p. 30-31. Drilling in Egypt. For almost 40 years, there have been attempts to develop oil near Gemsah and in the Gebel Zeit District, on the west side of the Gulf of Suez. The Monarch Ismail tried long ago to secure oil in the Gebel Zeit District. The tests by the khedive were located a little north of Gemsah, where the Anglo-Egyptian Oil Co. has been recently operating. In the early 1880's an American syndicate did some drilling. In 1903, the Gebel Zeit District was tested by Egyptian financiers, to about 3,000 feet, and again in 1910 at Gemsah, three wells were drilled by a private company. Well No. 1 was dry, No. 2 flowed 175 tons of oil a day for a while, and No. 3 was not as good as No. 2. The Anglo-Egyptian Oil Co. now has 12 wells in the field, with much water, including the recent so-called "gusher" reported at 4,000 tons a day, but exaggerated. The oil occurs in pockets and the rock is faulted, and the wells fall off rapidly. At Gemsah, the western cliff is part of an eroded anticline, running parallel to the Coast Range of Zeit and the Ulm Esh Range to the west. On the east side, the beds strike northwest. Oil seeps up through gypsum and limestone and has sulphur in it, along the axis of the anticline. The oil has 32% kerosene, 22% benzine, 8% gas and oil fuel, 18% tarry substance and residue, and 20% pitch.

p. 35. Geology of Cushing. The Oklahoma Geological Survey has published a geological report on the Cushing Field by Frank Buttram, who worked on the area in the summer of 1913. It shows the origin, location, and accumulation of the oil and gas pools in the Cushing Field. The area covers T. 17-19 N., R. 7-8 E., about 112 square miles in northwestern Creek County. Postage is 5 cents for delivery.

The surface rocks dip gently about 30 feet per mile westward, but are interrupted by gentle folds, one of the most pronounced being in the Cushing District. The map shows development up to Sept. 1, 1913. The field is about 7 miles long N-S by 5 miles wide E-W, following the gentle N-S fold, the Drumright Anticline. Most of the Layton and Wheeler sands on the west flank have been tested, where a structural terrace occurs on the west flank of the anticline. About $150,000 a day income comes from the field.

Vol. 13, No. 8, July 30, 1914, p. 4. Congressman Casey's Alcohol Bill. Congressman Casey of Pennsylvania has introduced a bill in Congress to use denatured alcohol in place of gasoline to propel engines. He will get the farmers vote.

p. 4-5. Peace May Come to Mexico. The Constitutionalists are making some progress in their pacification plans, following the overthrow of the Huerta regime. Villa, the war hero of the peons, is the dominant figure in uniting the clashing rebel factions. He realizes that through American assistance and sympathy, he has

gained much, and it is his own policy to deal fairly with Americans, and to perpetuate friendly relations with the United States. Carranza, on the other hand, shows some hostility to this Nation. He strongly objected some time ago to the invasion of Mexican territory by American fighting forces at Vera Cruz. But he has been held in check by Villa, and peace will probably come to Mexico. The oil business around Tampico is assuming normal conditions again, and property rights have been respected.

p. 5-6. Personal Mention. Alexander Murray, 71 years old, was in Tulsa. He assisted in the drilling of the first well in the Mid-Continent, located on Fall River, three miles from Neodesha, Kansas, and now the property of the Prairie Oil & Gas Co. The well is more than 20 years old and still produces about 10 bopd. He is working in the shallow sand district out of Nowata, Oklahoma, and will visit some friends back East.

p. 6. Noted in Passing. Official appraisal filed in New York fixes the net value of the estate of the late H. H. Rogers, the famous oil man, at $40,896,990.

Turkey has given a verbal promise to the British Embassy to grant the lease of the oil fields in the Provinces of Baghdad and Mosul to an Anglo-German group composed of Mr. D'Arcy at 50% who obtained the original promise of the concession, and the Deutsche Bank at 25% and the Anglo Saxon Oil Co. at 25%.

p. 6. Recent Deaths. Mrs. Annie Mossman Landon, wife of John M. Landon, a prominent oil man of Independence, Kansas, and a receiver of the Kansas Natural Gas Co., died at Chautauqua, New York, July 13, 1914, following a prolonged illness. Besides her husband, she is survived by a son, her mother, and one brother.

p. 8, 10, 12, 14. Oklahoma. In Payne County, northeast of Cushing, the Charlton Oil Co. No. 1 Shotwell in Sec. 36-18N-5E got about 50 bopd in a sand at 3,055-3,059 feet, with some gas. Some think that this is the Bartlesville sand, and others think it is the Peru or the Skinner sand. The company will continue to test the sand deeper.

In Marshall County, many wells are being drilled. Five years ago, the 3 producing wells near Madill were finished by the Madill-Millan Co. in Sec. 25-5S-5E, and have been holding up for a long time. The oil is 47.5 gravity. About 40 dry holes have been drilled around the area. Armstrong & Co. have laid a line from their gas well in Sec. 2-8S-6E to a new well in Sec. 27-7S-5E, and they are operating as the Southern Petroleum Co. L. T. Millican in the SE-1/4-Sec. 35-7S-5E struck a small showing of oil at 170 feet, and is now at 550 feet, on a 750-foot contract. The Smith-Coleman No. 2 in the SW-1/4-Sec. 35-7S-5E struck a fair-sized gas volume at 500 feet, and are now at 740 feet. Their No. 3 near Lark in Sec. 23-8S-6E had a showing of gas at 300 feet, and they are now at 450 feet. Their No. 1 was a gas well at 2,000,000 cfgpd, and they are using the gas to fuel their wells. Two gas wells were completed near Kingston during the earlier part of the year, in the SE-1/4-Sec. 35-7S-5E and in the NE-1/4 Sec. 2-8S-5E, about three fourths of a mile apart. The Cromwell Oil Co., in the SW-1/4-NE-1/4 Sec. 17-5S-5E, had a small showing of gas, but is going deeper for oil. Many other wells are being drilled.

In Johnston County, near Bromide, Robert Galbreath in Sec. 5-2S-8E is drilling at 1,875 feet, with no oil. This is the only test in the county.

In Choctaw County, east of Hugo, the Lusher Drilling Co. on the Spring Farm is idle at 1,403 feet. The test was started last December and is financed by Eastern operators. At 700 feet some oil was struck. At 1,375 feet some gas was struck.

In Oklahoma, on the first day of July 1914, there were 29,177 producing wells in Oklahoma, some dating back to 1897, or before, but most of the development has taken place in the last 12 years. About 307,475 bopd of oil production is now in Oklahoma, with the shut down at Cushing. The various pools are Glenn Pool, 1,845 producers; the North Glenn Pool, 1,110 producers; Inola Pool, 119; Lost City, 106; Kellyville, 11; Wicey Pool, 186; Perryman Pool, 436; South Tulsa, 27; Bald Hill, 587; Morris, 445; Schulter, 206; Henryetta, 37; Tiger Flats, 84; Hamilton Switch, 82; Mounds, 70; Haskell, 19; Wainwright, 4; Coweta, 8; Muskogee, 364; Cushing, 976; Osage County, 2,194; Cleveland, 634; Keystone, 25; Healdton, 223;

Newkirk and Ponca City, 103; Collinsville, 123; Skiatook and Bird Creek and vicinity, 2,234; Copan, 1,279; Hogshooter, 608; Bartlesville-Dewey, 4,807; Cherokee Shallow-sand, 10,255 including Chelsea at 4,774, Nowata at 3,321, Delaware at 2,060, and North Lenapah at 70 producing wells.

p. 17. North Texas. Work of Six Months. In North Texas in the first 6 months of 1914, there were 527 wells completed, of which 383 were producers, 15 were gas wells, and 144 dry holes. About 20,244 bopd new production was found, and 120,000,000 cfgpd gas was found. With the discovery of gas at Electra, the town is now piped for gas, and the Corsicana Petroleum Co. has laid a 4-inch line to Burkburnett. The pressure of the gas at Petrolia has dropped, and a new supply of gas will probably have to be found.

p. 24. Tulsa's Fine Homes. Several oil producers in Tulsa are building the finest homes in Oklahoma. H. F. Sinclair has just moved into a $75,000 residence on South Cheyenne overlooking the Arkansas River. John H. Markham, Jr., is erecting a residence to cost $50,000 without the furnishings or interior decorations. C. J. Hindman will shortly move into a $35,000 house. P. J. White is thinking of building south and east of Orcutt Park. Many of the handsomest homes are owned by J. A. Hull, Robert Oglesby, J.E. Corsbie, Thomas White, Earl Sinclair, Henry Steinberger, F. A. Gillespie, M.H. Conners, Charles Page, D. F. Connolly, and Robert Galbreath, each having purchased their residence in the last 4 or 5 years.

p. 28-29. How Ontario Came to be On The Map. by John O. McLaurin. Oil Springs, Ontario, Canada. Canada's petroleum industry had its birth at Oil Springs in the summer of 1860, where seepages occur along Black Creek, Enniskillen Township, Lambton County, Ontario, about 12 miles east of Port Sarnia at the foot of Lake Huron. Much earlier, the Indians used the oil for medicinal purposes and for burning. Oil Springs derived its name from the seeps.

James Williams, of Hamilton, was one of the first persons to convert the seeps to commercial use. He erected a log shed on the west bank of Black Creek, and set up retorts to melt the heavy asphaltic residue. He drilled a small water well nearby, and struck oil instead, and the news of the find spread rapidly. Drilling with a spring pole continued to 200 feet, but the oil had to be pumped. Rigs were erected nearby and land was leased, but after several months there was no gusher. Mr. Williams served in Parliament, and died a few years ago, his old rig remaining.

In the Spring of 1861, the first gusher came in. John Shaw began a spring pole well in the late fall of 1860, on the flat across the creek from the Williams No. 1 about 8 or 9 rods. He was muscular and uneducated, and worked hard. He was hungry, barefooted, ragged, and without much credit, and was about to leave for the United States, when he worked one more day. After 20 minutes of the last day, the tools blew out of the hole, followed by a column of oil that rose above the trees, with a roar that was heard for miles. The village emptied itself, and for a week the well roared, with the oil filling a natural basin of several acres, covering Black Creek, and coating the waters of Lake St. Clair. A Pennsylvania pilgrim showed Mr. Shaw how to seed-bag the well and regulate the flow, which was about 7,000 bopd. There was no immediate market, so the well was shut in. Shaw became the victim of schemers, and lost his fortune, having travelled to Titusville and back, and later earning a living taking pictures in an itinerant car. Forty-two years ago, in 1872, he died at Petrolia, Ontario, in abject poverty, like many other pathfinders. His well lasted for 4 months, and never produced again, and only today a small depression marks the spot, without a monument.

The second well by E. C. Bradley went up nearby, and also came in as a gusher, and he later became rich, becoming president of the Empire Gas Co. in the Bradford-Richburg Field of Pennsylvania, and operated in the Venango County, Pa., and belonged to the Oil City, Pa., exchange, becoming a buyer of oil at Rouseville, Pa. Many more wells followed, and many towns grew up, and mud roads became plank roads. In 1881, H. C. Crocker, from Milwaukee, Wisconsin, who operated here since 1865, drilled deeper, and hit more oil, and the boom was on again. The dark oil was 36 gravity, but had much sulphur. About 20 local refineries existed before 1881, and since the oil was mainly used for illumination and smelled bad because of sulphur,

the sale of the oil was never a great paying proposition. By 1881, refining had improved, and a line was built to Petrolia, making the oil competitive. The 1,800 wells are 200 to 500 feet deep, covering 500 acres of ground, and the gas is used as a fuel for pumping. Oil Springs now has 600 inhabitants.

By 1861, other areas were investigated, around seeps and springs, and towns such as Petrolia also grew up at the same time. In the Fall of 1865, many American investors came to Canada. In 1913, the output in the various districts was 226,162 barrels. Petrolia has about 2,200 wells, and the daily production of each well is in quarts instead of barrels.

In 1898, the Standard Oil Co. gained control of the Imperial Refining Co., and increased the capacity to 6,000 bopd. The Ontario government gave producers 1-1/2 cents a gallon on oil that they produced, and this kept the industry alive. Previously they taxed the producers, and they almost all went out of business. If the Canadian production is too low at times, the Standard has a 6-inch line from Sarnia to Cygnet, Ohio, crossing the St. Clair River 3 miles south of Sarnia. At present, oil is $1.50 a barrel, and the added bounty of 52-1/2 cents to the producer from Ontario, gives them $2.02-1/2 cents a barrel.

The largest operator in the Oil City area was the Fairbank Co., which had as many as 200 wells hooked together and pumped by one pump, and was owned by John Henry Fairbank. He came from New York from a prominent family of Fairbanks, but he dropped the s. He operated at Oil Springs in 1861, and later at Petrolia in 1865, and was known as the Father of Petrolia. He died last February 1914. His son, Dr. Charles O. Fairbanks, carries on the business.

p. 31. Muskogee County, Northwest Boynton. H. H. Galbraith's Gasser. The new well on the Sells Allotment in the SW-1/4-Sec. 9-14N-15E was brought in last week at 1,560 feet for 20,000,000 cfgpd, and appears to be a stayer.

p. 34. New Muskogee Gasoline Plant. The Motor Gasoline Co. has commenced operations at their plant near Muskogee, and will make 1,200 gallons of gasoline a day. The stockholders are J. M. Givens, the DeYarmett Brothers, and J. A. Stevens, the latter from Pennsylvania.

Vol. 13, No. 9, August 6, 1914, p. 3. Mid-Continent Production. At the close of last week, the Mid-Continent production was 383,000 bopd, with Kansas and Oklahoma outside of Cushing at 170,000 barrels, Cushing at 156,000 barrels, Electra at 21,000 barrels, and Caddo at 36,000 barrels. There is much pessimistic feeling among operators, with over-production, reduction in credit-balance quotations, and the war in Europe.

p. 3. Some Effects of the War. The astounding events of the past 10 days in Europe shows how flimsy international friendship can be. An 18-year old Serbian killed the heir to the throne of Austria-Hungary, and started an international conflagration of jealousy. On Sunday last, Aug. 2, 1914, Germany attacked France, Russian Cossacks invaded Germany, following war between Austria-Hungary and Serbia a few days before that. The business world had been thrown into a temporary panic. Trading in the markets of Europe and America has stopped.

Ships have been ordered to stay in port. Coal and oil are declared contraband of war, and traffic in these commodities is at a standstill. No one knows how long it will last. The war may be of short duration, but prospects seem otherwise. The Standard Oil Co. agent at Hamburg notified the home office in New York City, and all Standard ships have been ordered to ports. All similar companies have done the same, and the trans-Atlantic trade has stopped, bringing a serious blow to the American oil industry, already plagued with over-production. In Oklahoma, the Prairie Oil & Gas Co. is only taking 60% of their production, with the oil backing up in the pipe lines, tanks, and wells. This will cause the refinery workers to be laid off and the drillers and producers to quit drilling.

p. 5-6. Personal Mention. D. W. O'Hern, formerly State Geologist, was in Tulsa last week. He did much to open the Newkirk Field.

Winston Henry, a Tulsa operator, left for Chicago to visit his parents, before taking an eastern trip. He is with the Henry Gas Co., Inola Pipe Line Co., and other Henry interests.

J.F. Hutson visited Tulsa en route to Henrietta, Texas, where he will visit his wife's parents. He was one of the early operators in north Texas, but is now at Muskogee. He was originally from Pittsburgh, Pa.

H.O. Crawford, of Emlenton, Pa., is looking at his well at Drumright. He is a stockholder in the Devonian Oil Co. and president of the First National Bank at Emlenton.

p. 6. Noted in Passing. Owing to the cost of fuel oil, the German Navy will continue to depend upon coal as the chief means of steam generation on its vessels.

Gypsy fortune tellers have been obtaining good-sized fees from oil men at Ringling, Oklahoma, telling them where to locate wells.

p. 12, 14, 16. Oklahoma. In Comanche County, east of Lawton, the Rocky Mountain Oil Co. No. 1 Curtis in the SE-1/4-Sec. 25-2N-10W is making 23 bopd, and is one mile north of the original Epstein well.

p. 16. Standard Oil Will Limit Purchases. The Standard Oil Co. of New Jersey issued a statement that they will curtail the output of all petroleum products, especially to Europe. They will limit their purchases. The Texas Co. and the Gulf Pipe Line Co. have followed suit, cutting back 40 to 50 percent, due to the war.

p. 28. Gas. Oklahoma is the largest gas producing state in the United states. During July, Oklahoma found 192,250,000 cfgpd new gas. In the Cushing Pool, there is now available 350,000,000 cfgpd alone, and this is almost all cased off. In the Healdton Pool, Carter County, 50,000,000 cfgpd of new gas was found.

p. 30. Arkansas and Cimarron River Bed Leases. The U.S. Circuit Court of Appeals at St. Louis gave the rights to the sand bars and land in the Cimarron and Arkansas Rivers to the Creek Indian Nation, in Tulsa and Creek Counties. This litigation covers 3,000 pages, and started on Nov. 1, 1911, but the court recognized that the Indians owned the land since 1832. (Details given).

p. 34. R. D. Fletcher, Oil Pioneer Passes On. R. D. Fletcher, aged 84 years, died last Friday July 31, 1914, at his home in Titusville, Pa., where he was active in the mercantile business and other affairs in Oil Creek Valley. He assisted Col. Drake by backing him with money to drill his discovery well in 1859 on Watson Flats. Most people were cynical of Col. Drake and laughed at him and his ideas of finding oil by a drill, and would not help him financially, when minor reverses took place. But Dan Fletcher helped him, and now Dan holds an honored place in oil history.

Vol. 13, No. 10, August 13, 1914, p. 3. Mid-Continent Production. The apparent Mid-Continent production at the close of last week was 372,500 bopd, with Kansas and Oklahoma outside of Cushing at 165,000 barrels, Cushing 150,500 barrels, Electra 21,000 barrels, and Caddo 36,000 barrels. Disruptions will occur, and the production will fall off. The French have seized a cargo of fuel oil destined for Germany. This may be the last great war in the world's history. When peace is restored, business will have much to replace, and prosperity will shine again. But at present, the producers are up against a new order of things.

p. 5-6. Personal Mention. M. Ellis and family, of Tulsa, have returned from Jamestown, N.Y. He has production in the Bird Creek District. He was formerly a resident of Meadville, Pa.

Jack Grundish, of Independence, Kansas, was in Tulsa en route to McIntosh County, where he brought in the first well in that part of the State and now has a nice production.

J. I. Gillespie, of Tulsa, is drilling a wildcat in Cowley County, Kansas. He began his career as an oil man in the Trenton Rock Field of Ohio.

p. 6,8. Noted in Passing. A $250,000 company has been organized to drill for oil in the vicinity of Toledo, Cebu, Philippine Islands, where oil has been discovered.

The Standard Oil Company's big refineries in the East are soon to shut down because of the war.

John M. Cameron and Oran Cameron, of Chicago, with a refinery at Erie, Kansas, are said to be backing a refinery project at Eram, Okmulgee County.

The William Jordan Oil Development Co., capitalized at $1,000,000 with headquarters at Alexandria, La., developed a hot-water well in Rapides Parish, La. They have 5,000 acres of leases in Bossier Parish.

In the Mexia Field, of Texas, W. H. Johnson struck a bed of sulphur at 200 feet. The bed is 50 feet thick. He is looking up data on refining sulphur, and will erect a plant.

Sixty vessels of the U.S. Navy are now burning fuel oil. About 30,000,000 gallons of fuel oil will be used by the Navy this fiscal year.

Oil has been found at Torralanulya, 17 miles from Sanfander, Spain. The oil is high grade, and exploration will soon begin.

The $7,500,000 stock of the British Union Oil Co., which obtained control of the Union Oil Co. of California through the purchase of $15,000,000 of treasury stock of the latter company, has been fully subscribed for by financial interests in Scotland.

The "blue sky" department of the Bank Commission has licensed the Hamilton Young Gas & Oil Co. of Tahlequah, to sell $15,000 of stock in Arkansas. Before the license was issued, John T. Fuller, the state mineralogist, made an examination of the company's property in Arkansas.

In California, 40,000 bopd is tanked to England and Germany by 23 tankers of the Standard Oil Co. of California and by 6 tankers of the Union Oil Co. of California. The war will stop this, causing a glut of oil in California, and no emergency efforts can care for this oil.

Peggy Harrison, of the Midway and Fullerton Fields of California, drilled the famous gusher in the Akita Field, Japan. The well was drilled in 18 days, with native assistants. The production is 10,000 bopd,. of 20 gravity oil, with asphalt base. He believes that another productive sand lies below this sand.

p. 8. Recent Deaths. Miss Sarah Adams, known throughout Oklahoma as an operator and leaser, died on August 2, 1914, at a sanatarium at Denison, Texas, following surgery. She was a pioneer in the Healdton Field. She had been ill for several months.

p. 10, 12, 14. Oklahoma. The daily output of oil in Oklahoma and Kansas this week was 315,500 bopd. Cushing, Newkirk, Healdton, Wicey, and other areas continued to be developed. (Details given). The war has curtailed production.

In Okfuskee County, a new pool may be opened by Williamson & Kline in Sec. 2-13N-10E, at 1,392-1,494 feet, where they have 10 to 15 bopd.

In Creek County, south of Bristow, Perry & Co. No. 1 Henry in Sec. 30-14N-9E got 2,500,000 cfgpd at 2,490 feet. Since the completion of a small well in Sec. 9 by B. B. Jones, considerable acreage has been leased. Many wells are being drilled in the area. At Cushing many tanks are being built.

In Pontotoc County, developmental work around Allen and Ada continues. The Gladys Belle Oil Co. in Sec. 22-4N-5E is at 810 feet. This company has been one of the luckiest in opening new pools, as it opened the Lost City and Inola Pools.

In Stephens County, three miles northeast of Comanche, Williams & Co. took over the old well of the Antelope Oil & Gas Co. and struck gas at 735 feet, with a reported showing of oil. The Duncan Gas Co. has a 5,000,000 cfgpd well on the Cruce Farm, 12 miles east of Duncan. About 8 rigs are drilling now.

p. 24. Tidewater Reduces Runs. R. D. Benson, president of Tidewater Oil Co. in New York, stated that their refinery has an over supply, and that they cannot buy new oil, until further notice, due to war in Europe.

p. 24. German Oil Ship Captured. The German sailing ship Perkeo, owned by Laeisz & Co. of Hamburg, on her way from New York to Hamburg with 1.5 million

gallons of case oil, was seized in the English Channel. There was no wireless aboard and they apparently did not know that the war broke out.

p. 26. Another Tanker Captured. The British Cruiser Suffolk captured a German oil tank steamer off the United States and took the ship to either Halifax or Bermuda.

p. 26. Oil Vessels in Jeopardy. On August 6, 1914, the British Ship Strombos with a cargo of oil left Norfolk, Va., for Killingholme, England. He was notified that he would have to remain in port until the end of the war or move on, and Captain Allison decided to move.

p. 26. Recent Rumors Refuted. The Prairie Oil & Gas Co. will take smaller orders and will build more storage tanks, due to the war, but they have not completely curtailed operations. The big British Navy could protect ships bearing oil to France and England, but it would be most difficult to ship to Germany. The Pure Oil Co., whose principal foreign market is Germany, has ceased buying oil. General conditions may improve in a month or two.

p. 26. Prof. W. F. Cummins, Discoverer of Panuco. (portrait). Prof. W. F. Cummins, dean of Mexican oil geologists, has returned to Tampico from Texas, and is doing field work for the East Coast Oil Co. He is known as the "Father of Paunco", having brought in the discovery well in 1910 for his company. He brought in the second well in the Topila Field, the discovery well having been drilled by the Mexican Fuel Co. owned by the Pierce Oil Corporation. Prof. Cummins recently had his 74th birthday. He was born in Missouri, and fought in the Confederate Army. Much of his work has been in northwestern Texas, but he has always had an interest in Mexico. The East Coast company well was completed on Sept. 12, 1910, and is still flowing at 1,000 bopd.

p. 26. Montana Territory Leased. About 25,000 acres of State land has been leased in Montana after natural gas was discovered at Havre several weeks ago. The land is scattered in Dawson, Musselshell, Stillwater, Sweetgrass, Fallon, and Toole Counties, and around Great Falls.

p. 31. Ships Have Been Held Up. The oil business of the Standard Oil Co. at Constable Hook, Bayonne, N.J. has been seriously affected, because of the war. Several loaded ships have been held back, and the German ships Haagen and Washington were told to go back to Germany without cargo. Sailors on a French ship were called to the office of the French consul in New York, and they may be pressed into naval reserve service. There are a number of foreigners working at the Standard oil works, from the countries involved in the war, and the majority of them will probably return to their countries to join the war.

p. 31. Vacuum Oil Co. Watching War Developments. Officials of the Vacuum Oil Co. are watching developments of the war in Austria-Hungary, where the company has large holdings of land and refineries at Almar, Fusito and Dzleditz, with branches at Budapest and Vienna. The company does a large business in Germany, Italy, Prussia, France, England, and the Balkan States, with subsidiaries in each.

p. 34. Oil Tanker Destroyed. On August 7, 1914, the British consul at Antwerp stated that the oil tanker Wilfredo, laden with fuel oil for the German fleet, struck a mine off Cuxhaven and was destroyed, with nearly all of her crew lost.

p. 34. Fallis Well. A well was drilled to 1,900 feet at Fallis in Lincoln County by the Fallis Oil Co., but had a strong showing of oil. C. T. Walcher and 40 stockholders have filed a suit against the company, to prevent them from selling the equipment. The company said that the well was a dry hole, but the stockholders would like to compel the company to drill deeper.

p. 35. Oil Fields of Mexico. The Mexican oil fields are mostly in eastern Mexico from Vera Cruz to Tampico, covering 10,000 square miles. About $200,000,000 has been spent on developments. There are about 550 producing wells, with about 23,000,000 barrels produced in 1913 as compared to 1,000,000 barrels in 1907. In a few years, the production should be about 150,000,000 barrels a year. The oil

sells for about 40 cents a barrel, being 14 gravity, and used as fuel oil. Many wells will flow from 5,000 to 25,000 bopd. The Dos Bocas well was the first great gusher brought in at 10,000 barrels an hour or 240,000 barrels a day, but got out of control and burned for 58 days. The Potrero del Llano of the Mexican Eagle Oil Co. came in at 125,000 bopd, and is now choked down to 25,000 bopd. The Juan Casiana well of the Mexican Petroleum Co. came in at 75,000 bopd and is now choked down to 25,000 bopd. The LaCorona gusher of Shell in the Panuco Field came in at 96,000 bopd. Many foreign companies, half of which are American, operate in Mexico. The Mexican Eagle Co. of Lord Cowdray interests has 500,000 acres of interests, 200 miles of pipe lines, storage capacity of 2,000,000 barrels, with production of 100,000 bopd and refining capacity of 60,000 bopd, with 20 tank steamers each with a capacity of 2,000,000 gallons per voyage. The Mexican Petroleum Co. has 600,000 acres, 133 miles of pipe lines, 8,000,000 barrels in storage and production of 70,000 bopd, with 4 tank steamers. The Penn-Mex Corporation has extensive acreage, and operates a 6,000 bopd refinery at Tampico. The Standard Oil Co. of New York is building a large refinery at Tampico. The Texas Co., the Royal Dutch-Shell, and Gulf Oil Corporation have important interests also.

Vol. 13, No. 11, August 20, 1914, p. 1. Stagnation in Oil Trade. The war has caused a stagnation in the oil business. Some ships have gotten through, but other have been seized or sunk, and most companies have cut off foreign exports.

p. 1. Mid-Continent Production. At the close of last week the production in the Mid-Continent was 376,179 bopd, with 171,465 from Kansas and Oklahoma outside of Cushing, and was 149,214 barrels at Cushing, 35,000 bopd at Caddo, and 20,500 bopd at Electra.

p. 2. The Status of Oil in War. Fuel oil and lubricating oil are considered conditional contraband in the present European war. In 1909, there assembled in London an international conference on contraband of war, but nothing was ratified. The English Government recognizes oil as conditional contraband, but illuminating oil is not so classified, and this will probably be the status of fuel and lubricating oil for the duration of the war.

p. 2. Henry's Petroleum History. "History and Romance of the Petroleum Industry", Vol.1, by J.D. Henry, printed to Bradbury Agnew & Co., London, is now available and is the first of 3 or more volumes on the subject. The history includes developments from Babylon to Burma and Baku and 200 references in the Bible. Oil was used in sacred rituals and the pits and seeps were covered and considered holy. The bricks of Babylon were cemented by pitch. Pitch and oil was used for embalming in Egypt. Oil was burned in clay lamps. Mr. Henry points out that oil was found earlier in Pennsylvania than in 1859 but it was incidental to drilling for salt. Drake still gets proper credit for the first deliberate oil well to be drilled. Personal sketches of early oil men are given, together with their portraits. The history of early Pennsylvania oil towns is given.

p. 3. The Oil City Derrick. Cause for Congratulation. On August 10, 1885, The Derrick changed hands to the present owners, with the lease-purchase agreement consummated on August 10, 1895. The people of Oil City, Pa., have been very supportive. The Derrick makes a specialty of covering the oil news and statistics of the various fields of the world, aiming at accuracy.

p. 4. Personal mention. R.S. Jordan of Tulsa has spent 2 weeks in Marshall County, where he secured some leases. He leased a small tract near Madill.

Dan Allman of the Winona Oil Co. at Bartlesville, is visiting at his old home in Oil City, Pa. He was accompanied by Jake Madansky.

Charles T. Taylor, of Muskogee, is from Oil City, Pa., and is now on his own, being formerly a manager of the McEwen Manufacturing Co. store in Bartlesville.

p. 4, 6. Noted in Passing. The German steamer Pennoil left Philadelphia on July 27 with 2,000,000 gallons of oil for Germany, but returned to the dock on August 7, 1914.

On July 27, 1914, the British House of Commons passed a resolution for the British Government to provide money to obtain fuel oil for the Navy from Persia,

through the Anglo-Persian Company.

Heavy rains in the Ardmore area of Oklahoma have caused heavy losses of oil by washing away earthen dams, permitting oil to escape to the Cornish, Red Oak, and Bayou Creeks.

From London, a dispatch said that the German tanker Leda from Rotterdam to Baton Rouge, La., was captured and taken to Bermuda. The ship left on July 23, 1914.

The British Cruiser Essex warned a British oil steamer to pull into Halifax for safety.

The first cargo of oil from the Mid-Continent Field has been sent through the Panama Canal by the Oil Export Corporation of Tulsa to the Orient.

Orders have been issued by the Mexican Eagle Oil Co. to stop drilling because of the war.

Four hundred men employed in the wood-working plants at Salisbury, Md., are idle because of the war. One plant manufactured box shooks for the Standard Oil Co., and another plant made kindling wood from the scraps of the first plant.

In Australia, the Government has been asked to aid the oil industry by giving companies two pence for every gallon of oil extracted from shale beds.

The Japanese Navy has contracted with Nippon Oil Co. and the Hoden Oil Co. to supply them with oil for one year, amounting to 4,000 and 6,500 tons each.

L. V. Dalton, an eminent English geologist who specialized in petroleum geology, died recently at Deal, England, from Malaria contracted in Venezuela in 1910.

Keith Goode, of the Packard Motor Car Co. in Paris, France, has closed his headquarters there because of the war. He notified the office in Detroit that the price of gasoline has soared to $2.00 a gallon.

The Indo-Burma Petroleum Co. has struck oil in 3 wells in Upper Chindwan District in the Indaw Kindat Township, with one well yielding 2,000 bopd. This is a new field. The company is planning to lay a 170 mile line to the Up Valley, then south along the railway to Myinumu Tyinmu near Sagaing opposite Mandalay on the Irawaddy River.

p. 6. Recent Deaths. Daniel Daly, aged 85 years, died at Olean, N.Y, on August 9, 1914. Six sons, John of Oklahoma, Daniel of Buffalo, N.Y., Michael and James of California, Eugene of Roumania, Thomas of Olean, and two daughters, Julia of Ireland and Mary of Olean, survive. Of the sons, four are engaged in the oil business and are well-known to the Journal readers.

Mrs. Rosa S. Aggas, aged 72 years, died at the home of her son, A. E. Aggas, of Tulsa, on Wednesday Aug. 12, 1914. She was the widow of G. W. Aggas, a rig-builder and contractor who was well-known in the Eastern fields. She formerly resided in McKean County, Pa., and later went to Parkersburg, W. Va., coming to Oklahoma 7 years ago, and since that time she has resided with her son.

Christian M. Hoover, died last week at Franklin, Pa. He was visiting some friends with his wife at Titusville the day that the Drake well came in, and after going home that evening he decided to drill a well near Franklin, Venango Co., where a similar seep occurred. This was the second well to be drilled, and opened up a new pool, the well yielding 100 bopd.

Theodore E. Tack, aged 78 years, died at his home in New York City on last Friday. He was one of the famous Tack Brothers who operated extensively in the early Pennsylvania oil fields. He is survived by his widow, three sons, and four daughters, the youngest of whom is Mrs. Allen A. Ryan of New York. Theodore E. Tack, Jr., and Frank L. Tack, two of the sons, live in Tulsa. His funeral was held on Monday.

p. 8, 10. Oklahoma. The last estimate of production in Kansas and Oklahoma was 320,679 bopd. Most of the fields are quiet. In the Cushing pool there are 57 producing properties with 149,214 bopd, and at Healdton there are 76 properties with 55,351 bopd production. There are 363 producing wells in both fields. At Healdton, the waste of oil due to rain was 30,000 barrels and due to fire was 10,000 barrels this past week. There are 220 producing wells at Healdton, with 20 wells drilling.

In Muskogee Co near Boynton the Merriott Oil Co. No.3 in the SW-1/4-SE-1/4

Sec. 22-14N-16E had about 100 bopd from 1,555-1,603 feet, with a showing of gas at 1,460 feet.

In Tulsa County, in the Wicey Pool, in Sec. 3-16N-13E, the Scioto Oil Co. No. 2 Privett was good for 150 bopd. Many wells are being drilled there. The district is now producing about 7,650 bopd.

p. 10. Washington Gas. Claims Are Filed. About 32 citizens of Richland, Washington, have filed oil leases within a 3 mile radius of the Vessey & McRae gas well about 5 miles northwest of Richland. The well is estimated to produce 312,000 cfgpd.

p. 16. North Texas. In Archer County, at Olney, the Archer County Oil & Gas Co. No. 1 Andrews Ranch struck an oil show at 940 feet. Previously, near Westfork, a little showing of oil has occurred. Many 1,000-to 5,000-acre blocks have been leased in the area.

p. 23. Union Oil Co. of California. Mr. W. L. Stewart, president of the Union Oil Co. of California, said that the war has not hurt his company, because they distribute most of their products in the United States. They have very little export trade.

p. 24. Standard Oil Co. of California Working Force Reduced. The Standard Oil Co. of California has laid off about 300 workers, due to the war and overproduction. They export to Germany and Britain. The company closed 10 stills, and cannot take any excess oil from producers.

p. 27. Some Shipments of Oil. The Oil Export Association, composed of Mid-Continent refiners, is filling 3 contracts for British oil shipments. The association has contracts for German shipments, but British naval forces dominate the sea and the German shipments will have to be curtailed.

p. 28. Laying Off Refinery Men. All refinery employees of the Standard Oil Co. of New Jersey have been placed on half time. This involves about 15,000 workers, 5,500 of whom are employed at Bayonne refinery. The Standard Oil Co. of New York and the Atlantic Refining Co. at Philadelphia are doing the same.

p. 28. Oil Vessels at Anchor. There are 15 tankers at anchor in the upper bay of New York, 9 British and 6 German. France depends on shipments from New York to a great extent, and there is a shortage of gasoline in France. About 2,000,000 barrels of oil a week are shipped out of New York, but most of this is now idle.

p. 28. Chased by British Cruiser. The Standard Oil Co. steamship Sioux, flying the German flag, arrived at Key West after a chase by a British cruiser. The ship left Tampico, Mexico, on July 30, 1914.

p. 28. Harry Witherup and Otis Flanagan Die. These men were riding through the Cushing Field in their automobile when they passed through a gas pocket near a well. The gas was ignited, presumably from the headlights, and both men were killed. This was the second fatality of this same character this summer in that vicinity.

p. 29. Fifty Men Laid Off. The Milliken oil refinery at Vinita, Oklahoma, has laid off 50 men. The plant may close. Almost all of the Refined products are exported, but due to the war, there is no business.

p. 43-45. Wells. Oklahoma. Approximately 20 wildcat wells were completed in Oklahoma the past week, outside of the known fields, in Atoka, Jefferson, Marshall, Stephens, Comanche, Latimer, Kiowa, Pontotoc, Lincoln, Choctaw, and Pittsburg Counties. (Details given). In Atoka County, the Olive Oil Co. No. 1 in Sec. 33-1N-14E was completed for 5 bopd. The Olive Oil Co. No. 2 in Sec. 25-1N-14E was dry. In Pontotoc County, the McThwaite Oil Co. No. 3 Payne in Sec. 31-4N-6E was completed for 10 bopd. In Pittsburg County, the Test Oil Co. No. 4 Cunningham in Sec. 17-3N-12E was completed for a gas well, near Ashland. In Marshall County, Armstrong et al No. 1 in Sec. 3-6S-7E have a gas well. In Kiowa County, five wells were completed with oil. The S. P. Nickelson et al No. 2 had

5 bopd in Sec. 19-6N-16W. W. B. Badgett No. 4 Watkins had 5 bopd in Sec. 27-7N-16W. Della Dean Oil Co. No. 2 Voth or Roth had 5 bopd in Sec. 34-7N-16W. The Thomas Hollis Oil Co. No. 12 Voth or Roth had 4 bopd in Sec. 32-7N-16W, and their No. 13 Voth or Roth in the same section had 5 bopd.

Approximately 232 wildcat wells were being drilled outside of the known areas, mostly in southern Oklahoma in Carter, Tillman, Sequoyah, Coal, LeFlore, Pottawatomie, Pushmataha, Mayes, Bryan, Pontotoc, Adair, Love, Greer, Murray, Garvin, Grady, Caddo, Johnston, Garfield, Cotton, Jackson, Beckham, Oklahoma, Cherokee, Seminole, Lincoln, Choctaw, Pittsburg, Atoka, Hughes, Jefferson, Marshall, Stephens, Comanche, Kiowa, and Miscellaneous Counties, such as McCurtain. Fourteen are listed in Atoka County, and twenty six are listed in Marshall County. There were 668 wells completed, including 36 gas wells and 101 dry holes, with 84,671 bopd new production in July 1914, and 889 new wells started, in July in Oklahoma.

In North Texas there were 41 wells completed in July 1914, including 1 gas well and 18 dry holes, with 931 bopd new production, and 93 new wells started.

In northern Louisiana, there were 35 wells completed in July 1914, including 3 gas wells and 4 dry holes, with 7,595 bopd new production, and 149 new wells started.

p. 47. Concerning Burma Oil Field. by Jay O. Winger. The Oil Fields in this area are prehistoric in age. Oil was discovered in Burma at least 300 years ago. The discovery was made at Yenangyaung, by noticing seeps in chungs or canyons, and the natives used it for medicinal purposes, and later for fuel and lighting purposes. The demand was soon in excess of supply, so the natives began to dig for the oil and let it collect in ditches or basins. As demand rose, they dug deeper, and now are bailing the oil out at 500 feet deep. Two 5 gallon cans are lowered by 4 women who get 8 cents a day, and a crude 4-legged rig is placed above the hole. There are about 2,000 such wells in the field. When the hole filled up with sand and mud, a person would go to the bottom and clean it out. This happens daily. A hose is tied to a helmet, with rags at the bottom to keep out the gas, and the worker is lowered with a shovel and supplied air from the hose.

In 1887 the British formed the Burma Oil Co., and began modern drilling, and now employ thousands of men and women. There are about 150 Americans, 500 English, and 2,500 natives, working in 6 fields. The oil is 42 to 48 gravity, and is refined at Rangoon. Mr. Carl B. Jacobs conceived of a metal pipe line to Rangoon. The natives first put in a one-mile pipe line by bamboo to the Irrawaddy River, and the oil was shipped out by boat before the British arrived. Some of the wells are 3,000 feet deep, and it seems that there is a producing sand every 200 feet. Some of the wells are spaced 60 feet apart, but they seem to hold up. The rock is very soft, and caving is common, so drilling is slow. In one instance, a man was trying to clean out the hole and drill ahead and it took him 3 years, and he still did not get the hole to bottom. The holes have to be cased frequently. About 75 wells are now being drilled. A work day is from 6 a.m. to 4 p.m., and about 10 men work on one rig.

Vol. 13, No. 12, August 27, 1914, p. 2. Export Oil Trade. In the fiscal year ending June 30, 1914, exports of mineral oil totaled 2,269,218,073 gallons valued at $150,879,850 dollars. Germany is a large consumer of this oil. In 1913, Germany imported 225,000,000 gallons of illuminating oil, and the United Kingdom imported 187,828,453 gallons of illuminating oil from the United States. France imported even more than that of the United Kingdom. The Netherlands and Belgium also import a large amount of oil from the United States, but the Dutch sell it again to Germany. Almost all of this is shut off, due to the war.

p. 2. The Canal as an Outlet. The operators in Oklahoma and Texas are now looking to a good trade with the Orient via the Panama Canal, by shipping oil to New Orleans and other gulf ports.

p. 2. They Fly Foreign Flags. The Standard Oil Co. of New Jersey flies 40 German flags on many of their tankers. The Standard Oil Co. of New York has 20 British tankers flying British flags. This saves on certain taxes. Now, it seems that the U.S. shipping trade is at war.

p. 4. Americans are Neutral. President Wilson has declared America neutral in the European War. The contending nations are all on friendly terms with the United States.

p. 4. Personal Mention. William McCann, a blacksmith from Muskogee was in Tulsa. He states that many shops are now running half time, and that this condition prevails from the East Coast to the West Coast.

Henry Kerstetter, of Tulsa, has just returned from Bradford, Pa., his home town. He states that the oil industry back East is depressed. Small producers who had debts are especially hurt. He and Ralph Weaver have a large acreage in Kay County, and are drilling wells there.

p. 4, 6. Noted in Passing. Employees of the Standard Oil Co. of New Jersey are working on half time.

The cutting of runs in California reduces the marketing of oil by about 15,000 barrels a day.

The Atlantic Refining Co. at Philadelphia has practically suspended operations because of a lack of exports.

In Canada, natural gas production was 12,500,000 cubic feet. It is not being exported.

The Ways and Means Committee of Congress has unanimously supported the bill to permit the manufacture of denatured alcohol to compete with gasoline for motor fuel.

Near the southwest Oklahoma line, in Texas, W. A. Doyle & Co., of New York City, are starting a deep oil test, in Sec. 199, 6 miles north of Quanah, Texas.

There has been a decided slump in deals on leases in Oklahoma. However, some companies are making purchases of production, with depressed prices.

In Warren, Pa., the operators are worried that if they have to shut down their wells, what would happen to water encroachment and the life of the well, and what should be done about the gas that is shut off?

Some weeks ago, the Shell Company of California, Inc. was incorporated, and they would no longer use the name American Gasoline Company.

The Oklahoma Natural Gas Co. has a new compressor station in the south end of the Cushing Field. This will help in their supply of gas to Oklahoma City, Guthrie, Shawnee, and other central towns.

p. 8, 10, 12. Oklahoma. Work throughout Oklahoma is quiet. About 327,000 bopd was produced from Kansas and Oklahoma at the end of last week, of which 320,500 was from Oklahoma, and 141,000 bopd of this was from Cushing.

In Comanche County, the Oklahoma Petroleum Co. struck some oil at 170-180 feet in the SW-1/4-Sec. 19-2N-10W. The Rocky Mountain Oil Co. well on the Curtis Farm is holding at 25 bopd in the E-1/2-SW-1/4-Sec. 31-2N-10W. About 12 wells are drilling in this area.

In Pontotoc County, there is much activity around Ada. The McThwaite Oil & Gas Co. No. 3 in the NE-1/4-Sec. 31-4N-6E had 2,000,000 cfgpd at 980 feet. No. 1 was a gas well of the same caliber, while No. 2 was an oil well of about 25 bopd. No. 1 was a quarter of a mile south of No. 3. Three locations east of No. 3, the company is starting No. 4. They are also in the NW-1/4-Sec. 13-4N-5E, and are at 755 feet, having a small showing at 400 feet. There are also other wells drilling in the area.

p. 12. Texas. The Amarillo Oil & Gas Co. No. 1 Word Farm in Sec. 4 of E.L. & R. Ry. Co. is at 1,575 feet, near Amarillo, Potter County, and the company will go deeper.

p. 22. Tanker as War Prize. The British took the German tanker Leda to Bermuda, and took 100 prisoners. Sir Christopher Craddock of the British Cruiser Suffolk made the capture. Martial law is in full force in Bermuda. The prisoners will be kept on Princess Island. The ship was empty and is chartered to the Standard Oil Company.

p. 22. Consumers of Gasoline. One-fourth of all of the cars owned in the world are in the United States, now counted at 1,400,000 in the U.S. Great Britain is second with 250,000, and France is third with 93,000. Persia has 11.

p. 26. Bruce Harris, An Old Timer. Recently, a man inquired as to the whereabouts of Bruce Harris, and the Oil & Gas Journal found him in Tulsa. Away back in the 1870's Mr. Harris worked on a 3-inch pipe line in Butler County, Pa. Later he was a driller. He drilled at Baku, Russia, for 4 years, and in Egypt, for 2 years. He said that the Egyptian wells are failures, and that the country is poverty-stricken and worn out, and that the majority of the people are destitute. They need a good oil strike to help their economy. He is still active and moves about quite a bit.

Vol. 13, No. 13, September 3, 1914, p. 3. The Danube River is closed to the oil trade. A fleet of oil boats is tied up by war. Roumanian oil producers, like American producers, are having troubles of their own.

Gasoline drives aeroplanes, autos, trucks, boats, warships, and trains. With the war, there will be an increased demand for oil and its products, but the shippers will have to take desperate chances to deliver the goods.

p. 3. Mid-continent Production. At the close of last week, the production was 381,000 bopd, with 175,800 from Kansas and Oklahoma outside of Cushing, 151,200 at Cushing, 34,000 at Caddo, and 20,000 at Electra. One well at Cushing in the Bartlesville sand of the Numa Oil Co. came in at 6,960 bopd and is the largest well completed to date in that field.

p. 4. Improved Export Business. With the British seemingly winning the naval war, exports of oil to Britain and Scandinavian countries are resuming. The business of the Standard Oil Company at Constable Hook, N.J. has picked up 40% in the last 10 days. Other companies are sending refined oil to Britain through a brokerage firm in New York City, according to the Export Oil Corporation in Tulsa.

p. 4. Oil-Fuel in War Vessels. Almost all of the navies of the world have switched to burning fuel oil to generate steam. Britain has led the way, giving that country the advantage in the war. Germany will have to get oil from Austria or Hungary, or Roumania. Russia has the Baku Field. With increased demand by the war, there should be higher prices for oil.

p. 6. Personal Mention. Jack Grundish was in Tulsa from Independence, Kansas, his home. He drilled the first well in McIntosh County, Okla.

J. F. Hutson, of Muskogee, formerly of Pittsburgh, Pa., spent several weeks at Henrietta, the home of his wife. He is interested in the Eram and Boynton Districts.

E. W. Marland, of Ponca City, is spending two weeks in Pittsburgh, Pa., and other Pennsylvania points. He has interests in the Newkirk, Ponca City, and Blackwell Pools. His Murdock tract in the Newkirk Pool is one of the most prolific.

A. L. Derby, of Newkirk, is spending a short vacation in Colorado. He has drilled more wells in Kay County than any other contractor, and has some production of his own. Recently he sold his interests in the Jens Marie Oil Co. in the Newkirk Pool. He drilled the first well in the Carlyle Pool, Illinois. He also has extensive interests in Cowley County, Kansas.

p. 6, 8. Noted in Passing. California's oil production dropped 1,000,000 barrels in July.

In San Francisco there has been a severe slump in oil company stocks.

About 20 oil tankers of the Standard Oil Co. are tied up in Pacific ports, due to the war.

At Dover, Delaware, the Jones-Buehl Co., capitalized at $3,000,000, has been chartered to acquire oil and gas properly.

Muskogee oil men have formed a company to develop Ozark territory, and expect to begin about November 1, 1914.

Another oil company has been formed to drill near Ozark, Arkansas, north of the Arkansas River.

Three British warships have been ordered to the Gulf of Mexico to protect oil tankers now menaced by German cruisers.

The Oceana, a foreign ship, hoisted the American flag last week and sailed for Genoa, Italy, the first vessel to transfer its allegiance because of the war.

The British Government is using great quantities of fuel oil in its Navy, and American producers expect large contracts shortly.

The opening of the Panama Canal will mean increased traffic for oil between Australia and the United States.

The electric fan is to have a rival, a fan driven by vaporized kerosene. It is 12 inches high, weighs 7 pounds, and will run 24 hours on a pint of kerosene.

Owing to a long tie up in oil in California due to war, the producers are now building steel tanks for extra storage, especially for oil being stored behind earthen dams.

p. 12. 14. Oklahoma. The older pools are almost all shut down in Oklahoma and Kansas. Only the newer pools are being developed.

In Creek County, Litchfield & Sullivan on the McIntosh Allotment in Sec. 27-14N-8E have a 50 bopd pumper. Near Kellyville, the Great Western Oil Co. in the NW-1/4-SE-1/4-Sec. 24-17N-10E, had a number of nice oil flows at 2,495 feet deep, on touching into a sand.

p. 16. Oil Field Fires. Recent fires in the past 10 days at Healdton and Cushing, due to lightning, have caused a loss of 950,000 barrels of oil.

p. 25. Tankers Still in Port. The Standard Oil Co. of New Jersey still has most of its tankers in port. A few ships are at sea with British flags and will probably be safe. When war risk insurance reaches a tolerable level, probably the oil business will go back to normal.

Vol. 13, No. 14, September 10, 1914, p. 1. Mid-Continent Production. A the close of last week, the production was 385,800 bopd, with Kansas and Oklahoma 173,000 bopd outside of Cushing, and 159,800 bopd at Cushing, 32,000 bopd at Caddo, and 21,000 bopd at Electra.

p. 2. Ports Are Not Blockaded. Germany has declared that her ports are not blockaded, and that American ships are welcome. Almost all ports are open, but many areas are mined off Britain, France, and Germany. Germany needs oil, but the shippers will have to evade British ships. Last year, Germany consumed 5,437,500 barrels of kerosene, of which 77% came from the United States.

p. 4. Personal Mention. James K. Duffy and Donald Slingluff, of New York, president and vice-president of the Export Oil Corporation, are in Tulsa in the interest of their concern, composed of 7 Mid-Continent refiners. They have made 252,000-barrel shipments each to foreign lands.

p. 4, 6. Noted in Passing. The number of oil men now idle is greater than in any time of the oil industry.

Dispatches from London indicate that the price of petroleum products has advanced greatly. This was to be expected.

The Russian troops have seized the Galician oil fields, Germany's and Austria's source of petroleum.

Many of the byproducts of petroleum and coal tar were manufactured in Germany. With the war, the American manufacturers will have to make these products.

At Zeandale, Kansas, at 1,000 feet deep, drillers struck a quartz rock, said to contain gold in considerable quantities. People are interested in a gold boom.

J. S. Katter, an Assyrian of Fort Smith, Arkansas, some time ago organized an oil company with 5 of his fellow countrymen. They recently hit 2 good oil wells in the Cushing field, and now do not have to sell Assyrian novelties.

Vice-president Pratt of the Standard Oil Company said that their prices have not increased because of the war.

Holland is holding a neutral position in the war. Mr. G. Meyer, of Tulsa, has been summoned back to Holland to joint the Dutch Army, where he was a reserve first lieutenant. He refused to go, having business and family interests in the United States.

p. 8, 10, 12. Oklahoma. The past week has been quiet. The pipe lines are running from 35 to 60 percent capacity. About 332,325 bopd was produced in Kansas and Oklahoma, of which 159,833 was from the Cushing Field. At Healdton, about 45 rigs are working, and the Magnolia Pipe Line Co. is moving about 8,000 bopd to Fort Worth at about 65 cents a barrel, and about 242 wells are producing about 40,000 bopd, but much of this is in storage. At Cushing, about 200 rigs are working, and the majority of the production is from 294 wells completed in the Bartlesville sand.

In LeFlore County, the Prairie Oil & Gas Co. is considering laying lines to the Cameron pool, where some good wells have been completed, but there is no outlet for the production.

p. 16. Texas. In Hardeman County, six miles north of Quanah, W. A. Doyle and Associates from New York are at 325 feet on the A. J. Martin Ranch, using a rotary rig.

p. 29. Ways and Means Committee Will Approve Gasoline Tax. The Ways and Means Committee of the House has tentatively approved a tax of 2 cents per gallon on gasoline, in addition to a tax on liquor, and on incomes down to $2,000 a year. The additional tax and increases are considered a war tax due to loss of business due to war. The bill has to be approved by the Senate.

p. 29. German Vehicles. In the German army, there are 60,000 ambulances, in addition to other motor driven vehicles. The opposing enemies also have a very large number of motor vehicles. Gasoline is a big item with the European military.

p. 30. Oil Franchise for Magnolia. The Magnolia Petroleum Co. has been granted a 25-year franchise to pipe line fuel into Fort Worth. This is not exclusive of other companies. Magnolia is erecting a $1,000,000 refinery near the packing houses and will pipe fuel oil to the factories in the area with about 6 miles of lines.

The South Mid-Continent Oil & Gas Co. (Col. R. A. White) hit gas at 600' south of Ringling, in Texas. White established the El Reno Daily American.

p. 31. Red River Bed Problem. Mr. Gus Shaw of Texarkana, desired to buy an island in the Red River between McCurtain County and Texas. He has a plantation in Texas, and has written to the Choctaw Nation and to the Oklahoma State School Land Commission and to the U.S. Government. The issue is still in litigation.

p. 33-34. Oklahoma's Many Oil And Gas Sands. Only productive sands are mentioned, such as the Bartlesville sand, from which almost one-half of the oil production in Oklahoma is produced.

In Washington County, there are sands at 70 feet, 200-215 feet, 450-470 feet, the Wayside sand at 650-690 feet, the Peru sand at 700-760, the Squirrel sand, the Bartlesville sand at 1,150-1,250 feet, the Tucker sand at 1,300-1,350 feet, and the Burgess sand at 1,400-1,600 feet, resting upon Mississippi lime. At Copan, an odd sand occurs at 110-150 feet. The Bartlesville has 30 to 34.3 gravity oil.

In Tulsa County, in the Bird Creek District, the Big lime is at 400 feet, then a sand at 750-800 feet, the Bartlesville sand at 1,200-1,275 feet, and the Tucker sand at 1,375 feet. At Turley and Flat Rock, there is a sand at 700-750 feet, the Oswego lime at 900-930 feet, the Bartlesville sand at 1,325-1,385 feet, and Tucker sand at 1,537-1,572 feet. At Owasso, the Tucker has 34 to 37 gravity oil.

In Kay County, the Newkirk sand is found from 850 to 1,035 feet, with 39 gravity oil. The Ponca sand is at 1,500-1,610 feet, with 41 gravity oil. North of Blackwell, the Bartlesville sand is at 3,445-3,472 feet, but some say that this is the Mississippi lime.

In Osage County, in the Boston Pool, at 450 feet and 1,290 feet, there are gas sands, and at 2,240-2,340 feet there is the Bartlesville sand. In the Avant District, the Big lime is at 890-940 feet, the Oswego lime at 1,100-1,160 feet, the Squirrel sand at 1,183-1,213 feet, the Bartlesville at 1,525-1,565, and Tucker sand at 1,775 feet with gas. At Bigheart, the first producing sand is the Bartlesville at 1,770-1,805 feet, and the Tucker sand at 1,902 feet. At Nelagoney, the Bartlesville is at 1,400 feet. At Osage Junction, the Musselman sand is at 420-450 feet, and the Wayside sand is at 1,290-1,315 feet. The oil is from 32 to 38 gravity. Oil occurs in the Bartlesville sand in T. 27 N.- R. 10 E. at 1,790 feet.

Also in Tulsa County, in the Bixby District, a sand occurs at 1,225-1,285 feet, with gas, and another is at 1,310-1,390 feet, and two others at 1,600 and 1,750 feet. The oil is 32 gravity. In the Perryman Pool, there are 2 oil sands at 900 and 1,100 feet, with 32-36 gravity oil. At Broken Arrow, an oil sand is at 1,240-1,290 feet, named the Bartlesille, with 37 gravity oil. In the Glenn Pool, the top sand is at 976 feet, followed by the Skinner at 1,140-1,165 feet, the Red Fork at 1,500-1,530 feet, a stray at 1,625-1,660, the Bartlesville at 1,700-1,780, and a gas sand at 1,850 feet. The oil is 36 gravity. The Lost City Pool, near Sand Springs, has the Lost City sand at 1,700-1,750 feet. In the Red Fork and Taneha Districts, the Red Fork sand is at 1,375-1,395 feet, and the Bartlesville is at 1,450-1,510 feet. The oil is 34 gravity.

In Creek County, in the Cushing Pool, the Musselman sand is at 800-820 feet, a gas sand at 1,175-1,195 feet, the Layton at 1,450-1,520 feet, the Wayside at 1,640-1,670 feet, the Cleveland at 1,850-1,950 feet, the Oswego lime at 2,175-2,235 feet and also known as the Wheeler sand, and the Bartlesville at 2,625-2,705 feet. The oil is 39-43 gravity. The Bartlesville has the majority of the production, with some wells at 1,000 to 6,000 bopd. At Mounds, the Bartlesville is at 1,685-1,705 feet, and the Boock is at 1,950-1,980 feet, the Second Boock at 2,180 feet, and the Mounds sand at 2,300-2,320 feet. At Mannford, the Wayside sand is at 1,225, 1,250 feet, the Skinner is at 2,154-2,189 feet, and the Nemire sand is at 2,240-2,280 feet.

In Pawnee County, the Cleveland Pool has the Layton sand at 725-795 feet the Wayside sand at 1,200-1,210 feet, the Cleveland sand at 1,670-1,750 feet, the Skinner at 2,140-2,190 feet, the Bartlesville at 2,390-2,490 feet, and the Tucker sand at 2,520-2,550 feet.

In Carter County, in the Healdton Pool, the sands are at 725 and 781 feet with gas, and at 835-885 feet, and 935-1,015 feet, and 1,041-1,091 feet with oil of 28-33 gravity.

In Okmulgee County, at Bald Hill, there is a sand at 1,180 feet with gas, and a sand at 1,450-1,460 feet. The Glenn-of-Morris sand is at 1,650-1,700 feet, and at 1,705 feet another sand occurs. The oil is 34.3 gravity. In the Wicey Pool, 8 miles south of Bixby, there is a sand at 630-760 feet with gas, another at 1,200-1,230 feet, and the Mounds sand at 1,500-1,525 feet, and Sapulpa sand at 1,785-1,820 feet. The oil is 37 gravity. The Boock sand Field, near Okmulgee, is a term used for the Boock sand that was struck later in some of the older fields. The Boock sand is at 1,200-1,220 feet, with some wells flowing 3,600 bopd or more. The Second Boock sand is at 1,325-1,345 feet. The oil is 37 gravity. In the Hamilton Switch Pool, a gas sand is at 1,395 feet, and the Mounds sand is at 2,030-2,048 feet. The oil is 35.5 gravity. At Morris, the Bartlesville is at 700-850 feet, the Boock is at 1,105-1,120 feet, the Second Boock at 1,218-1,233 feet, the Glenn-of-Morris is at 1,724-1,784 feet, and the Fields sand at 1,845-1,880 feet. The oil is 34-35 gravity. In the Okmulgee District, there is a sand at 1,915-1,937 feet. At Schulter and Henryetta, there is a sand at 1,775-1,800 feet, and the Fields sand at 1,950-1,970 feet. The oil is 28-40 gravity. In the Tiger Flats District, the Bartlesville is 140 feet thick, with gas, and the Mounds sand is at 1,800-1,840 feet, with 34-37 gravity oil. In the Pine Pool, the Fields sand is at 1,920-1,940 feet.

In Muskogee County, near Boynton, a gas sand occurs at 820-870 feet, with others at 1,400, 1,550-1,590 feet, the latter being the Glenn oil sand. In the Haskell District, the Second Boock sand is a gas sand at 1,360 feet. In the Muskogee District, the Fields Sand is at 1,075 feet, with one at 1,345-1,405 feet, and one at 1,425-1,455 feet. The oil is 36 to 40 gravity. In the Yahola District, the Boock sand has gas at 850 feet, and the Fields sand is at 1,575-1,590 feet in T. 14 N. - R. 18 E., the Fields sand is at 1,000 feet.

In Wagoner County, at Coweta, the Mounds sand is at 1,425-1,460 feet. The oil is 36 gravity. In the Wagoner District, there are 2 oil sands at 400 and 700 feet. The oil is 38 gravity.

In Rogers County, at Inola, there is a sand at 550 feet, with 37 gravity oil. In the Sageeyah area, an oil sand is at 950 feet, with 34 gravity oil.

In Craig County, in the Wimer District, the Tucker sand is at 680 feet.

In Nowata County, near Nowata, the Bartlesville sand is at 730-760 feet, with 30-36 gravity oil. In the Alluwe District, the Nemire sand is at 400-420 feet, and the Bartlesville is at 465-480 feet. In the California Creek District, the Tucker sand is at 1,030 feet, with gas. At Coody's Bluff, the Bartlesville is at 400-420 feet, and the Tucker sand is at 600-618 feet. In the Delaware-Childers area, the Bartlesville is at 750-800 feet. In the Adair Pool, the Bartlesville is at 1,025-1,055 feet, with 32 gravity oil.

In Pontotoc County, near Allen, an oil sand is at 750 feet, with 31 gravity oil. Near Ada, there is a gas sand at 975 feet.

In Coal County, there is oil at 1,527 feet.

In Stephens County, there is gas at 765 and 825 feet. In the Loco Field, there are 3 gas sands at 137, 594, and 972 feet.

In Kiowa County, in the Gotebo Pool, there is an oil sand at 730 feet.

In Comanche County, in the Lawton Field, an oil and gas sand occurs at 320 feet, and an oil sand occurs at 600 feet.

In Seminole County, at Wewoka, the Bartlesville sand is at 1,600-1,674 feet.

In LeFlore County, at Poteau, there are 4 gas sands, at 1,330, 1,500, 1,600, and 1,803 feet.

p. 43-45. Wells. Oklahoma. About 7 wells were completed this week outside of the main fields, in Marshall, Cherokee, Pontotoc, and Miscellaneous Counties. (Details given). About 232 rigs were drilling in southern Oklahoma and other wildcat areas, in Carter, Comanche, Stephens, Marshall, McCurtain, Kiowa, Hughes, Jefferson, Seminole, Lincoln, Choctaw, Pittsburg, Atoka, Adair, Love, Greer, Murray, Garvin, Grady, Caddo, Jackson, Beckham, Tillman, Sequoyah, LeFlore, Pottawatomie, Pushmataha, Mayes, Bryan, Pontotoc, Coal, Garfield, Johnston, and Oklahoma Counties. (Details given). In August, 588 wells were completed in Oklahoma, including 26 gas wells and 81 dry holes, with 97,362 bopd new production, and with 864 new wells being drilled. About 14 wells were in Atoka County and 26 in Marshall County.

Vol. 13, No. 15, September 17, 1914, p. 1. Mid-Continent Production. About 393,850 bopd production was in the Mid-Continent at the close of last week, with 170,000 in Kansas and Oklahoma outside of Cushing, 170,850 at Cushing, 32,000 at Caddo, La., and 21,000 at Electra, Texas.

p. 1. Gasoline is Not a Luxury. Some members of the House Ways and Means Committee said that gasoline should not be taxed, and that it is not a luxury for only the rich, and that such a tax should not be used to make up revenue lost by the war. The oil industry is already overtaxed, and has been hit hard by the war.

p. 1. War Prayer. On October 4, 1914, President Wilson has proclaimed that day a day of prayer to be offered for a cessation of the war.

p. 2. Russian Petroleum Industry. There are 7 producing regions in Russia. At Baku, the principal field, modern drilling started in 1870. In 1882, about 800,000 tons were produced, and in 1901 about 11,890,000 tons were produced, and since then about 9,000,000 tons a year has been produced. In 1912, there were 182 companies operating, with about 3,142 wells. Most of the oil was produced by 17 firms that had been there for 25 years or more. The wells averaged 555 to 773 yards deep. At Grozny, drilling began in 1893, but dug wells were earlier. There is about 2,497 acres in the field, and about 12 firms produce about 1,210,000 tons a year. At Maikop, the output was very small since 1912. At Emben, in the Gurlevs District of the Ural Mountains, the field was opened in 1912. In the Dos-Sor Field, 20 wells were sunk by 5 firms, and a 41 mile line connects to the Caspian Sea. One well yielded 16,000 tons a day. At Ferghana, there are 4 regional fields, Shan-Su, Maili-Su, Chimion, and Sel-Rokho. In 1912, about 65,000 tons of naptha was produced. At Ukhta, in the Olonetz Province, a bed 10 to 35 feet thick was found, and each well yields 3 to 5 bopd, at 80 to 100 fathoms deep. At Sakhalin, in 1913, about 895,080 tons of naptha was produced.

p. 3. War and Oil in Roumania, Scandinavia, and England. In Roumania, the exports of kerosene and benzine to France, Germany, and Switzerland has been suspended. Austria has confiscated all products on the Danube River. The only

exports are by sea, with a large shipment arriving in England, consisting of 1.25 million gallons of illuminating oil, from the Black Sea. Denmark, Norway, and Sweden are now importing much oil from foreign ports, now that the war has cut off their Russian supply. In England last week, about 10,000,000 gallons of petroleum products were imported, much from the Orient, and much by the Anglo-American Oil Company.

p. 6. Noted in Passing. The Oklahoma Democratic Party in its recent State convention adopted a plank favoring the government ownership of pipe lines.

The Truly Lake Oil Co., capitalized at $25,000, will test a 7,000 acre tract in Jefferson County, Mississippi, for oil and gas.

Colonel George Richardson, one of the wealthiest ranchmen in Western Texas, is planning several test wells to be drilled on his lands near San Angelo, Texas.

At Claremore the Chaney-Hughes Oil & Gas Co. has been organized, to pipe gas into Claremore from their wells nearby.

The Cimarron Valley Oil Co. of Guthrie, has given a contract to the Ostrich Oil Co. to drill a well to 3,000 feet, 6 miles east of Guthrie. The well is already at 1,000 feet with a 10-inch hole.

Nearly a score of Americans working for the Carribean Petroleum Co., a subsidiary of the Barber Asphalt Co. in Venezuela, have returned to the United States. The operations are shut down due to the war.

H. A. Wheeler, E. M., of St. Louis, Mo., has published a book "The Illinois Oil Fields". From 1905 to Dec. 31, 1913, about 21,744 wells were drilled, of which 18,025 were producers, and these have yielded 209,018,914 barrels.

Gasoline was 20 cents a gallon last year, and has since dropped to 10 cents a gallon last april, and is now 12 cents a gallon.

p. 8, 10, 12. Oklahoma. At Cushing, 10,211,146 barrels of oil are in storage, and more wells continue to be drilled. The price is 50 cents a barrel. About 227 wells are now drilling. About 170,850 bopd is now being produced, with 158,850 bopd from the Bartlesville sand from 304 producers, and 12,000 bopd from the Wheeler and Layton sands. About 23 companies are producing from this field. (Details given). The field is 10 miles long by about 5 miles wide, and covers about 350,000 acres. Drumright is the metropolis of the pool, with dances and picture shows being the main amusements. E. H. Horsley has 100 teams and H. R. Ketchum has 65 teams working in the Cushing Pool. Both of these gentlemen did the bulk of the work on the Glenn Pool during its busy days.

In Comanche County, east of Lawton, Owen, Wilson et al on the Miller Farm in the SW-1/4-Sec. 13-2N-10W, one-half mile from the Allen well, has about 1,500,000 cfgpd from a sand at 800-822 feet.

p. 30. Gas for Lawton Consumers. Boone & Morford, and Chaffee, Owen & Wilson, will incorporate as a new gas corporation, to pipe gas into Lawton from their wells in the Lawton Field east of town.

p. 30. DeSoto Field, Louisiana. The Reserve Natural Gas Co. was recently organized, by M. W. Behan of Fort Worth, as president, and Charles A. Dally of Pennsylvania as general manager. They will lay a 54-mile 16-inch gas line from the DeSoto Field to Oil City, connecting with the Arkansas Natural Gas Co., the Texas Co., and the Southwestern Gas & Elec. Co. lines. This will put many people to work that were idle because of the war and overproduction problems.

p. 30. Temple, Texas, Gas in Water Well. The artesian well drilled at the asylum some months ago in Temple, Texas, struck enough gas to supply the kitchen in the asylum. A similar well was drilled about 2 years ago, by the city, and lately it also is flowing gas, which may also be utilized for fuel.

p. 31. Exit The Tax Ferret. After 4 years, the State Supreme Court on Thursday last declared the 1898 Statute of taxing mining leaseholds as invalid. Claims amounting to more than $5,000,000 in back taxes were accumulating against the oil companies in Oklahoma who had leases. Thus passes the tax ferret out of the Oklahoma oil game.

p. 31. Electric Rays Locate Minerals, Water, Etc. Since 1910, Professors Liembach and Loewy, of Goettingen University, Germany, began to experiment with electric rays to locate water, and minerals in the earth. They located potash beds of great value. On April 26, 1914, a small expedition was sent to German Southwest Africa under Dr. Helmut Kroenke, to verify the electrical method of locating ore bodies and water. On September 12, 1914, Dr. Kroenke verified the validity of the method. Some people think that this might work for locating oil.

p. 31. Germany's Need Of Oil. Russell E. Mason, of Niles, Ohio, former Consul at Frankfurt, Germany and Marseilles, France, said that when he left Berlin recently, the Germans were trying to develop alcohol for motor fuel in place of gasoline, having derived almost all of their gasoline from Russia and the United States. France will continue to get its supply from the United States, but Germany is cut off.

p. 31. Advertisement. Oil Field Maps. Tulsa Engineering & Supply Co., Ground Floor Pioneer Building, Tulsa. Engineering Surveys, Special Drafting, and Supplies. Maps show all pools, all wildcat developments, from Texas to Kansas, and in Oklahoma from 9 west to the Arkansas line. Price $5.00 to $8.00.

p. 33. Shortage of Gasoline. Germany is now producing alcohol from potatoes and other vegetables. Its chief source of gasoline is from the United States, if it can get any from the U.S. This situation greatly aggravates the german military.

p. 33. Pipe Line Tariffs Filed. The Interstate Commerce Commission has received tariffs filed by the various companies in the United States. The tariff is between 20 and 32 cents a barrel charged by the various lines for gathering and transporting the oil.

Vol. 13, No. 16, September 24, 1914, p. 1. Mid-Continent Production. At the close of last week, the production was 396,000 bopd, with 169,000 bopd from Kansas and Oklahoma outside of Cushing, 177,000 bopd from Cushing, 31,000 from Caddo, La., and 19,000 bopd from Electra, Texas. Mr. John H. Markham, Jr., recently brought in a Bartlesville gusher in the Cushing Pool at 7,200 bopd, and some asked him why he would not drill deeper to get 12,000 bopd, and he replied "What would I do with the oil?" Last Wednesday was moving day for Dropright in the Cushing Pool. The entire town moved to a new site one mile away, to make way for new drilling.

p. 2. Once More The Tax Ferret. Having disposed of taxes on leases, the Tax Ferret has decided to try a new game, to tax stocks, bonds, and monied capital of any type owned or traded by oil companies in the past 7 years in Oklahoma, under Section 7138 of the Revised Statutes of Oklahoma. The companies have filed briefs against the Tax Ferret, citing the 14th Amendment against double taxation. One small oil company, worth $12,000, would have to pay $300,000 in taxes under the tax formula. One corporation would have to pay $200,000,000. A long and bitter fight is expected again.

p. 3. Immense Gusher in Egypt. The Anglo-Egyptian Oilfields Corporation has drilled some small wells, and the production has been about 6,000 tons a week at maximum. Recently, they deepened one of the wells and it came in at 28,000 bopd, and after control, now produces about 14,000 bopd. A refinery has been erected at Suez. Hitherto, Egypt has had to import oil for its railways and factories. In the Sudan, there will be a wide use for oil products.

p. 3. How War Affects Exports. In 1913, in August, 101.7 million gallons of illuminating oil were exported from the United States, but in August 1914, only 48 million gallons were exported. Crude oil was 16.2 million gallons in Aug. 1913, and 10.5 million gallons in Aug. 1914. Gasoline was 16 million gallons in Aug. 1913, and 9 million gallons in Aug. 1914.

p. 4. Personal Mention. Sam Redd, who is leasing for C. B. Shaffer, is visiting his old home at Buffalo, N.Y. On his return, he will be accompanied by his wife. They will make their home in Tulsa.

B.L. Carpenter who is in charge of operations for the Mid-Co Petroleum Co.

travelled to San Francisco in the interests of his company which is controlled by Marion Travis & Co. They have a tract in the north Cushing Pool.

p. 6. Noted in Passing. Decius & Levy, a Muskogee firm, have leased 8,000 acres near Ozark, Arkansas, and are drilling a test well.

In California, they have a new plan to revive the oil business. They would have the U.S. Government buy oil and erect storage tanks.

In China, 80 wells have been completed, and considerable oil is now being produced. There are 12 pools there now being worked by Americans.

In Trinidad, and Venezuela, the American drillers and workers have been laid off for two months, owing to demoralized business conditions.

The Mexican Petroleum Co. has decided to postpone the building of a refinery above New Orleans, because of bad financial conditions due to the war.

Stocks in oil companies have not been in brisk demand, because of the war.

The Santa Susanna Syndicate, a French concern in Ventura County, Cal., has suspended operations because of the war. They lack funds because business is bad in France.

The San Wilfrido of the Eagle Oil Transport Company, which sank in the Elbe River some weeks ago, was one of the gigantic oil tankers. Most of the crew are now prisoners of war in Germany.

p. 6. Recent Deaths. James E. Vincel, aged 60 years, died on Friday, Sept. 18, 1914, at Kansas City. He was struck by an automobile. He is the father of Edward S. Vincel, purchasing agent for the Kansas Natural Gas Co., and Peak Vincel, who is in the natural gas business at Ramona, Oklahoma.

George B. Ewing, 70 years of age, died at his home in Lima, Ohio, Sept. 18, 1914, after a protracted illnesses. He was a producer in the oil business. He was a native of Meadville, Pa., and worked in the days of the Oil Creek boom. Surviving are the widow, three daughters, and two sons; Mrs. J. W. Hayes, Lima; Mrs. L. L. Terrell, Guy's Mills, Pa.; Mrs. C. N. Wells, Ashtabula County, Ohio; R. B. Ewing, Lima, Ohio; and C. E. Ewing, Wann, Oklahoma.

p. 8, 10, 12. Oklahoma. At Cushing, the Bartlesville sand production is about 178,510 bopd from 319 wells. The Layton and Wheeler sands yield about 11,500 bopd.

In Jefferson County, west of Healdton, the Corsicana Petroleum Co. completed an oil well for 175 bopd in Sec. 1-4S-4W. The first producer in the county was by the Twin State Oil Co. No. 1 Bess Tucker in Sec. 36-3S-4W.

In Atoka County, near Atoka, Bowen & O'Day are starting a wildcat in Sec. 13-2S-11E, on the Angerin Farm, a mile from Atoka.

p. 12. Oklahoma Oil Producers Agency. Oil producers met in Tulsa to discuss their common problems of over-production and the war, and prices fixed by the Prairie Oil & Gas Co.; and the Oklahoma Corporation Commission orders to fix oil at 75 cents a barrel, and to regulate common carrier pipe lines, along with the declaration that oil belongs to the people of Oklahoma and that the State has the right to conserve the oil. A charter was granted last Friday for the formation of the "Oklahoma Oil Producers Agency", capitalized at $25,000. They will be a bureau to monitor all types of situations affecting the oil industry, from taxes, foreign production, refining, marketing, pipe lines, production, legislation, rules, stocks and bonds, investments, well information, etc.

p. 25. Prairie Stops Runs. The Prairie Oil & Gas Co. issued an order this morning to stop the running of oil from all leases in Oklahoma, because the Corporation Commission said that they could not buy oil for less than 65 cents a barrel. Prairie contends that some people can buy at 55 cents.

p. 30. New Conservation Measure. Congress is now considering a new conservation bill which would allow leasing of public lands by oil companies, involving 700,000,000 acres. If a company finds oil, they will be issued a permit to develop the area for 2 years, and will receive a patent for 160 acres if within 10 miles of known production, and 640 acres if more than 10 miles away. The bill is insured of passage.

p. 30. Gas. The production of natural gas in the United States in 1913 has broken a record, at 581,898,239,000 cubic feet, at about 15 cents a cubic foot. West Virginia was first and Pennsylvania was second. About 24,060,817 gallons of gasoline was extracted from the gas, at about 10 cents a gallon. Oklahoma produced about 6,462,968 gallons of gasoline from gas.

Vol. 13, No. 17, October 1, 1914, p. 3. Mid-Continent Production. Estimated production at the close of last week was about 385,500 bopd, with Oklahoma and Kansas outside of Cushing being 165,000 bopd, Cushing 171,500 bopd, Electra 19,000 bopd, and Caddo 30,000 bopd. Two gas wells were reported in Comanche County.

The Reserve Natural Gas Co., in Northern Louisiana, is laying a 16-inch line from the DeSoto Parish to Mooringsport, where compressor stations will send the gas to Shreveport, Marshall, Texarkana, and Little Rock.

p. 3. Mexico. There is trouble with the Mexican Government. Diaz is an exile. Madero is in his grave. Huerta is banished from the country. The fate of Carranza could be the same as one of the previous three, as he is dealing with Villa, his former supporter and now his enemy. Villa possesses power of an overmastering kind and will ruthlessly remove opposition to his will.

p. 3. An immense number of oil-field workers are idle. Winter is coming on and prospects are discouraging.

p. 4. Mexico. Attitude of Carranza. Mexico needs to finance its needs, and Carranza finds that taxation of oil furnishes the country the quickest assets. National elections will be next month, and if Carranza wins, the oil companies will not be able to make a profit. In the United States, there is strong sentiment to tax imported Mexican oil, making things worse.

p. 6. Personal Mention. Daniel Moran, son of Martin Moran of The Texas Co., is in Tulsa, after a trip to South America, Louisiana, and Texas.

E. H. Short, a well-known operator at Wichita Falls, Texas, who operated there at the beginning of the discoveries, has decided to locate his home in Tulsa.

John Crawford, of Parkersburg, W. Va., is visiting in Tulsa. He is head of the Parkersburg Rig & Reel Co., and Muskogee Refining Co., and has interests in the Bartlesville sand in the Cushing Field.

Theodore N. Barnsdall, of Pittsburgh, Pa., was in Tulsa. He hit the pay streak in the Bradford Field 35 or more years ago, and is still active. He is never afraid to take a chance. He grew up in the oil business in Oil Creek days away back in Titusville, Pa., where his father, William Barnsdall was a pioneer resident and who was mayor of Titusville for one term.

p. 6, 8. Noted in Passing. The Scottish shale oil industry is not affected by the war. Every year about 3,000,000 tons of shale are processed, and about 72,000,000 British gallons or 250,000 tons are produced.

The Chaney-Hughes Oil & Gas Co. of Claremore, Okla., was organized, with capital of $30,000. The officers are: George Metcalf, president; Samuel Chaney, vice-president; M. L. Hughes, secretary; and C. J. Davis, treasurer, all of Kansas City.

At Madras, India, a German cruiser began shelling the city. Two oil tanks were set on fire. The cruiser was the Emden, and was said to have destroyed 6 British vessels in the Bay of Bengal.

In January 1912, the price of Mid-Continent oil was 57 cents a barrel, up from 50 cents in September 1911. In February 1914, it was $1.05. In April 1914, it dropped to 80 cents a barrel. It is now 40 to 50 cents, but the Corporation Commission has set 65 cents as a minimum.

The Russian Government has decided not to take over the oil industry, but to leave it to private industry. It would cost the Government immense sums of money and would have much trouble such as that being experienced at Petrograd.

The oil fields of Galicia in Austria-Hungary have been requisitioned by the Government for military and naval purposes. The oil is not actually seized but is to be held at the disposal of the Government. Small quantities are permitted to be sold commercially at present.

p. 8. Recent Deaths. A. F. Winn, 45 years of age, a tankbuilder, died at his home in Tulsa on Sunday night last, his death being very sudden. The deceased is survived by his widow.

Arthur Goodwin, a tooldresser, was found dead in a Tulsa rooming house last Thursday evening, the cause of death being unknown. He is survived by a sister and three brothers, all of Tulsa.

Major Daniel C. Boggs, aged 96 years, died at his daughter's home in Pittsburgh, Pa., Sept. 20, 1914, from old age. He was a pioneer oil man and prominent as a veteran of the Civil War, in which he served 4 years and was promoted to Major. Surviving are four sons, Daniel Boggs and O. P. Boggs of Washington, Pa., and J. F. Boggs and E. M. Boggs of Oklahoma, and two daughters, Mrs. Cora Glassness of Tyndyll, S.D., and Mrs. E. H. -----, of Pittsburgh, Pa., and 27 grandchildren.

p. 10. Summaries of Field Operations for September. During Sept. 1914, there were 527 wells completed in Oklahoma, including 30 gas wells and 70 dry holes, with 93,386 bopd new production added. There were 803 wells drilling or being erected in September 1914.

In North Texas, there were 25 wells completed in September 1914, including 3 gas wells and 6 dry holes, with 1,184 bopd new production.

In the Caddo area of Louisiana and NE Texas, there were 27 wells completed, including 7 gas wells and 6 dry holes, with 1,485 bopd new production and 77 rigs drilling or being erected.

p. 12. 14. Oklahoma. The past week was quiet. The Cosden Pipe Line Co. will start a 6-inch line from the West Tulsa Refinery to Cushing.

In Okmulgee County, the Oklahoma Natural Gas co. No. 1 Tiger Farm in Sec. 24-16N-12E was completed for 9,000,000 cfgpd., and the Oklahoma Natural Gas Co. No. 1 Roland Allotment was completed in Sec. 25-16N-12E for 9,000,000 cfgpd.

In Comanche County, Redding et al No. 1 M. Keady Farm in the NW-1/4-Sec. 22-2N-10W had 2,000,000 cfgpd at 823 feet. The Oklahoma Petroleum Co. No. 1 in the SW-1/4-Sec. 13-2N-10W had 1,000,000 cfgpd from the same zone.

In Pontotoc County, near Ada, the McThwaite Oil & Gas Co. No. 1 Stewart Farm in Sec. 31-4N-6E is holding at 2,000,000 cfgpd, and the No. 2 on the Chariton Farm in Sec. 31-4N-6E is also making 2,000,000 cfgpd.

In Marshall County, about 25 rigs are working, around Woodville, Aylesworth, Madill, and Mannsville. Some years ago, 33 wells were drilled near Madill, but only three are now producing 47.5 gravity oil. The other 30 were dry holes.

p. 20. Deepest Well in the World. In Upper Silesia, at Czuchow, the deepest well in the world is at 7,348 feet, in the coal field. The deepest in North America is that near McDonald, Pa., at 6,860 feet, followed by a well at Putnam Heights, Conn., at 6,004 feet, and one at Derrick City, near Bradford, Pa., at 5,820 feet. Little was learned from these borings in the way of new geology.

p. 21. North Texas. In Archer County, there is development near the old Miller well that was drilled in 1911 in the southern part of the county, and that produced 6 bopd on the pump.

In Cooke County, near Dexter, 15 miles northeast of Gainesville, D. A. Smith is drilling a well and had some gas at 500 feet.

In Coleman County, considerable gas and some oil has been found, and some small oil wells are producing at 800 and 1,100 feet.

In Dickens County, at Spur, the deepest well in Texas was drilled to 4,489 feet, by S. M. Swenson & Sons. It took 5 years and 7 months and cost $50,000. The project was abandoned last November 1913.

p. 26. Death of George K. Young. George K. Young, aged 60 years, died at his home in Tulsa, Tuesday evening. Formerly he was connected with the South Penn Oil Co. in West Virginia and later with the Barnsdall Oil Co. in the Osage District of Oklahoma, with headquarters at Skiatook. He had cancer of the stomach. He is survived by a widow and two daughters. He was a Mason. The body was taken to Mannington, W. Va., for interment.

p. 26. Panama Canal. The Dutch tanker J. B. Aug. Kessler will take a load of refined oil through the Panama Canal from Port Arthur to Tien Tsin, China. It will be one of the first oil tankers to go through the canal, and will pay a toll of $1.20 a ton. Oil men have more than a passing interest in the canal.

p. 31. Gas. In Oklahoma, in September, 143,000,000 cfgpd new gas was discovered. The leading producing area was in the Cherokee deep sand district, and Bird Creek. The Copan-Wann District had 2 gassers for 4,000,000 cfgpd. The Dewey Pool had one new gas well at 1,000,000 cfgpf. Bird Creek had 65,500,000 cfgpd new gas, with some wells at 12 to 14 million cfgpd each. Cushing had two gas wells at 5,000,000 cfgpd. In the Osage District was one well at 4,000,000. In the Creek area from Tulsa to McIntosh County, about 44,000,0000 cfgpd new gas was found. At Schulter there was one at 4,000,000 cfgpd. At Tulsa, the Wilcox & Co. No. 1 Williams in Sec. 26-17N-18E had 12,000,000 cfgpd. In Carter County, 14,000,000 cfgpd was found. Near Bristow, Creek County, 3,000,000 cfgpd was found in a well. In Comanche County, about 2,000,000 cfgpd was found.

p. 31. Using Gas at Ada. Ada plants are using the new gas discovered by the McThwaite Oil & Gas Co. It is being used to light the town, for making cement, and in the cotton gin and cotton-seed oil mills. The production is 3,000,000 cfgpd from the two wells.

Oklahoma. Natural Gas Items. The Osage & Oklahoma Co. is completing an 8-inch line east from the Osage Fields. At Kellyville, the Oklahoma Natural Gas Co. has compressors to supply Kansas Natural Gas Co. this winter.

The Caney River Gas Co. supplies Muskogee, Wagoner, and Claremore. The Osage and Oklahoma Co. supplies Tulsa. The Oklahoma Natural Gas co. supplies Oklahoma City, Guthrie, and towns along the line.

p. 32. Two Gassers at Lawton. Caffee, Owen & Wilson struck gas at 815 feet in the Lawton Field, blowing mud and water 200 feet into the air. The other was by E. Reading, at the same level. There is now an abundance of gas for Lawton and its factories.

p. 32. Three Missouri Gassers. About 5 miles northwest of Parkville, Mo., three gas wells were completed for 300,000, and 600,000, and 1,000,000 cfgpd. The smallest well was capped last year. A franchise has been granted by the city of Parkville to furnish gas to Park College and to the Parkville Milling Co. This is the culmination of efforts to find oil or gas near Parkville for 15 years.

p. 35. Land For Ardmore Refinery Site. M. W. Shriver purchased today 50 acres of land in the Santa Fe Heights Addition, adjoining the city on the north, from Morris Sams and Harold Wallace, for the Chelsea Refining Co. and J. E. Crosbie, a banker of Tulsa, and will be used for a refinery site. The Santa Fe Pipe Line from Oil City to Ardmore will be used, and a new line will be built from the Healdton Field to Oil City. Machinery for the refinery has been ordered. A second refinery is also in prospect.

Vol. 13, No. 18, October 8, 1914, p. 1. Mid-Continent Production. At the close of last week, the production was 370,500 bopd, with 160,000 bopd from Kansas and Oklahoma, outside of Cushing, and 162,000 bopd at Cushing, 19,500 bopd at Electra, and 29,000 bopd from Caddo, La. This is apparent estimated production.

p. 1. All of the automobiles in northern France have been requisitioned for pursuing the enemy. Gasoline is making history.

p. 4. Noted in Passing. English companies have been formed to exploit Persian oil fields, with $15,000,000 capital.

Wichita, Kansas, citizens have subscribed $12,000 to look for oil locally.

The Waycross Oil Co. is drilling a test well 6 miles south of Waycross, Ga. Oil indications there have led to the formation of the company.

At Clanton, Alabama, the city water department drilled a water well and punctured an oil formation and a vein of coal. The oil and coal deposits will now be worked in place of water.

Mrs. Kathleen Garrison, widow of Sheriff G. W. Garrison, who was killed by Alf Hunter in Blaine County 6 years ago, has leasehold rights to 1,650 acres in Carter County, and with Mrs. Emma Taylor or San Diego, Cal., has formed a stock company to develop her territory.

p. 6. Personal Mention. George F. Getty and his son J. P. Getty, of Los Angeles, Cal., and O. J. Rogers, of Cleveland, Okla., were in Ardmore, looking over southern Oklahoma. They will likely start some work shortly. Mr. Getty is president of the Minnehoma Oil Co., with operations in the Cleveland and Osage Districts.

A. E. Lewis, president of the Liberty National Bank of Tulsa, and Miss Agnes Theile, of St. Louis, were united in marriage in St. Louis on Tuesday, October 6, 1914. The groom is a member of Black, Lewis & Larson. They will reside in Tulsa.

p. 6. Recent Deaths. Horace A. Hutchins, 76 years of age, died at his country home in Madison, N.J., September 30, 1914. For 30 years he had been connected with the domestic trade department of the Standard Oil Co., and was a director of a number of corporations, and was well known in the oil industry. He liked yachting as a pastime. On the night that Abraham Lincoln was shot in Ford's Theater, Mr. Hutchins was in the audience.

p. 8, 10, 12. Oklahoma. Activity has decreased in the oil fields, along with production.

In Carter County, in the Healdton Pool, the Stockman Oil Co. well in the NW-1/4-NE-1/4-Sec. 15-4S-3W got 20 bopd at 1,015-1,055 feet, extending the pool another mile to the southeast. This is the first well to be drilled in section 15. The calculated production in the field is 40,000 bopd, with 1,000,000 barrels in storage. On Sept. 24, 1914, V. M. Calvert, the umpire for the Healdton Field, estimated that the open flow potential is about 65,460 bopd from 256 wells, but only 9,060 bopd is actually taken, or about 14.7% of the potential production.

In Pottawatomie County, 4-1/2 miles southwest of Maud, the Maud Oil & Gas Co. has a 5-bopd pumper at 840 feet in Sec. 18-7N-5E, and are now at 915 feet.

In Stephens County, near Loco, the Diamond Oil & Gas Co. has a 10-bopd well, with heavy oil, in Sec. 9-3S-5W.

In Creek County, the Oklahoma Natural Gas Co. No. 1 Fulson well in Sec. 32-17N-11E is shut in for a 10,000,000 cfgpd gasser.

In Tulsa County, in the Perryman Pool, Crosbie & Braden have a 20-bopd well on the No. 2 Belle Allotment in Sec. 9-19N-13E. It is a pumper.

In Muskogee County, in the Boynton District, Litchfield & Sullivan No. 2 Peters well in Sec. 11-14N-15E, was good for 35 bopd natural. The Lee Oil Co. in Sec. 18-14N-15E has a 25-bopd pumper also.

In Nowata County, the Citizens Gas Co. will lay a 3 mile line from the Hogshooter Pool in Washington County to Nowata, to provide gas for the winter.

In Kay County, a gas line has been laid from the Buehl & Jones well, a 10,000,000 cfgpd gas well, to Blackwell, to give the town a larger supply of gas.

p. 24. Lone Star is Expanding. The interests of Calvin N. Payne of Titusville, Pa., operating in the gas districts of Healdton and Stephens County, have been consolidated under the title of the Lone Star Gas Co., and the company has secured franchises to pipe gas to a number of towns in southern Oklahoma. The company has a line to Wichita Falls, Texas, and is going to extend its operations throughout North Texas and Southern Oklahoma.

p. 26. The War Oil Map of Europe. The 9 major oil fields of Europe are shown. (1) Southeast Scotland, oil shales, 72,000,000 gallons a year. (2) Northern Germany, 140,000 tons a year (1 ton = 7.25 barrels). (3) NE Austria, Galicia Fields, 1,000,000 tons a year, now being attacked by the Russians. (4) Roumania, 1,800,000 tons a year. (5) NW Italy, 10,000 tons a year. (6, 7, 8, 9). Russia, about 8,546,942 tons a year, from Baku, W. Caspian Sea; Grosny, between Caspian and Black Sea; Maikop on the E. Black Sea; and Ural-Ema District on the N. Caspian Sea.

p.34. Drilling in Arkansas. In Ouachita County near Camden at Dortch's bluff on Freed Creek the Standard Oil Co. is drilling at 2,000 ft. There is trouble with water sand. Hot salt water was also encountered. At Lester, some

years ago, a similar well was ruined by hot salt water.

Vol. 13, No. 19, Oct. 15, 1914, p. 1. Mid-Continent Production. The apparent estimated production of Kansas and Oklahoma at the close of last week was 157,750 bopd outside of Cushing, and 170,150 bopd at Cushing, 19,500 bopd at Electra, and 29,000 bopd at Caddo, La. Many companies are running at 60% or less, and oil is down to 40 cents to 50 cents a barrel if companies wish to purchase the oil. At Cushing, about 12,000,000 barrels are in storage. More pipe lines and tanks are still being built.

p. 1. Prayers and War. The prayers recently offered by the American people and President Wilson in behalf of world peace have failed to stop the war.

p. 1. Oil Prices. Oil has dropped from $1.03 to about 40 cents a barrel within a year, and some people would like to blame the oil companies for price fixing, instead of recognizing the natural law of trade, the downward trend of which was caused by a sudden war and massive development of the Cushing and Healdton Fields and other fields in the United States. Some wells are still being completed for 4,000 bopd at Cushing, much of which represents completions on older contracts, but many oil tankers are still being sunk, in spite of reflagging and neutrality, causing a backup at the refineries. In addition, the U. S. Government wants to impose an import tax on oil, and local State Governments want to place a production tax on local oil, in addition to regulating rates for pipe lines.

p. 4. Personal Mention. W. H. Carpenter, of Pittsburgh, Pa., is in Tulsa and will look over the holdings of the Carpathia Petroleum Co. in the northern end of the Cushing Pool. His son, B. L. Carpenter, is in charge of operations in the Mid-Continent for the company.

p. 4, 6. Noted in Passing. Ohio capitalists are drilling a wildcat well at Sicily Island near Natchez, Miss. They expect to find an oil sand at 2,300 feet.

Residents of Sherman and Denison, Texas, are negotiating for a block of leases in Marshall County, Okla., with 3 gas wells to be used as a reserve supply.

At Clanton, Chilton County, Alabama, oil and coal was struck in a well being drilled for a local water supply. The coal is reported to be a good thickness, and tests will be made for oil and coal.

The Tulsa Engineering & Supply Co. has recently issued a new map of Cushing, embracing Twps. 17-18 N., Rs. 6-7-8 E. The map is on a 4 inch = 1 mile scale, and shows the Layton, Wheeler, Bartlesville, and Tucker sand wells, dry holes, and tank locations in color.

p. 6. Recent Deaths. T. A. Oxley, died at the home of his daughter, Mrs. J. P. Flanagan, 1727 South Cheyenne Ave., in Tulsa, on Sunday, October 10, 1914. The body was taken to Lima, Ohio, former home of the deceased, where he will be interred.

J. S. Long, 60 years of age, died at the hospital in Bartlesville, Okla., on October 8, 1914, from bowel trouble. He was one of the best known drillers in Washington County, working for Harry Breene for many years. He is survived by two sisters, both of Oil City, Pa. The remains were sent to Franklin, Pa., on Friday.

p. 8, 10, 12. Oklahoma. In Payne County, north of Yale, about 7 miles northwest of the northern extension of the Cushing Pool, the Alice Katherine Oil Co. No. 1. Johnson in the SE-1/4-NW-1/4 Sec. 7-19N-6E got about 150 bopd at 3,137 feet in the Bartlesville sand, opening a new pool. About a month ago the well had a fair showing in the Wheeler sand.

In Tulsa County, in the Wicey Pool south of Bixby, the Wilcox & Co. No. 3 Katie Call in Sec. 3-16N-14E was completed at 2,090-2,101 feet for 450 bopd or more.

In Marshall County, five miles west of Woodville, the Twin Oaks Oil Co. on the Lairy Farm in Sec. 6-8S-6E has a 10-bopd pumper at 550 feet. For the past 3 months, about 15 wells have been drilled in Marshall County, with the pay being less than 750 feet.

In Creek County, the Bantley-Bell Oil Co. has applied for a charter, with O. G. Bantley, S. F. Bell, K. M. Roach, and J. F. Dingee being the organizers. They will drill their holdings in the Cushing Field between John Markham's well and the McMan Oil Co.'s well in Sec. 8-18N-7E, in the bed of the Cimarron River.

p. 25. Navy Fuel Oil Stations. The Navy Department intends to establish fuel oil stations at New York, San Francisco, San Diego, Puget Sound, Guam, and Cavite, the Philippines. A testing plant will be placed at the Philadelphia Navy Yard, to be used for instructions for officers and men on how to use fuel oil. At present, the Navy has storage stations at Boston, Mellville, R.I., Norfolk, Charleston, and Key West, each having a capacity of about 36,000 barrels of oil. The station at Guantanamo, Cuba, has a capacity of 223,000 barrels. The one at Park Harbor, Hawaiian Islands, has a capacity of 200,000 barrels.

p. 27. Tankers in Danger. From San Francisco comes the news that the British oil tanker Elsinore was sunk off California on Sept. 15 by the German cruiser Leipzig. The British steamer Oberon is a week overdue at Panama, and she too probably fell victim to the German shells. Capt. John Roberts and crew of 33 officers and men were captured from the Elsinore and marooned on the Galapagos Islands, but later they managed to get word to Valparaiso. This is the first direct news of German cruisers operating off San Francisco.

p. 27. Woman in Oil Business. Mrs. Garrison, widow of Sheriff G. W. Garrison of Blaine County, who was shot by Alf Hunter and killed on June 7, 1908, was left with 1,650 acres of leases in Stephens and Carter Counties. She is now going to develop these with the help of Mrs. Emma R. Taylor, with whom she has developed a stock company. Also, Mrs. Garrison owns outright one-fourth of 200,000 acres of oil land in Oaxaca, Mexico, with a 35 mile strip on the water front.

p. 28. Lawton to Get Gas. Lawton will have natural gas in the next 30 days, according to F. M. Marple, who has gas interests in Comanche County. The Lawton Natural Gas Co. and the Redding interests have been consolidated to supply gas to Lawton. The pipe line now leading from the Marple well will be utilized. The company already has 3 miles of alley lines in the city, and other mains will be constructed. A new line will be a 4-inch line from the Redding well to the Marple well, a distance of 2.5 miles. The gas should cost about 35 cents a thousand to the consumers.

p. 38-40. Wells. Oklahoma. Eighteen wells were completed this week in Comanche, Kiowa, Hughes, Jefferson, and Tillman Counties, with 5 producers in Kiowa County, and two in Comanche County, and one in Jefferson County. (Details given). These are outside of the normal fields. In September, 537 wells were completed, with 30 gas wells and 70 dry holes in Oklahoma, with 28,386 bopd new production found, and 862 wells drilling or being erected. About 167 wildcat wells were being drilled outside of the normal districts, in Comanche, Stephens, Marshall, Adair, Love, Greer, Coal, Oklahoma, Murray, Garvin, Grady, Caddo, Johnston, Hughes, Jefferson, Seminole, Pittsburg, Atoka, Garfield, Jackson, Beckham, Sequoyah, LeFlore, Pottawatomie, Pushmataha, Mayes, Bryan, Pontotoc, and Miscellaneous Counties. Approximately 15 wells were drilling in Atoka County, and 10 wells in Coal County, and 14 in Pontotoc County. (Details given).

p. 41. North Texas. About 23 wildcats were being drilled in North Texas, and about 25 wells were completed in September, including 3 gas wells and 6 dry holes.

p. 41. North Louisiana. About 27 wells were completed in September, with 7 gas wells and 6 dry holes. About 116 new wells were being drilled. (Details given).

p. 42. Oil Discovered 30 Years Ago in the Lima Oil Field. It will be 30 years next May since oil was discovered at Lima, Ohio. The discovery was by accident. B.C. Faurot was operating a paper mill at Lima and wanted to drill a well for gas to supply the plant. At 1,251 ft. he found oil. The flow was slow, and experts pronounced it worthless, but the experts from Olean, N.Y. began to lease the area at once. In the Fall of 1885, a company was formed by local men

from Lima, and they drilled their own well and got 40 bopd. In 1886, the Eastern men had their land together and they drilled some good wells. The production spread out all over the county, and gradually, like concentric circles, spread into Allen, Wood, Seneca, Hancock, Wyandotte, Hardin, Putnam, Mercer, and Auglaize Counties, and Lima became one of the greatest oil centers of the world for a short time. The wells have now fallen off and have to be pumped, but the natural gas supplies enough fuel to run the pumps.

p. 43. F. A. Gillespie, Oil Man to be Rancher. F. A. Gillespie, of Tulsa, has purchased 90 acres of land on the Blue River, near Tishomingo and Milburn, in Johnston County, Oklahoma, from the Dr. W. J. Brown Estate. The deal was closed by T. C. Bridgman, of Ardmore, the administrator. It is stated that Mr. Gillespie purchased several hundred acres surrounding the water power site on the Blue River. He will establish a large ranch there and will stock it.

Vol. 13, No. 20, October 22, 1914, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent at the close of last week was 379,700 bopd, with Kansas and Oklahoma outside of Cushing being 161,500 barrels, and Cushing 170,200 bopd, Electra 19,000 bopd, and Caddo, La. 29,000 bopd.

p. 1. The Royal Dutch Shell combine has invested $26,000,000 in California oil property.

p. 1. Jules Cambon says that the European war will not last over a year.

p. 1. German destroyers have appeared in the Samoan Islands.

p. 2. Japanese Fields Described. The oil fields in Japan are widely distributed. A belt runs along the inner side of North Japan, from the west coast of the island of Sakhalin, along the Sea of Japan, through the west Hokkaido Mountains, and thence through the provinces of Mutsu, Ugo, Uzen, Echigo, and Shinano, to the Pacific Coast of Totomi Province in the south. In Formosa, an oil belt has been defined near the west coast. There are 15 fields in Echigo, Hokkaido, Ugo, Shinano, Totami, and Formosa.

The Echigo region is the chief center of activity, producing about 90% of Japan's oil, with the Niitsu Field producing one-half of Japan's production.

The Higashiyama and Nishiyama regions are growing in importance, the latter field having 3 pay horizons at 700, 1,000, and 1,500 feet, with oil in the latter being 0.852 specific gravity.

The total output is about 270,000 tons a year, but 20 years ago it was 24,000 tons a year. Production since 1905 has been as follows:

1905 - 178,000 tons	1910 - 250,000 tons
1906 - 220,000	1911 - 230,000
1907 - 246,000	1912 - 226,000
1908 - 255,000	1913 - 270,000
1909 - 260,000	

Most other fields have not been developed.

p. 3. The Price of Crude Oil. In Oklahoma, in 1907, crude was 39-41 cents a barrel. In 1908, 41 cents for high grade and 28 cents for low grade; in 1909, 35 cents for high grade and 28 cents for low grade; in 1910, 42 cents for all grades; in 1911, 50 cents; in 1912, 50 cents to 83 cents at the end of the year; in 1913, from 83 cents to $1.05; in 1914, 40-50 cents when desired, as the Cushing and Healdton pools came on line. Supply and demand dictated these prices, even though the Standard Oil Co. could influence or fix prices on a temporary basis. No oil company could influence the war, and could not regulate the massive overproduction, and could not cope with the State and Federal regulations, not could the Standard cope with the Shell combine or nationalization by other countries, or with uprisings such as the Mexican revolution. The gasoline engine and diesel engine and the automobile caused a great demand for oil, with temporary shortages being created in different places at different times, causing the price to go up. The sinking of ships cut off sales, and prices fell.

p. 4, 6. Noted in Passing. E. T. Shock, A. F. Shock, and Walter Weimmar, all of Okmulgee, have incorporated a company to built a refinery, with $100,000 stock.

Work has been started on the construction of the Ardmore Refining Co. plant. O. B. Males is to be foreman and H.O. Simmons, civil engineer for the Chelsea Refining Co. Oil will be taken from the plant of J.E. Crosbie in Sec. 5-4S-3W in the Healdton Pool.

J. M. Sullivan has started drilling a well on the Young Farm east of Berwyn, Carter County, under the name of the Horse Shoe Oil Co.

In McCurtain County, near Buffalo Creek, 20 miles beyond the summit of the Kiamichi Mountains, a person shot a steel jacket bullet into the 8-inch line of the Oklahoma Pipe Line Co., and considerable oil was lost. This is the second time that this has occurred. A reward of $200 is offered.

p. 6. Recent Deaths. Claud A. Brannon, a young oil producer, died at his home in Bartlesville on Thursday of last week, a victim of typhoid fever. He was a member of the Elks and the Knights of Columbus. Surviving are his widow and two children, Helen, 12 years old, and Jack, 9 years old. The burial took place at Bartlesville.

p. 8. 10, 12. Oklahoma. In Creek County, probably the largest oil well to be completed in the Cushing pool came in, by C. B. Shaffer No. 5 Izora Walker Allotment in the NE-1/4-Sec. 18-18N-7E, for 400 barrels an hour. It is southwest of the John Markham, Jr. No. 12 Yarhola in Sec. 8-18N-7E, which had 5,090 bopd. There are now 348 producing wells in the Bartlesville sand in the Cushing Pool.

In Rogers County, near Claremore, gas is being developed by Cheney & Davis. They have recently completed 4 gas wells averaging about 2,000,000 cfgpd each. Their No. 5 had 5,000,000 cfgpd on the Joe Chambers Farm in Sec. 18-21N-16E. It is No. 4 for the lease, but No. 5 for the owners.

In Atoka County, there was a chance for a great deal of new work, but the price of oil caused operators to decide to curtail work. A number of tests that were started months ago have been shut down for some time. Bowen & Day have moved in a rig on the Anglin lease in Sec. 13-2S-11E, one mile east of Atoka and east of the Choctaw Fault. They will drill to 2,500 feet. (They gave this as Sec. 32 here, but Sec. 13 on Oct. 15 report).

In Jefferson County, B. B. Jones & Robert Gillam in Sec. 28-6S-5W struck the Mississippi lime at 1,997 feet, this being the first well to drill to that formation in that section of the state. They intend to go deeper.

In Muskogee County, northwest of Boynton, the Caney River Gas Co. has purchased the gas rights of Litchfield & Sullivan and the Prairie Oil & Gas Co. in T. 14 N. - R. 15 E. The Prairie has a gasser in Sec. 3, and Litchfield & Sullivan have wells in Secs., 2, 10, and 11. Caney may take over the gas well of H.H. Galbraith in Sec. 9. Caney is laying approximately 5 miles of 6-1/4 inch gas lines between Haskell and the Boynton Pool, and connect with an 8-inch line 4-1/2 miles south of Haskell.

p. 20. W. W. Johnson. Prominent Oil Man Dead. W. W. Johnson, age 65, died this morning at Mineral Wells, Texas. He was the president and organizer of the Forest Oil Co. of Wichita Falls, Texas. He opened and operated the Thurber Coal Co. mines at Thurber, Texas, 30 years ago, and sold his holdings to the present company. In March 1913, he organized the Forest Oil Co., with stock of $30,000, becoming president. He is a native of Michigan, and is survived by his widow and two sisters, one of the latter in Michigan and the other in California.

p. 20. John L. Breene Dead. John L. Breene, aged 54 years, died at his home in Oil City, Pa., Sunday evening, of heart failure. He was general manager of the Stoneboro & Choctaw Lake Ice Co. He is survived by a widow, two daughters, and five sons. He was a brother of H. H. and Frank Breene, of Bartlesville, Okla., and W. J. and E. C. Breene, attorneys of Oil City.

Vol. 13, No. 21, October 29, 1914, p. 1. Mid-Continent Production. The apparent estimated production at the close of last week was 371,250 bopd, with Kansas and Oklahoma being 158,750 barrels outside of Cushing at 165,000 barrels, Electra 19,000 barrels, and Caddo at 28,500 barrels. Even though 15 gusher wells were reported for the Cushing Field, many other wells have fallen off, so the average production of Cushing has fallen off.

p. 1. Thirteen British merchant vessels have recently been sunk by German cruisers.

p. 1. The lawmakers of Washington have thrown aside a war tax on gasoline. The efforts of Senator Gore of Oklahoma are to be commended.

p. 6. Noted in Passing. It is expected that gas from the vicinity of Claremore will soon be piped to Kansas City, Missouri. A new gas field near Claremore is expected to yield a bountiful supply.

There are strained relations between Russia and Turkey, and Russian oil companies have removed their branch offices from Constantinople to Alexandria.

Gunsburg & Forman, of Buffalo, N.Y., have purchased five-twelfths of the Westheimer & Daube farm in the Healdton oil district, with 800 bopd production. Seven wells are to be drilled at once.

About $6,000 worth of stock of the Black Panther Oil Co., operating in the Cushing Field, is held in Ardmore. The stock may give 100 to 1 in return.

An expert says that the Alice-Katherine Oil Co. well near Yale in Sec. 7-19N-6E, gets its oil from a new sand, not the Bartlesville. It is 3,150 feet deep, and the oil is 32 gravity.

At Tilden, McMullen County, Tex., there is a freak water well impregnated with gas. The well was opened in June 1908, and behaved nicely as a water well until June of this year. Now someone will drill for gas here.

p. 6. Recent Deaths. E. J. O'Donnell, an oil man of the Healdton Field, died last Sunday. The body, accompanied by the widow and children, was sent to Butler, Pa., for burial.

Almon Thacker, a driller, 22 years old, was killed at a well at Drumright on Monday of this week. He worked for J. H. Markham, Jr. Thacker's home was at Bartlesville. His parents, Mr. and Mrs. T. D. Thacker live at Drumright. A little daughter lives at Bartlesville with her aunt, Mrs. O. B. Hathaway.

p. 8, 10, 12. Oklahoma. In Creek County, in the Cushing Pool, from Sept. 19 to Oct. 18, 5,473,448 barrels of oil were produced from 348 wells, averaging about 176,308 bopd. The highest daily production was on October 6, 1914, at 187,978 bopd, from 340 wells. It is estimated that about 100,000 bopd is actually taken from the field.

In Pontotoc County, near Steedman, about 7 miles south of Allen, in the SE-1/4-SE-1/4-Sec. 16-4N-8E, the Cummings Oil Co. (Moffett et al) No. 1 Bob Ford has a 25-bopd pumper at 492-553 feet, and has opened a new pool. The company has 3,000 acres under lease.

In Muskogee County, in the Boynton District, Litchfield & Sullivan on the Peters tract in Sec. 11-14N-15E, in the C-NE-SW of the section, is good for at least 150 bopd. This is a new pool, and the busiest spot south of Tulsa at this time.

p. 14. Oklahoma's Newest Oil Town, Dropright. (Within the SW-1/4-SW-1/4-SE-1/4 of Sec. 6-18N-7E was the new town of Dropright, later named Markham, on the bluff of the Cimarron River). A traveler in a Ford taxi from Yale entered Ellison's short order eating place at old Dropright, the deserted village of the Cimarron Valley. He asked where Dropright was located, and was told that the town just moved up the hill about 2 miles by road and 1.25 miles in a straight line, and that he was eating in old Dropright. The old town used to be in the shade trees, and stayed there for one year. It was a quiet town, with only 3 murders, but the killings were done by outsiders. At old Dropright, Constable Joe L. Ryan built the first house in August 1913, but because of a lack of good titles, being on full blood Indian territory, the town was moved, and Constable Ryan located the

new town. There are two streets in new Dropright, with a water pump in the center at the crossroads, with good water at 112 feet. There is grass and there are trees in the streets, and most of the people live in tents. A picture show is in operation. New Dropright is not a month old, but has petitioned for a post office, with 700 residents signing a petition. In old Dropright, there were about 1,000 residents, but some have wandered to other parts. The town is within a mile of one of the biggest wells in Oklahoma. At old Dropright, the Prairie Oil & Gas Co. has a pump station, and John Markham, Jr. is erecting a new station.

One and one-half miles south of Yale is the 160-acre tank farm of John Markham, Jr. Yale is about 10 miles from Dropright by road. Mr. Markham had 3 big tanks on his lease in Sec. 8-18N-7E, but these were inadequate, and he is now building 6 tanks south of Yale, each tank being 55,000 barrel capacity. He has just laid a pipe line 12 miles long to his new tank farm, the 4-inch line being laid in 12 days. Mr. Markham's production is about 7,000 bopd at present.

p. 14. T. B. Slick. Deal in Cushing Property. T. B. Slick is selling his entire holdings in the Cushing Pool for about $2,000,000 to the Okla Oil Co. and the Milliken Oil Co., the new company being called the Slick Oil Co., retaining Slick's name. The Okla Oil Co. is the producing branch of the Tidewater Pipe Line Co., and is represented by Frank Haskell of Tulsa. The officers of Slick Oil Co. are John T. Milliken, president; Charles Painter, secretary; P. W. Wilson, vice-president; and Frank Haskell, general manager. There are 30 producing wells, yielding 4,414 barrels a day, besides a large acreage block.

p. 14. North Texas. In the Spring of 1912, a Dr. Miller of California completed a small oil well near Annarine, Archer County, Texas. About 16 or 17 wells were drilled but found a few showings and no commercial oil. The Miller No. 1 was about 8 bopd, and the property was transferred to Bland & Henson who operated for a while and then shut down. Recently the Miller No. 1 and the Andrews No. 1 were cleaned out and put on a pump and each averaged about 30 bopd, starting out at about 208 bopd the first day, 73 bopd the second day, and about 30 bopd the third day. This past week, W. C. Pope et al on the Saunders & McCall Ranch, 3-1/2 miles southeast of Holliday, in Archer County, completed a well for about 10 bopd at 580-590 feet, about 200 feet north of Pope's dry hole. This is the best well yet drilled southwest of Wichita Falls, outside of the Moran Pool in Shackelford County.

in NW Erath County, near Thurber, the Texas Pacific Oil Co. completed a gas well for 1,000,000 to 3,000,000 cfgpd in the Thurber Field, at 700 feet.

p. 24. New Oil Well Near Ada. The Buckhorn Oil & Gas Co. struck a 30-bopd well at 1,028 feet at 6 to 8 feet in the sand, in Sec. 16-4N-5E. The oil is considered a good grade.

p. 24. Collinsville Pool. J. D. Ward's Sale. J. D. Ward, one of the pioneer operators of the Collinsville Pool, in Rogers County, has sold his interest of 33 oil wells producing 125 bopd, some gas wells, and 5,000 acres of leases, to John H. Grieves of New York for $120,000.

p. 24. G. W. Wasson Fatally Shot. G. W. Wasson, a Sapulpa oil man, was fatally shot while hunting. He only recently had been married. He was the only son of William Wasson, also an oil man.

p. 31. Business is Incorporated. The interests of Ardizzone & Ossenbeck have been merged into 3 companies which were recently incorporated. The Fritzie Oil Co., with capital of $10,000, has taken the Tulsa County property; the Helen Ruth Oil Co., capitalized at $20,000, and the Supreme Oil Co., with $20,000, will take all other property in Oklahoma. The officers of the 3 companies are: Joseph Ardizzone, president; F. J. Ossenbeck, vice-president and treasurer; and F. B. McCabe, secretary. The companies own leases in various sections of the state. These 3 companies are a small part of the holdings of Ardizzone & Ossenbeck.

Vol. 13, No. 22, November 5, 1914, p. 3. Mid-Continent Production. The apparent estimated production at the close of last week was 365,200 bopd, with Kansas and Oklahoma outside of Cushing being 156,700 bopd, Cushing 162,500 bopd, Electra, 19,000 bopd, and Caddo, La. 27,000 bopd. The week ending October 31, 1914, was uneventful. Drilling for gas in the Bird Creek District and in LeFlore County was interesting.

p. 3. An anti-Christian uprising is reported among the Bedouins along the Egyptian frontier. The brotherhood of man is not brotherly.

p. 3. The Turks, in order to be in fashion, have become belligerents. Italians, Greeks, Bulgarians, and Roumanians are also expected to get into the war. Insanity is spreading.

p. 3. During the present month, more than 1,000,000 acres of Choctaw land will be sold at auction in Oklahoma. The land is classified as timber and coal, but there is reason to believe that some land contains petroleum. The sale began at McAlester on Tuesday of this week and will end at Hugo on November 12, 1914.

p. 3. It is estimated that the independent refineries in Oklahoma are using about 67,000 bopd.

p. 3. Ex-president Roosevelt has seen plans by a foreign power to invade the United States, including plans for the capture of important seaports, to be held for ransom. Our coastal defenses may have to receive attention. He does not say which foreign power has designs on this country.

p. 3. Rev. J. M. Critchlow has revived religious sentiment in Oklahoma. He has caused Sunday observance to be recognized on his leases. He has engaged an evangelist, Rev. Albert Bean, to work for 6 months among the oil people, and Brother Critchlow will defray expenses of the movement and to the oil fraternity, and salvation will be free. Money is scarce among the sinners, and many are idle, so now they will have time to devote to spiritual matters.

p. 5. Personal Mention. Daniel O'Day, Jr., of New York City, has been a business visitor in Tulsa. He was formerly identified with the Standard Oil Co. at No. 26 Broadway, New York City, but during recent years he has been engaged in personal enterprises. He is the son of the late Daniel O'Day, one of the men who helped to build up the Standard's colossal business.

p. 5, 8. Noted in Passing. B. B. Jones has decided to drill his test well near Wetumka to a depth of 3,800 feet.

The export trade of the Roumanian oil fields has been reduced, but there have been some trainloads of gasoline shipped to Germany, Egypt, and elsewhere.

The German troops in central Belgium have seized the oil fuel there and have shipped the oil back to Germany.

Former Governor Haskell announced that the Oil Belt Terminal Road from Jennings to Drumright will be completed within a month. It will be a steam road for local accommodation and will have sidetracks wherever needed.

The contract for the grading on the Cushing-Drumright interurban line was let last, and work will begin at once. The main line will be 15 miles long, with about 5 miles of siding. All material has been ordered.

The Oklahoma Gas & Electric Co. is erecting a compressor station at Depew, where the Cushing line joins the Tulsa line, and this will be completed shortly, insuring a good supply of gas to Oklahoma City.

Henry Roeser has purchased the interests of his partner Charles Brown, of Nowata, in property south of Cleveland, Okla., known as the Cotton Farm in Sec. 6-20N-8E, with 4 oil wells and 3 gas wells, the latter being some of the best in Pawnee County. They supply gas to Terlton, Hallett, and Jennings, and will furnish gas to Cleveland in an emergency.

p. 6, 8. The World's Oil Production in 1913. In the United States in 1913, about 248,445,230 barrels of oil was produced. Oklahoma produced about 63,579,384 barrels, Texas 15,009,478, Louisiana 12,498,828, and Kansas 2,375,029. California

was the leading producer with 97,788,525 barrels. The average price was 73¢ a barrel.

The world production was 381,508,916 barrels, with the United States first, producing 65% of the world's oil, and Russia second, and Mexico third.

p. 8. Recent Deaths. Edward Jenks, chief engineer of the Oklahoma Pipe Line Co. at Kinta, Oklahoma, died on Saturday of last week. He was 57 and a veteran in pipe line work. The body was shipped to Cassadaga, N.Y., for interment.

H. C. McCroskey, of Yale, Okla., died at an Oklahoma City hospital on Saturday last. He is survived by his widow and 9 children. He was the owner of the farm on which the Alice Katherine Oil Company's well is located.

p. 10. Summaries of Field Operations for October 1914. In Oklahoma, there were 372 wells completed in October, including 46 gas wells and 44 dry holes, with 81,337 bopd new production, and 730 new wells being started. In Texas, there were 60 wells completed in North Texas, including 18 dry holes, and 391 bopd new production, and 58 new wells started. In Louisiana, in the Caddo Field, there were 25 wells completed, including 10 dry holes, with 1,605 bopd new production, and 101 new wells started.

p. 12, 14. Oklahoma. Drilling was quiet this week, except for developmental wells. In Tulsa County, in the Bird Creek Field, drilling for gas continues in an active way. A good market has kept the drill busy. Halsell & Son No. 1 Johnson in Sec. 27-21N-13E was completed for 12,000,000 cfgpd at 424 psi rock pressure. Their No. 1 Nevins in Sec. 35-21N-13E was completed for 11,115,000 cfgpd at 420 psi rock pressure. On October 22, 1914, W. E. Halsell & Son No. 1 George West was completed in Sec. 27-21N-13E for 2,000,000 cfgpd, and their No. 2 had 1,500,000 cfgpd. They are among the most aggressive gas operators in the field, and will drill at least 12 more wells, as they have a contract with the Kansas Natural Gas Co. to supply them with much gas.

In LeFlore County, the Thomas Wall No. 1 Beard Tract in Sec. 21-7N-26E was good for 2,000,000 cfgpd at 1,950 feet, with 412 psi rock pressure. As very little has been reported from this area, a list of the completed gassers is given. The field is near Poteau, and some of the gas is piped into Arkansas. C. E. McMurtry No. 1 Fee has 500,000 cfgpd in Sec. 36-7N-26E. The LeFlore County Oil & Gas Co. has contracts to supply Ft. Smith 30 miles away from the field which is located 3 miles east of Poteau. Their No. 1 Tucker in the NW-1/4-Sec. 3-7N-26E is 500,000 cfgpd with 350 psi pressure, the sand being at 1,303 feet, and this supplies Cameron. Other wells of this company are No. 1 McClure in Sec. 23-7N-26E for 500,000 cfgpd at 1,535 feet with 402 psi rock pressure; No. 1 Esther Hill in Sec. 27-7N-26E for 3,500,000 cfgpd at 412 psi rock pressure at 1,466-1,686 feet, being the first gas well completed in the field, supplying Poteau, and later connected with other wells; No. 1 Wilson SE-1/4-Sec. 27-7N-26E at 5,000,000 cfgpd at 1,513 feet with 412 psi rock pressure; the No. 1 Albert Billy Farm in Sec. 27-7N-26E for 10,000,000 cfgpd at 1,490 feet with 412 psi rock pressure; No. 2 Albert Billy in the NE-1/4-Sec. 34-7N-26E for 2,000,000 cfgpd at 1,535 feet with 412 psi rock pressure; and the No. 1 Washington, in SW-1/4-Sec. 35-7N-26E for 250,000 cfgpd at 1,950 feet which diminished rapidly and was abandoned.

In Osage County, in the Boston Pool, in Sec. 1-21N-7E, the Gypsy Oil Co. has 10 wells shut in on top of the pay. At one time this lease was producing 12,000 bopd from 26 wells.

In Muskogee County, near Boynton, the operators are waiting for the new 2-inch line of the Prairie Oil & Gas Co. to be completed. There is 8,500 barrels now in storage.

p. 20. Refineries of the Mid-Continent. The independent refineries of the Mid-Continent are handling 62,300 bopd, through 37 refineries. These companies are now working in harmony with each other through the Western Refiners' Association.

p. 26. W. F. Dermott Dead. W. F. Dermott, died on November 3, 1914, at his home at Lamar, Mo., from heart trouble. He was a leaser in Oklahoma, and was with the Gypsy Oil Co. for 2 years, as a scout, until last July.

p. 26. Death of James A. Storey. James A. storey, age 60 years, died at his home in Bruin, Pa. on Friday of last week. His widow, one son, and two daughters survive. He worked mainly in the Pennsylvania oil fields.

p. 27. New Petroleum Map. The U. S. Geological Survey has just printed a colored wall map of the petroleum resources and natural gas deposits of the United States. The map is 49 by 76 inches, at 40 miles to the inch. Pipe lines are also shown. The price is $1.00.

p. 32. Gas. In October 86 gas wells were completed in Oklahoma and Kansas, with 214,673,000 cfgpd new production, of which 162,323,000 was in Oklahoma, from 46 wells. The Creek Nation from Tulsa to McIntosh County was the leading area with 76,000,000 cfgpd new production, of which the Tulsa District was 58,000,000. (Details given). At Bird Creek, 17 wells were completed in October, with 59,073,000 cfgpd new gas being produced. Halsell & Son have contracted to provide 20,000,000 cfgpd to the Kansas Natural Gas Co. from Bird Creek, and they have already completed 12 wells. The Cushing Pool has 250,000,000 cfgpd available, except that it is bypassed for the oil. In Carter County,3,000,000 cfgpd was found in one well, and in Stephens County three wells came in for 2,500,000 cfgpd, and in Comanche County two wells came in for 1,000,000 cfgpd combined. In Kay County, two wells came in for 6,000,000 cfgpd. (Details given).

Vol. 13, No. 23, November 12, 1914, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent fields at the close of last week was 350,475 barrels of oil per day, with Kansas and Oklahoma outside of Cushing being 150,000 bopd, Cushing 153,475 bopd, Electra 19,000 bopd, and Caddo 28,000 bopd. Most activity is quiet.

p. 1. Dropright, in Creek County, decided to change its name to Markham, after John Markham, Jr., who discovered the field in that area.

p. 4. Personal Mention. Governor Cruce of Oklahoma will engage extensively in oil operations after his retirement from office. He has holdings in the vicinity of Ardmore.

J. I. Gillespie, of Tulsa, who has extensive holdings in Oklahoma and Kansas, is spending several weeks at Toledo, Ohio. He was one of the pioneers in the Glenn Pool, and was previously an active operator in the Trenton Rock Fields of Ohio.

p. 4. Japanese Oil Production. Two companies control almost all of the petroleum industry in Japan. The Nippon Petroleum Company began in 1888 in Amase, Niigata Prefecture, with $55,000 capital, which has now been increased to $5,000,000. The Hoden Petroleum Company began in 1893 at Nagaoka, with $7,500 capital, and now increased to $7,500,000. Japan's daily output is about 192,300 gallons, 90% of which is produced by the two companies. However, this will be changed by the new discovery of the Nippon Kurokawa well which yields 384,800 gallons a day. The first 6 months of 1914 showed that 33,958,719 gallons of oil were produced in Niigata Prefecture. Japan is now able to slowly satisfy the home demand without too much importation of oil.

p. 4, 6. Noted in Passing. The proposition to change the name of Dropright to Markham meets with general approval.

A. F. Stewart & Co., of Chicago, dealers in petroleum products, have opened offices in the new Daniels Building in Tulsa, with H. T. Dorrington in charge, recently with the Phoenix Refining Co.

Dropright has a commercial club and so has Yale. The public road between the two towns is being shortened by a cut-off of two miles, which will be a great improvement.

Oil shale in the Green River formation of the Uinta Basin, in Utah and Colorado, compares favorably with Scottish oil shale, but it will not be utilized while there is an overproduction of petroleum.

There are no more exports of Roumanian oil by sea due to the closing of the Dardanelles. There are now extensive exports to Austria, Germany, and Bulgaria.

p. 8, 10, 12. Oklahoma. Cushing continues to be important, but mostly everything is quiet in the oil fields. About 20 wells were completed last week at Cushing, and these were offset wells. The older wells are now being pumped. About 104,000 barrels a day is being taken out by 14 or more refineries, and about 15,433,650 barrels are in storage by 20 operators (details given). The umpire of the field reports that the field is capable of producing 179,000 bopd, from 378 producing wells of 24 operators (details given). White & Sinclair are the largest producers with 24,050 bopd from 66 wells, with the Producers Oil Co. next at 19,300 bopd from 21 wells, and the Prairie Oil & Gas Co. with 13,750 bopd from 59 wells, and the McMan Oil Co. with 14,050 bopd from 28 wells, and the Gypsy Oil Co. with 13,200 bopd from 37 wells. Dropright, the leading town in the northern extension, is now known as Markham, named by the new commercial club after John Markham, Jr., upon whose property the town was formerly located. Villa is the name of a new town on the north end of Cushing Field near the Bolton School House. Seven refineries are running or will be running within the next two weeks at the Cushing Field. Yale is becoming lively, and about 40 automobiles leave there daily. The Twin State Oil Co. is making preparations to put in a small refinery there.

p. 16. North Texas. In Hardeman County, near Goodlet, two more tests will be made, about 12 miles northwest of Quanah. F. W. Felch, of Seattle, Washington, a mining engineer will be in charge. About 25 local people from Goodlet and Quanah are backing the project. A test made about 15 months ago about 15 miles from Goodlet had a showing. A northern syndicate purchased the 18,000 acre Damsite Ranch of Col. Cecil L. Lyons of Texas, and has subdivided it into lots for mineral leasing, and will drill a well on the property.

p. 28. Natural Gas for Lawton. By next week, Lawton should have natural gas. The final lines are now being inspected between the F. M. Marple well and the Mr. Redding well, and between the Marple well and Lawton.

p. 35-37. Wells. Oklahoma. About 7 wells were completed in Comanche, Stephens, Pontotoc, and Marshall Counties. In Stephens County, near Loco, the Diamond Oil & Gas Co. completed 3 gas wells in Secs. 9, 15, and 18 - 3S-5W.

In Comanche County, the Lawton Natural Gas Co. completed a gas well in Sec. 36-2N-11W on School Land, and Redding et al No. 1 Keady in Sec. 29-2N-10W completed a gas well.

About 204 wildcat wells were being drilled in southern Oklahoma and other counties. In Carter County, the Wildcat Jim Oil Co. is drilling in Sec. 18-2S-2W. The Wander Oil Co. is drilling in Sec. 35-2S-2W.

About 29 wells are being drilled in Marshall County, and 15 in Atoka County, and 15 in Pontotoc County, and 10 in Coal County.

p. 37-38. North Texas and Louisiana. About 60 wells were completed in North Texas in October, including 2 gas wells and 16 dry holes, with 58 wells drilling. In the Caddo Field, La., about 25 wells were completed for about 1,605 bopd new production, including 10 dry holes, and 101 new wells started. In North Texas, about 391 bopd new oil was found.

Vol. 13, No. 24, November 19, 1914, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent at the close of last week was 326,000 bopd, with Kansas and Oklahoma outside of Cushing being 134,500 barrels, Cushing 144,500 barrels, Electra 19,000 barrels, and Caddo, La., 28,000 bopd.

p. 1. Expert geologists are steadily gaining ground in the estimation of up-to-date oil seekers. Science, to some extent, is taking the place of mere guesswork.

p. 1. It is said that 140,000 people are dodging their income taxes.

p. 1. The American Federation of Labor favors the establishment of a Government Industrial Alcohol Commission to promote alcohol to replace gasoline, and to break up the oil monopolies. They do not realize that the gasoline business is an independent industry. Two billion dollars is spent on alcoholic drinks each year in the United States, and this is not affected by the war or overproduction, or trade restrictions.

p. 3. Waco. Barnsdall Lets Pipe Contract. The Texas Power & Light Co. has contracted with T. N. Barnsdall, of Pittsburgh, Pa., to build a pipe line from the Mexia Gas Field to Waco, Texas, according to J. F. Strickland, president of the company. The cost will be more than $250,000.

p. 4. Personal Mention. Col. E. H. R. Green and party, consisting of T. B. Griffith and W. P. Allen, of Terrell, Tex., E. J. Cannon, Frank Blankenship, T. E. Corey, L. W. Wells, John H. McDonough, and N. W. Baker, of Dallas, visited Tulsa in Col. Green's private car. He is the son of the famous Hetty Green of New York City, and has extensive holdings in Oklahoma. Others in the party are affiliated with the Dallas-Osage Oil Co., the Terrell Co., and the Paris Company. The Paris-Terrell companies have production worth $3,000,000 in Oklahoma mostly in the Osage Nation and near Bartlesville, and they make an inspection trip twice a year. Michael Connor is their representative in Oklahoma.

p. 4. 6. Noted in Passing. The United States Battleship Nevada, to be launched in about 3 months, will be an oil burner and strictly modern in design.

At Prague and Paden, the Prairie Oil & Gas Co. struck oil and gas, and oil men are taking many leases.

A. W. Culp and Miss Tessa Lee, of Okmulgee, were married on Nov. 7, 1914 at Wichita Falls, Texas. They will reside in Okmulgee, where Mr. Culp is a prominent oil producer.

The test of the Prairie Oil & Gas Co. in the SW-1/4-Sec. 8-12N-7E, six miles east of Prague, on what is known as the Echo Emarthia allotment owned by A. G. Rogers, came in for 2,500,000 cfgpd on Tuesday of last week, and by midnight had blown the casing out of the hole 30 feet with a high-grade oil running out of the top. This is 12 miles from the nearest production and has aroused considerable interest.

p. 6. Recent Deaths. Philo D. Lockwood, age 42, died in an automobile accident at Hominy Creek near Sperry. He is the son of Senator Lockwood and was well-known in the oil business. He is survived by his wife, an infant child, and his aged father. The burial took place at Skiatook, Oklahoma.

p. 8, 10. Oklahoma. In Okfuskee County, near Paden, the Prairie Oil & Gas Co. No. 1 Rogers in Sec. 8-12N-7E, two miles northwest of Paden and 18 miles south of the Cushing Pool, is making about 1,000,000 cfgpd and 5 bopd at 2,800 feet in a dark gray sand. It is stated that this is the Bartlesville sand, but others state that it is a stray sand, with the Bartlesville to be expected at 3,200 feet. Acreage is leasing for $100 to $150 an acre, some of which is two miles away. Leases 9 miles away are $2.00 an acre. Several wells have been started near here.

In Creek County, 10 miles northeast of the above well, Litchfield & Sullivan in Sec. 27-14N-8E had a 30-bopd pumper in the Wheeler sand at 2,300-2,400 feet, after plugging back from the Bartlesville sand at 2,900 feet.

In Jackson County, three tests are being drilled. The Jackson County Oil & Gas Co. is drilling on the J. A. Lovett Farm, 7 miles east and 2 miles north of Altus. Van Varman & Co. is drilling in Sec. 27-3N-22W. The Creta Oil & Gas Co. is drilling on the Thorn tract in Sec. 33-1N-22W.

In Tulsa County, the Bird Creek gas wells are still being drilled. (Details given).

In Arkansas, three tests are drilling, one in Crawford County, the Clear Creek Oil & Gas Co., which is at 1,100 feet, and two in Franklin County, the Paris Oil & Mineral Co. at 1,700 feet, and the Decius, Levy & Hutchinson well at 1,200 feet in western Franklin Co. The latter is owned by Muskogee men. The Clear Creek company is owned by Fort Smith capitalists.

p. 22. Sam-O-Set Company Big Concern. The Sam-O-Set Company has been organized at Ardmore with $5,000,000 stock with a charter taken out in Delaware. Robert Watchorn organized the company and he has homes in Los Angeles, New York, and Dundee, Scotland. He is interested in the Dundee Petroleum Co. and the Alma Oil Co. operating in the Healdton Field. The word Sam-O-Set was the first word spoken to Dutch explorers by the American Indians and means welcome. The board of directors will reside in Ardmore. The company plans later to build a pipe

line from Healdton and Cushing to the Gulf of Mexico.

p. 23. Jarius French, Oil Man is Dead. In the newspaper at Ringling, Okla., was received a notice that Jarius French died at Lake Charles, La. He drilled the first producing well in southern Oklahoma in the Wheeler Field for the Santa Fe Railroad. The first test wells cost the company $76,000.

p. 26. Roy Purpus, Baseball Magnate. Roy W. Purpus, secretary and treasurer of the Oklahoma Iron Works, is now sole owner of the Tulsa Baseball Club, a member of the Western Association.

p. 26. Chelsea Refining Co. Owns Three Refineries. The Chelsea Refining Co. plant at Cushing, known as the International Refining Co. with 3,000 bopd capacity, is the third plant of the company. Gunsburg & Forman are interested with the company and will supply the crude from their Cushing leases. The Ardmore Refining Co. plant will soon be ready to make its run from the Healdton Field. J. E. Crosbie of Tulsa is interested in this plant and he will supply the crude from his leases in the Healdton Field. The Chelsea Refining Co. entered Oklahoma 7 years ago, locating at Chelsea in Rogers County, using crude from the shallow fields. They market under the name Chelreco, and deal in foreign trade through the Export Oil Corporation, with C. F. Martin secretary.

The Chelsea Refining Co.'s officers are: C. R. Armstrong of Lock Haven, Pa., president; W. P. Beaver of Chelsea, vice-president; and C. F. Martin of Tulsa, secretary-treasurer and general manager.

p. 30. Fifty-Seven Years' Record of the Oil Industry - 1857-1913. The table below by the U. S. Geological Survey, gives in barrels of oil, the production of 12 countries and one column of miscellaneous countries from 1857 to 1913:

Year	Roumania	United States	Italy	Canada	Russia	Galicia	Japan
1857	1,977						
1858	3,560						
1859	4,349	2,000					
1860	8,542	500,000	36				
1861	17,279	2,112,609	29				
1862	23,198	2,056,690	29	11,775			
1863	27,943	2,611,309	58	82,814	40,816		
1864	33,013	2,116,109	72	90,000	64,586		
1865	39,017	2,497,700	2,265	110,000	66,542		
1866	42,534	3,597,700	992	175,000	83,052		
1867	50,838	3,347,300	791	190,000	119,817		
1868	55,369	3,646,117	367	209,000	88,327		
1869	58,533	4,215,000	144	220,000	202,308		
1870	83,765	5,260,745	66	250,000	204,318		
1871	90,030	5,205,234	272	269,397	165,129		
1872	91,251	6,293,194	331	308,100	134,391		
1873	104,036	9,893,786	467	365,052	474,379		
1874	103,177	10,926,945	604	168,897	583,751	149,837	
1875	108,569	8,787,514	812	220,000	697,364	158,522	4,566
1876	111,314	9,132,669	2,891	312,000	1,320,528	169,792	7,708
1877	108,569	13,350,363	2,934	312,000	1,800,720	169,792	9,560
1878	109,300	15,396,868	4,329	312,000	2,400,940	175,420	17,884
1879	110,007	19,914,146	2,891	675,000	2,761,104	214,800	23,457
1880	114,321	26,286,123	2,035	350,000	3,001,200	229,120	25,497
1881	121,511	27,661,238	1,237	275,000	3,401,441	286,100	16,751
1882	136,610	30,349,897	1,316	275,000	4,537,815	230,076	15,549
1883	139,486	23,449,633	1,618	250,000	6,002,401	265,160	20,473
1884	210,667	24,218,438	2,855	250,000	10,804,577	408,120	27,923
1885	193,411	21,858,785	1,941	250,000	13,924,596	465,400	29,237
1886	148,606	28,064,841	1,575	584,061	18,006,407	305,884	37,916
1887	181,907	28,283,483	1,495	525,655	18,367,781	343,832	28,645
1888	216,676	27,612,025	1,251	695,203	23,043,787	466,537	37,436
1889	297,686	35,103,513	1,273	704,690	24,609,407	515,268	52,811

1890	383,227	45,823,672	2,998	795,030	28,691,218	659,612	51,420
1891	488,201	54,292,655	3,305	755,298	34,573,181	630,730	52,917
1892	593,175	50,514,657	18,321	799,753	35,774,504	646,220	68,901
1893	535,655	48,431,066	19,069	798,406	40,456,519	692,669	106,384
1894	507,255	49,844,516	20,552	829,104	36,376,428	949,146	171,741
1895	575,200	52,892,276	25,843	726,138	46,140,174	1,452,999	141,310
1896	543,348	60,960,361	18,149	726,822	47,220,633	2,443,080	197,082
1897	570,886	60,475,516	13,892	709,857	51,390,568	2,226,368	218,569
1898	776,238	55,364,233	14,489	758,391	61,609,357	2,376,108	265,339
1899	1,425,777	57,070,850	16,121	808,570	65,956,968	2,313,047	536,079
1900	1,628,535	62,620,529	12,102	918,498	76,779,417	2,346,505	866,814
1901	1,678,320	69,389,194	16,150	756,679	85,168,556	3,251,544	1,110,790
1902	2,059,935	88,766,914	18,933	530,624	80,540,044	4,142,159	1,193,038
1903	2,763,117	100,461,327	17,876	486,637	75,591,256	5,234,473	1,209,371
1904	3,590,026	117,080,960	26,476	552,575	78,536,655	5,947,383	1,419,473
1905	4,420,987	134,717,680	44,027	634,096	54,960,270	5,765,317	1,472,804
1906	6,378,184	126,492,936	53,577	569,763	58,897,311	5,487,967	1,710,768
1907	8,118,207	166,095,335	59,875	788,872	61,850,734	8,455,841	2,001,838
1908	8,252,157	178,527,355	60,966	627,987	62,188,447	12,612,295	2,070,115
1909	9,327,278	183,170,874	42,388	420,755	65,970,350	14,932,799	1,889,563
1910	9,733,806	209,557,348	50,830	315,895	70,336,574	12,672,688	1,930,661
1911	11,107,450	220,449,391	74,709	291,096	66,182,691	10,519,270	1,658,903
1912	12,976,232	222,935,044	53,778	243,836	68,019,208	8,535,174	1,671,405
1913	13,554,768	248,446,230	50,334	228,080	60,935,482	7,818,130	1,942,009
Total	105,156,895	3,069,694,605	765,759	23,278,805	1,563,314,849	126,840,251	24,312,780

	Germany	India	Dutch East Indies	Peru	Mexico	Other Countries
1880	9,310					
1881	29,219					
1882	58,025					
1883	26,708					
1884	46,161					
1885	41,360					
1886	73,864					
1887	74,384					
1888	84,762					
1889	68,217	94,250				
1890	108,296	118,665				
1891	108,939	190,131				
1892	101,404	242,384				
1893	99,390	298,969	600,000			
1894	122,564	327,218	638,170			
1895	121,277	371,536	1,215,757			
1896	145,061	429,979	1,427,132	47,536		
1897	165,745	545,704	2,551,649	70,831		
1898	183,427	542,110	2,964,036	70,905		
1899	192,222	940,971	1,795,561	89,166		
1900	358,297	1,078,264	2,253,355	274,800		
1901	313,630	1,430,716	4,012,710	274,800		20,000
1902	352,674	1,617,363	3,430,465	266,728		26,000
1903	445,818	2,510,259	5,770,054	278,092		36,000
1904	637,431	3,385,468	6,508,485	365,834	270,653	40,000
1905	560,983	4,137,098	7,849,896	447,880	320,279	30,000
1906	578,610	4,016,803	8,180,657	538,284	1,697,264	30,000
1907	756,631	4,344,162	9,982,597	756,236	1,717,490	30,000
1908	1,009,278	5,047,028	10,283,267	1,011,180	3,487,610	30,000
1909	1,018,887	6,676,517	11,041,852	1,316,118	2,488,742	30,000
1910	1,032,522	6,127,090	11,030,620	1,330,105	3,332,807	30,000
1911	1,017,956	6,451,203	12,172,949	1,368,374	14,054,643	200,000
1912	1,031,856	7,116,672	10,645,624	1,751,143	16,552,215	474,000
1913	995,764	7,500,000	11,966,857	1,837,355	25,696,281	517,616
	11,989,805	65,649,770	125,573,184	12,113,264	68,965,294	1,493,616

The Total world production is as follows:

1857	1,977	1878	18,416,761	1900	149,132,116
1858	3,560	1879	22,601,405	1901	167,424,089
1859	6,349	1880	30,617,606	1902	181,945,876
1860	508,578	1881	31,952,797	1903	194,801,294
1861	2,130,917	1882	35,704,288	1904	218,299,419
1862	2,091,692	1883	30,255,470	1905	215,861,296
1863	2,762,940	1884	35,988,741	1906	214,010,124
1864	2,303,780	1885	36,764,730	1907	260,958,008
1865	2,715,524	1886	47,243,154	1908	285,089,815
1866	2,899,278	1887	47,897,083	1909	298,326,073
1867	2,798,846	1888	52,164,507	1910	327,482,746
1868	3,990,180	1889	61,507,095	1911	345,645,824
1869	4,695,985	1890	76,632,838	1912	352,210,881
1870	5,799,214	1891	81,100,347	1913	381,508,916
1871	5,730,063	1892	88,739,219		
1872	6,877,267	1893	92,038,127	Total	5,189,027,477
1873	10,837,720	1894	89,335,697		
1874	11,933,121	1895	103,662,510		
1875	9,977,348	1896	114,159,183		
1876	11,951,267	1897	121,948,575		
1877	15,753,938	1898	124,924,682		
		1899	131,143,742		

p. 31. John D. Rockefeller Vigorous and Alert at Age of 75 Years. Rev. Dr. William W. Bustard, pastor of the Euclid Avenue Baptist Church of Cleveland, Ohio, was a visitor in Pittsburgh, Pa., last week, and said that John D. Rockefeller has been a member of his church for 60 years. He said that Mr. Rockefeller is in fine physical and mental shape. He spends a large portion of his time out of doors and plays golf for an hour and a half every weekday morning when he has time. He is sinewy, strong, quick, and athletic. He plays an unusually good game of golf, and enjoys the sport. He whistles and sings and tells stories and cracks jokes, and is an open and humorous companion. His mind works like lightning, and his humor is clear. His home life is good, and he has no fear of being assassinated. He eats almost all kinds of food except fruits that contain acids. He is methodical in everything that he does and is regular in his habits. When a mere boy, he became a member of the church, and did his share of church and Sunday School work. For years he was superintendent of the Sunday School, and is now honorary superintendent. Mrs. Rockefeller was also a teacher in the infant department of Sunday School, and was always an active worker in the church. Mr. Rockefeller attends the morning services every Sunday when in town, and is most cordial and brotherly toward everybody. He likes to do things on a large scale, especially in his gifts to church and charity. His relief ships for the stricken of Europe, caused by the war, are evidences of that, and worthy of the praise given to him by the world.

›l. 13, No. 25, November 26, 1914, p. 1. Mid-Continent Production. The apparent estimated production in the Mid-Continent at the close of last week was 381,800 bopd, with Kansas and Oklahoma outside of Cushing being 147,500 bopd, Cushing 188,300 bopd, Electra 19,000 bopd, and Caddo, La., 27,000 bopd. Three important tests will be drilled in Ouachita Parish, La., near Monroe, by a company of Oklahoma and Texas men, and the wells will be drilled to 3,500 feet. Near Dexter, in Grayson County, Texas, two wells have shown some oil.

p. 1. To be stuck up by robbers in Oklahoma is a common experience. The supposed prosperity of the petroleum fields has attracted crooks from all sections of the country.

p. 1. The town of Prague, in Lincoln County, is in a boom, owing to the new oil and gas strike near there. It is believed that an important field has been opened.

p. 3. After Russian Oil Fields. It may be that the oil fields of Russia will

be the scene of hard fighting. This is one of the purposes that Germany had in view by urging the Turks into war. The main attack of the Turkish armies is against Batoum, from which a pipe line runs to the Baku oil fields, and from this port they would attack Baku. Germany would then have ample oil for the war, if the Balkan states remain neutral. The Russians have captured the Galician oil fields of northeastern Austria, and the Roumania fields are being shut down because the workers are joining the Army, and with Baku shut off, Germany has almost no oil.

p. 4. Personal Mention. J. E. Kinney and C.W.S. Cowie, affiliated with the Winona Oil Co. of Bartlesville, have returned to their homes in New York after looking over their properties. Frank Breene, of Bartlesville, is the head of the Winona company.

N. J. Riley and wife, of South Bend, Indiana, were in Independence, Kansas, visiting their son E. S. Riley, a prominent oil producer. Mr. Riley is head of the Studebaker Auto Company and will later become interested in the Oklahoma fields.

Joe Bartles, of Dewey, Okla., oil man, rancher, and financier, was in Tulsa. He has won fame by conducting a round-up each Fourth of July at Dewey, which is attended by people from all over the country. He has extensive oil interests in Washington County.

J. Howard Pew, of Philadelphia, Pa., president of the Sun Oil Co., was in Ardmore, looking over the holdings of the Twin State Oil Co. in the Healdton Pool, which is controlled by Sun. He denied that his company was soon to build a pipe line from Oklahoma to the Gulf.

p. 4. Noted in Passing. E. A. Walker, attorney, oil man, and former newspaper correspondent, has sold part of his Healdton holdings for $140,000, and is moving to Oklahoma City.

Now that Turkey has been drawn into the war, the Russian, Roumanian, Persian, and Egyptian oil fields are indirectly or directly involved. A. G. Dana and family were in Turkey when war was declared. With difficulty, they escaped to Egypt, and are now in Cairo.

George Foster, star pitcher for the Boston American Team, and a twirler in the Muskogee Western Association Team in 1911, has bought two tracts in the U.S. Government land sale at Poteau. Both farms are located in Latimer County.

p. 8, 10. Oklahoma. Outside of the strike at Paden and increased production at Cushing, there was little of interest this week in Oklahoma. About 188,330 bopd by 24 companies is the approximate production in the Cushing Field, on the first of this week. About 16,500,000 barrels are in storage in Cushing.

In Okfuskee County, two miles northwest of Paden, in Sec. 8-12N-7E, the Prairie Oil & Gas Co. completed a well last week at 2,793 feet, and drilled a few feet into the sand, making about 1,000,000 cfgpd and 5 bopd. The Paden Oil Co. was the original holder of the lease, part of which was turned over to the Prairie company. The company does not want to complete the well and has shut it in due to market conditions.

In southern Tulsa County, in the Wicey Pool, south of Bixby, many wells are being completed deeper at the 2,000-foot level. A. M. O'Donnell No. 3 DePriest Farm in Sec. 3-16N-13E drilled 31 feet into the sand in a north location from the southeast corner, and is making 1,100 bopd. His No. 4 is making 50 barrels an hour. When Wicey was first opened, the 1,660-foot sand was the pay zone. The daily production of the pool is now about 7,500 bopd. (Details given).

In McIntosh County, the Green River Oil & Gas Co. has two gas wells, and have sold gas from one well to the Western Natural Gas Co. which furnishes gas to local towns. Last month, for October, Green River made $1,089 on the gas. The other well will be on line shortly, gauging at 3,760,000 cfgpd.

E. S. Riley and W. H. Hood are new-comers to the oil business. Mr. Hood is from Birmingham, Ala., and Mr. Riley is from South Bend, Ind. Mr. Hood came to Independence, Kansas, about 2 years ago, and later interested Mr. Riley in a half interest in some good production. They have completed 12 wells on the Black lease in the Wayside Pool and 3 wells on the Patterson tract in the Wayside Pool.

p. 10. Very Lively Town of Prague. Frank Arber of the Guthrie Post Office

has just returned from Paden and Prague, as a representative of some Guthrie citizens interested in oil investments. He said that he never saw such a wild crowd. Strangers are sleeping on cots in the wagon yards and barns. A contract has just been let in Prague to build a 3-story hotel as quickly as possible. Leases are selling at fabulous prices. A few weeks ago, farmers could not have disposed of their farms for cash at any price, and now they are refusing thousands of dollars for their quarter sections. He had never seen such wildcat schemes enacted before.

p. 12. North Texas. In Cooke County, Texas, northeast of Gainesville, the Dexter Oil & Gas Co. No. 1 well was recently completed, and oil is reported by D. A. Smith of Wichita Falls who drilled the first test in the Fowlkes Pool of Wichita County.

In Grayson County, the Red Branch Oil & Gas Co. is at 510 feet on the Riche Farm and reports good showings of oil, in the vicinity of the Dexter Pool. J. C. Whaley, of Gainesville, has plans to build a refinery at Gainesville, and to build a line to Healdton, to handle 10,000 bopd. The company may extend a line to the Gulf Coast. The company would also handle oil from the Dexter Pool.

p. 29. Lawton Has Natural Gas Now. The Lawton Natural Gas Co. turned the gas into the city mains on the south side of the city on Wednesday morning. The pressure at the southwest corner of the city was 70 psi. Mr. Marple stated that 4 or 5 psi was sufficient for the present needs of the consumers.

p. 30. Oil City Field, Carter County Deal. Dr. F. W. Skillern, of Tishomingo, on Saturday afternoon, sold his 4 producing wells in the Oil City Field to T. J. Moore & Co. of Dallas, for $100,000.

Vol. 13, No. 26, December 3, 1914, p. 3. Mid-Continent Production. The apparent estimated production of the Mid-Continent fields at the close of last week was 372,000 bopd, with Kansas and Oklahoma being 145,500 barrels outside of Cushing, and Cushing 180,500 bopd, Electra 19,000 bopd, and Caddo, La., 27,000 bopd. Mostly things were quiet in the Mid-Continent.

p. 3. Some stock in the Royal Dutch-Shell Company is owned in Germany, but the majority is owned by Dutch, French, and British capitalists, according to H. Loudon, director of the company.

p. 6. Personal Mention. Joe Mercer, of Kansas City, Mo., who is drilling a wildcat test in Pittsburg County, was in Muskogee during the week.

Ross W. Coe and Miss Nellie Nauer were married at Denison, Texas on Wednesday of last week. Mr. Coe is a field scout for the Gypsy Oil Co. The bride is from Denison. They will live at Ardmore, Oklahoma.

Mr. and Mrs. A. M. Craig, of Grove City, Pa., are visiting their son C. B. Craig of Tulsa, the district manager of the Bessemer Gas Engine Co. A. M. Craig was a pioneer in the Pennsylvania fields and has met many of his old friends since his arrival at Tulsa.

S. G. Robinson, of Van Buren, Indiana, was in Tulsa, coming from the development at Ada in Pontotoc County, where he has interests. He is one of the old timers in the Trenton Rock development and also has interests in Cowley County, Kansas.

p. 6, 8. Noted in Passing. The Kansas Natural Gas Company will extend its lines to the gas wells in the Catoosa Field. The line will probably be a 12-inch one.

Litchfield & Sullivan received $63,000 for their oil holdings in the Cole Pool northwest of Boynton in Secs. 10, 11, 14 -14N-15E.

Alexander and others are reported to have made 2 locations on land near the Prairie well near Paden, Okfuskee County.

In Palestine, the Holy Land of Bible History, American oil operators are proceeding briskly on the southwest shore of the Dead Sea. A 50-mile railroad is being constructed to the oil fields. On the east shore of the Dead Sea, English oil interests are equally busy.

A group of Russian mining engineers has been sent to Galicia, Austria, to

begin exporting oil to Kieff and the central provinces of Russia, by southeastern railways.

Arrangements have been completed to construct the 164-mile Inola Pipe Line Co. line from Cushing to Chanute, Kansas, to carry 20,000 bopd. It will cost $1,100,000, and will furnish oil to refineries at Tulsa, Chelsea, Coffeyville, Caney, Niotaze, Independence, Erie, and Chanute.

Frank Harper, of New York, who for the past 5 years has been Theodore Roosevelt's private secretary, has located at Ardmore, Oklahoma, as secretary of the Alma Oil Co. and the Sam-O-Set Co., both Robert Watchorn concerns. Mr. Harper had accompanied Roosevelt in his African and South American trips and his speaking tours. Mr. Harper is a very capable man.

Attorney W. A. Ledbetter, of Oklahoma City, visited Ardmore, to talk with Robert Watchorn, for the purchase of extensive oil-producing properties in the Cushing District.

p. 8. Recent Deaths. James McGinley, 35 years old, formerly a resident of Titusville, Pa., who worked in the Oklahoma oil fields, died of pneumonia at a Tulsa hospital Saturday night. The body was shipped to Titusville for burial.

p. 12, 14. Oklahoma. Activity was generally quiet this week. About 70 wells are drilling in the Cushing Pool. Many earlier gushers are now falling off. The Tucker sand is about 150 feet below the Bartlesville sand, and some wells have penetrated too deep and have struck salt water in places, possibly commingling the two sands. It is thought that the Shaffer No. 5 Izora Walker farm in Sec. 18-18N-7E that produced 9,960 bopd, was finished in the Tucker sand, and now the well is making 2,000 bopd, and that the Tucker and Bartlesville are probably producing together over a 152-foot interval. The old wells in the southern end of the field had the pay in the upper Bartlesville, but the new wells in the northern end have the pay in the lower Bartlesville; and possibly the Tucker and Bartlesville sands have merged here.

In Muskogee County, near Boynton, many wells are drilling in the Boock sand, 14N-15-16E. The early work was done in 14N-15E. Twelve wells have been completed in 14N-16E, the wells averaging 10 to 200 bopd. There are 3 sands found at Boynton; in Sec. 15-14N-16E, there is a sand at 1,400 feet, another at 1,500-1,540 feet in other sections where the best pay occurs, and at 1,590-1,605 feet in Secs. 21-22-14N-16E. The Caney River Gas Co. has purchased the gas rights. (Details given).

p. 16. North Texas. Near Denton, Texas, Oklahoma oil men have been securing leases. A well is being drilled near Old Rock Crossing, on the Texas side, near Leon, and the well is said to be standing full of oil and water at 370 feet.

Leasing is going on from Kingston, Oklahoma, to Gainesville, Texas.

p. 32. Gas. November's Gas Wells. Oklahoma. In Oklahoma, for November, about 169,365,000 cfgpd new gas was discovered. The Bird Creek development of Tulsa County had 77,865,000 cfgpd new gas discovered. In the Tulsa District, there were 6 gas wells completed for 41,000,000 cfgpd. In eastern LeFlore County, about 5,000,000 cfgpd new gas was discovered.

Vol. 13, No. 27, December 10, 1914, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent fields at the close of last week was 408,000 bopd, with 147,000 bopd from Kansas and Oklahoma outside of Cushing, and 215,000 bopd from Cushing, 19,000 bopd from Electra, and 27,000 bopd from Caddo, La. There were 282 wells completed in Oklahoma in November 1914, which was mostly represented by drilling in wells that were being held back at Cushing and other areas, with large wells being completed at Cushing and Healdton.

p. 1. The Island of Cyprus has been annexed by the British during the past month, and oil possibilities are being investigated.

p. 4. Personal Mention. F. A. Gillespie, the prominent oil operator from Tulsa, has been spending a great deal of time at Bromide, since he became extensively interested in the big biolithic stone quarries at Bromide, east of town, in Johnston County.

M. A. Dillard, of Fort Worth, Texas, the vice-president of the Thelma Oil Co. was at Healdton. His company recently completed a line from Healdton to Ringling, where oil is shipped by tank car to the Oriental Oil Co. Refinery at Dallas, Texas.

Mrs. Nathaniel Harris of Bradford, Pa., was elected president of the National Council of Jewish Women in New Orleans. She is the wife of Nathaniel Harris, a successful oil producer, and is a sister to Ike Simons, now located in Tulsa.

p. 4, 6. Noted in Passing. J. C. Shaffer and J. W. Calkins, of Tulsa, have leased 10,000 acres of oil land around Talihina, Oklahoma. They are under contract to begin drilling a well within 90 days.

Mr. and Mrs. R. J. Curry were married on Nov. 22, 1914 at St. Louis, Mo., and are now at home in Tulsa at 1225 South Boston Ave. He is the director of the Catoosa Petroleum Co., and his bride was Miss Doris Armstrong of Oklahoma City.

The Austrian government has confiscated the entire output of oil in the Austria-Hungarian fields. Stocks will be exhausted within a few days.

The Missouri-Oklahoma Oil & Gas Co., of Wann, has been incorporated, and will drill a test on several thousand acres in Delaware County, Oklahoma.

p. 8-10. Oklahoma. Many wells at Cushing have sat idle, waiting for a better market. As some of these are completed, the production goes up, and is now listed as 230,000 bopd at Cushing. As more pipe lines are completed, and new tank storage completed, the figures will also rise for storage. Many wells are being completed in the Bartlesville sand at 2,647, 2,590, 2,382, and 2,747 feet, each flowing about 6,700 to 7,100 bopd. Wildcat wells are being drilled in a 50 mile radius. The 12-inch line of J. S. Cosden & Co. from the Cushing Field to Tulsa has been completed and is handling about 7,000 bopd.

In Atoka County, several wells are drilling. In the Oliver test near Wardville, in Sec. 8-2N-12E, only water was found.

In Coal County, Wolford et al in the SW-1/4-Sec. 4-2N-11E are drilling at 1,200 feet after a short idleness.

p. 27. Gas. In Oklahoma, Alfred J. Diescher of Bartlesville says that about 200,000,000 cfgpd is being wasted in the Cushing Field, and that the pressure is being reduced at 2 pounds per square inch a day. A year ago, the average pressure was 600 psi, and now it is 200 psi. The Layton, Jones, and Wheeler sands in the Cushing Pool supply about 200,000 people in Oklahoma and Kansas, but by next year this will be depleted. In the Wheeler sand a year ago, the pressure was 600 psi, and now it is barely 200 psi, and not 5% of the gas was ever used. In the Bartlesville sand, the pressures started out at 1,000 psi, but in some areas this is now down to 300 psi. A packer should be set on top of the Bartlesville sand, and a separator should be installed at the surface, to separate the gas from the oil, in order to retain the formation pressure and to be able to sell both gas and oil.

In Texas, in Limestone County, gas will be piped to Corsicana and Waco from the Mexia Field. T. J. Driscoll, of Indianapolis, Ind., president of Driscoll Pipe Line Co., has placed a 100 man team in the field to lay a 30 mile line to Corsicana. They should finish by Jan. 1, 1915. He has organized the Mexia-Corsicana Pipe Line Co. C. T. Harding of Amarillo is one of the stockholders. The company was chartered last week, with $200,000 capital. Wortham, Texas, will also be supplied by the 8-1/4-inch line.

Barnsdall, and Herring, have each applied for a franchise to pipe Waco, 40 miles away. Mr. Barnsdall would purchase the gas from the Mexia Oil & Gas Co., which has 3,800 acres and 200,000,000 cfgpd reserves in the field, and already serves Mexia at 40¢ a thousand and 7¢ a thousand for industrial use. He would use the old existing lines of Waco. The C. T. Herring Oil & Gas Co. has 1,500 acres of their own production in Mexia. The Barnsdall company expects to have its line completed in the next 2-1/2 months. The Herring interests would lay new lines in Waco, instead of using the old artificial gas lines.

The Lone Star Gas Co. is laying new lines, a 6-inch line from Petrolia to Wichita Falls, and a 16-inch line from Petrolia to Alvord to Fort Worth and Dallas. They recently paid $75,000 for gas rights in a pool in Stephens County, Oklahoma, where they have completed some fair gas wells.

p. 28. Gas Production from 1885 to 1913. In 1913, about 581,898,239,000 cubic feet of gas was sold at an average price of about 15¢ a thousand. Oklahoma production began about 1902, when $360 worth was sold. In 1903, about $1,000 worth was sold, and in 1904, about $49,665 worth was sold. In 1905, $130,137, in 1906, $259,862, in 1907,$417,221, in 1908, $860,159, in 1909, $1,806,193, in 1910, $3,490,704, in 1911, $6,731,770, in 1912, $7,834,599, and in 1913, $7,436,389 worth of gas was sold.

p. 29. J. Grabham, Independence Man Dead. J. V. Grabham, owner of the farm upon which Grabham Station and the Kansas Natural Gas Co.'s first and largest pumping plant is located, died in Independence today. He was born in England, and came to Kansas in 1877.

p. 35-38. Wells. Oklahoma, Texas, Louisiana. About 31 wells were completed as wildcats, mostly in southwestern Oklahoma, at the end of November, including 5 gas wells and 15 dry holds, apart from the main Oklahoma fields.

In Mayes County, O. W. Killam et al No. 1 in Sec. 12-20N-19E was a gas well.

In LeFlore County, Hickman et al No. 1 near Panama was a gas well. The Thomas Wall et al No. 1, near Poteau, in Sec. 21-7N-26E, was a gas well. The Bokoshe Oil & Gas Co. No. 1 near Bokoshe was completed for a gas well.

In Atoka County, the Olive Oil Co. No. 3 in Sec. 8-1S-14E was dry. The Conewango Oil Co. in Sec. 7-2S-10E, on the Danehour tract, was dry. The Oklatoka Oil Co. No. 1 in Sec. 13-3S-10E was dry.

In Johnston County, the R. Galbreath No. 1 near Bromide was dry.

In Coal County, the English Oil Co., No. 1, near Globe, struck gas and water at 800 feet in Sec. 35-3N-9E, and was completed as a gas well.

About 213 wildcat wells were drilling at the end of November in Oklahoma, with 12 in Atoka County, 15 in Pontotoc County, 9 in Coal County, 3 in Pittsburg County, 18 in Comanche County, 12 in Stephens County, and 31 in Marshall County. In all of Oklahoma, 282 wells were completed, of which 46 were gas wells and 52 dry holes, with 71,563 bopd new production, and 753 wells drilling.

In North Texas, there were about 35 wells completed, with 2 gas wells, and 12 dry holes, and about 78 new wells started, with about 652 bopd new production.

In Northern Louisiana, about 20 wells were completed, with 6 dry holes, and about 2,790 new bopd, and 107 wells drilling.

Vol. 13, No. 28, December 17, 1914, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent fields at the close of last week was 444,725 bopd, with Kansas and Oklahoma outside of Cushing being 146,275 bopd, Cushing 252,000 bopd, Electra 19,000 bopd, and Caddo, La., 27,450 bopd. The developmental wells of Cushing and Healdton continue to be completed.

p. 1. On Jan. 3 Canadians will pray for the success of the Allies. The enemies of the Allies are praying for the defeat of the latter. In Turkey, Moslems are praying for the overthrow of Christian enemies, and Christians are praying for the downfall of the Turks. All is quiet along the Potomac. Secretary Bryan says that preparation for war often leads to war. Other statesmen have different views.

p. 1. Nikola Tesla says that he has discovered a new means of spreading light on dark subjects. With a 75,000 horsepower plant located in the Azores, he says that he can illuminate, with a mild glow, the entire Atlantic Ocean. This could put kerosene and gas out of business.

p. 4. Personal Mention. W. L. Russell, of Lima, Ohio, of the firms of Russell Brothers, and Russell & Skelly, is in Tulsa. He and Mr. Skelly recently brought in a gusher in the Healdton Pool.

W. C. McBride, head of the Silurian Oil Co., operating in the Cushing Pool, was in Tulsa. He is a director of the Pure Oil Co., and one of the owners of the Republic Supply Co.

p. 4, 6. Noted in Passing. In Rogers County, a test well is to be drilled by Thomas Green and associates on a line between the gas pool west of Claremore and Sageeyah, Okla., in the hope of finding a connection between the two pools.

A deposit of hard asphalt, known as uintahite or gilsonite, has been discovered a few miles inland from the west coast of Leyte, Philippine Islands. It is regarded as a rich find and plans are being considered to develop an asphalt industry there.

C. H. Cameron has given out a record of the Paden discovery well. At 2,887 feet, the pay zone is in the Skinner sand. The Bartlesville sand should come in at 3,007 feet.

The Scivally Petroleum Co., of Ardmore, has been organized, with capital of $60,000. The officers are: W. F. Whittington, president; S. A. Apple, vice-president; and Edward Galt, secretary-treasurer. The board of directors includes the officers and Robert F. Scivally and W. B. Johnson. They intend to drill immediately.

p. 6. Recent Deaths. R. L. Ransom, 69 years of age, died in Toledo, Ohio, last week. He had headquarters in Muskogee, where he was in the oil business. He was formerly the president of the First National Bank of Toledo, and came to Oklahoma several years ago. He had surgery on his throat in Toledo recently.

p. 6. Oil News From New Zealand. In the New Plymouth Oil Field of New Zealand, the Taranaki Oil Wells Ltd. has 4 oil wells simultaneously flowing, Nos. 2, 3, and 5 of cable tool type, and one rotary well. It is a paraffin oil.

p. 8, 10, 12. Oklahoma. Drilling continues in north Cushing, with lifting of restrictions by the Corporation Commission. In the area north of the Cimarron River there are 2 pay sands. Some think that the upper sand is Bartlesville and that the lower sand is the Tucker, but where they almost merge, some think that it is one formation. The sands begin at about 2,320 to 2,450 feet deep. West of the river the sands together are about 100 to 110 feet thick, but to the east they are 65 to 85 feet thick. The upper sand yields about 10 to 20 barrels an hour at 35 to 40 feet into the sand. The lower sand yields about 50 to 300 barrels an hour, at different levels. In most places, only a few feet of shale separates the two sands. West of the Cimarron River, 8 wells have struck salt water, in Secs. 17-18-18N-7E. Many wells in the older area have fallen off rapidly, some as much as 15,000 bopd in 4 weeks time, on a lease with several wells. About 14 or more companies shipped out 120,800 barrels of oil per day last week, and 22 or more companies had 18,845,430 barrels in storage. The estimated daily output last week, if all could be produced, was 252,515 bopd. The McMan Oil Co. has a yield of 40,700 bopd and next is White & Sinclair with 37,000 bopd, with the Prairie Oil & Gas Co. third at 19,000 bopd. The actual runs are much less, with Sinclair and Prairie each running about 25,000 bopd, being the two largest daily runs in the field. (Details given). Yale and Markham are thriving villages. The town of Cushing is being supplied by gas from the Cushing Field by the Cushing Gas Co., with 1,200 meters already installed. James McNeil is the superintendent, having come from Sharon, Pa., originally. Norfolk is a busy tent town. H. R. and Ed Ketchum have about 100 men doing grading around Norfolk. the railroad from Jennings to Drumright should be completed soon, and the electric line from Cushing to Drumright is progressing well with the Norfolk crew working steadily. Five companies are building tank farms near Norfolk. Villa is growing rapidly on the northern end of the field. Drumright is very busy, with 5,000 people, and the Morrell Hotel is always filled. Many pipe lines will be completed soon to the field. Seven refineries are now operating.

p. 14. North Texas. A new oil company has been organized at Mineola, Wood County, Texas, with capital of $20,000, by E. V. Drouett and T. I. Whitley. They have about 500 acres under lease and will drill locally.

The Texas Gas Co., of waco, with stock of $250,000 has been chartered to lay lines from Mexia to Waco, through Limestone, Falls, Navarro, and Bell Counties. The stockholders are Robert Law, T. N. Barnsdall, E. O. Bartlett, and E. R. Reeser of Pittsburgh, Pa., and W. W. Seley and P. B. Crosby, of Waco.

p. 16. Natchez, Miss. A company has recently been organized in Natchez to drill for oil in Jefferson Co. The company is known as the Truly Lake Oil

Co., and the well is on the property owned by Judge Jeff Truly, in the northwestern corner of the county. Indications of oil and gas abound in this area, and the people of Natchez 20 miles away are hopeful that their city will soon be supplied with natural gas.

Vol. 13, No. 29, December 24, 1914, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent fields at the close of last week was 369,750 bopd, with Kansas and Oklahoma being 146,000 bopd outside of Cushing which was 223,750 bopd, and Electra 19,000 bopd, and Caddo, La., 27,000 bopd.

p. 1. Egypt has been made a British protectorate, and Turkey's rule over the ancient land is thereby terminated. These are history-making days in the Eastern Hemisphere.

p. 2. White & Sinclair's Refinery. P. J. White has returned from Baton Rouge, La., where his company has purchased 1,000 acres on the Mississippi River, two miles north of the Standard refinery, and upon which they intend to build a refinery. The distance from Cushing to Baton Rouge is 385 miles. They also intend to build docks there. The water averages 50 feet deep, and the docks could handle some of the largest vessels in the world. They intend to build an 8-inch line from Cushing, if everything goes well. There are a number of surveyors in the field, and the firm is purchasing right-of-way land from farmers. Orders have been placed for the pipe some time ago.

p. 4. Personal Mention. Alexander McKay, of Dundee, Scotland, associated with Robert Watchorn in Oklahoma, has sailed for Scotland, accompanied by his wife and Mrs. MacGregory.

Walter Critchlow, associated with the Dundee Petroleum Co., discoverers of the Healdton Pool, was in Tulsa. His company has secured interests in the Cushing Pool.

Frank Harper, secretary of the Sam-O-Set, Dundee, and Alma Oil Companies, with headquarters at Ardmore, has arrived in Ardmore from Montclair, N.Y., his former place of residence. He was accompanied by his wife and family. He was formerly the private secretary to Col. Theodore Roosevelt.

C. A. Greenlees, of Wichita Falls, Texas, is preparing to make his new home at Wichita, Kansas. He has disposed of almost all of his holdings in the Wichita Falls district, having cleaned up a fortune in his operations.

p. 4, 6. Noted in Passing. The Russian Government has imposed a new tax on petroleum in order to create revenue for war purposes.

Tenino, Washington, continues to be excited over prospects of an oil boom. Much leasing has been in progress. Another Oil City has been added to the already long list. An oil well has been drilled on the sound.

In the recent sales of Indian lands in Oklahoma, nearly one million dollars was realized. Approximately two-thirds of the land offered was sold.

One of the most successful oil operators is Col. John J. Carter, of Titusville, Pa. He drilled nearly 400 wells in the Bradford Field, and only two were dry. In West Virginia, his operations became so extended that a company was formed to handle the business.

A post office is to be located at Wirt in the Healdton Field. Wirt Franklin was prominent in the enterprise which resulted in the discovery of that field, and the town is named in his honor.

p. 6. Recent Deaths. Roy Disney, 29 years old, died Dec. 17, 1914, at Cushing, Okla., of pneumonia. He was from Bradford, Pa. He is survived by 3 sisters and 4 brothers. One brother, Robert, was with him when he died, and accompanied the body to Bradford, Pa., where burial took place.

p. 8-10. Oklahoma. It has been quite a week in Oklahoma. In the Cushing Pool, the Clover Leaf Oil Co. in Sec. 17-18N-7E in the Cimarron River valley, got 8,000 bopd from the Bartlesville sand at 2,441-2,523 feet.

In Carter County, the Coline Oil Co. No. 2 J. Ferguson in Sec. 6-4S-3W of the Healdton Field, got 3,347 bopd at 890-1,202 feet. The McMan-Corsicana gusher

recently completed and east of the Russell-Skelly well in Sec. 6, is holding for 3,000 bopd. About 37,500 bopd could be produced from the Healdton Field. About 1,000,000 barrels are in storage. The oil in earthen storage sells for about 30¢ a barrel, and the remainder is 50¢ a barrel. About 15,000 bopd is taken.

In Muskogee County, the Boynton Pool is expanding. Rigs are drilling in all directions. The Boock sand is mostly being developed, mostly in T. 14 N. - R. 16 E., and the development is spotty. The Prairie Oil & Gas Co. takes the production, having laid a 4-inch line to the development. (Details given)

In Pontotoc County, near Ada, the McThwaite Oil & Gas Co. No. 3 in Sec. 29-4N-6E got 7,000,000 cfgpd at 1,040 feet, and this is now on line to Ada. The two previous gas wells are in Sec. 31.

In Muskogee County, a wildcat about 3 miles west of town and a little north in Sec. 13-15N-7E, by Shoenhair, Robinson et al, C-SE-1/4-SE-1/4 on the Jane Jackson Farm, got about 300 bopd of 41 gravity oil, and is 2 miles away from any production. It is the first well in that township to have production. It is at 1,325 feet.

In Osage County, north of Hominy, in Sec. 36-24N-8E, the wildcat of Foster & Davis was recently completed at 2,198 feet for 500 bopd, but water broke into the sand and the well was abandoned.

p. 30. Oil Fields of Mexico and Their Origin. The following is from a paper read by Mr. Ezequiel Ordonez at Pittsburgh, Pa., some time ago. In Mexico, in the oil fields near the east coast, the majority of the wells are located near volcanic necks. Mr. Eugene Coste pointed out that this was proof that the Mexican oil was of volcanic origin. Mr. Ordonez published a small article in 1905, explaining that the oil comes up around or near volcanic necks, after making an investigation for the Mexican Government. Mr. E. L. Doheny and Mr. Ordonez located the first major producing well in Mexico. Mexican capitalists did not want to invest in oil, so foreign companies came in. In Mexico, there is about 4,000 to 5,000 feet of shales and sands above Cretaceous limestones, and the oil originates in these beds. The structure is gentle. There are basaltic plugs, diorities, and nepheline syenite intrusions, that cut sharply through the sedimentary rocks, and have probably heated the shales and caused the oils to form in an aureole around the necks and intrusions, and to seep to the surface. A number of large seepages occur at the foot of the volcanic necks in altered shale, or on the flanks of dome-shaped bosses, and many of the large discoveries have been made in these areas. In some areas where there are curved rows of volcanic hills, heavy oil or chapopote as it is called, is found in the amphitheatre within the hills. Some oil is found away from obvious volcanic rocks, and appears to have come from some distance along bedding planes of the shale and argillaceous rock above the shale, giving rise to albertite and grahamite where the oil evaporates. In the eastern Sierra Madre, some of the limestones seem to be impregnated with oil, and the oil is lighter, being different in origin from the coastal oil. Near Tampico, the oil comes up with small grains of basaltic material in the sand, from 2,500 to 2,700 feet deep in most of the wells, and probably caused the shales to yield the oil. The first producing well of Mexico at Cerro de la Pez near El Ebano has produced 1,500 bopd for 70 straight months, and the general level of the producing sands is about 2,600 feet for most of the wells, suggesting that a flat permeable horizon is the source. Volcanic material may have stopped at about that level, or there may be another explanation. When the wells are exhausted, salt water and sulphuric acid and mud come into the well.

Vol. 13, No. 30, December 31, 1914, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent fields at the close of last week was 409,000 bopd, with Kansas and Oklahoma outside of Cushing being 143,000 bopd, and Cushing 220,000 bopd, Electra 19,000 bopd, and Caddo, La., 27,000 bopd. The week was quiet.

p. 1. Some weeks ago, Dwight Buck sold his oil lease in the Glenn Pool, south of Sapulpa, and went back to live at Hoquiam, Washington, to lead a simple life. Last week, an 80-bopd well was struck on the lease which he considered dry. One cannot tell where the pay streak is hidden until it is drilled.

p. 4. Personal Mention. Ira Shock, of Lima, Ohio, and Miss Pearl Gould, of Butler, Pa., were married recently in Okmulgee, Oklahoma. The young couple came to Oklahoma about a year ago. They will reside near Morris, where Mr. Shrock is employed by the Whyte Oil & Gas Co.

p. 4, 6. Noted in Passing. The Big Anticline Oil Co., of Oklahoma City, was chartered, with $5,000 capital, by R. M. Conway, D. T. Conway, and F. W. Whitney.

Edwin R. Dewey, formerly of Pittsburgh, Pa., but now a resident of Tulsa for several years, and Miss Ruth Tate Brady, of Tulsa, were married at the home of the bride's parents, Mr. and Mrs. W. Tate Brady, prominent residents of Tulsa. Mr. Dewey is connected with the Osage & Oklahoma Oil & Gas Company.

p. 6. Recent Deaths. Thomas Hewitt, 40 years old, was found dead in bed in a First Street rooming house in Tulsa on Saturday morning last, due to heart disease. He was an oil field worker. The body was shipped to Bradford, Pa., for burial, the former home of the deceased.

Felix N. Humes, 90 years old, died at his home in Tarentum, Pa., on Dec. 21, 1914. In 1847, he drilled a salt well at Tarentum and struck oil, the oil being used for medicinal purposes. The method of drilling was primitive.

p. 8, 10, 12. Oklahoma. The fields were quiet this week, except for the Cushing developments. The Bartlesville sand in the Cushing Pool was opened one year ago this month, by the Prairie Oil & Gas Co. on the Fred Tucker Farm in Sec. 3-17N-7E. Operators are predicting a drop in total production in about 3 months, with declining pressures and some dry holes outlining the pool. Late estimates place the production at 220,000 bopd. About 236 wells are being drilled. About 389 wells, Nov. 19, made about 210,209 bopd according to Umpire Watts. On Dec. 18, 1914, there were 457 producing wells, making 228,685 bopd. Some of the gusher wells declined rapidly after a few weeks. The C. B. Shaffer No. 5 Izora Walker well, in Sec. 18-18N-7E, has fallen off from 9,660 bopd to 1,200 bopd. On Dec. 10, 1914, the highest production was 263,382 bopd from 445 wells. In the one month period from Nov. 19 to Dec. 19, 1914, about 7,094,877 barrels was produced in the Cushing Field.

In Kay County, south of Ponca City, there has been a revival of interest in the southern part of the old Ponca City Pool, with the completion of a 50-bopd well in the Ponca sand at 1,600 feet by the 101 Ranch Oil Co. No. 2 Flossie Running-After-Arrow Tract. In June 1911, Marland et al got a well on the Willie Cry allotment, and at present this well is still making 25 bopd. The old wells have similar staying qualities. This month, about 36 wells produced 16,455 bopd from this field. The Newkirk Pool has decreased from 3,000 bopd to 1,800 bopd. Buehl & Jones started 10 wells sometime back north of Blackwell in 29N-1E, but all are dry holes. They lost about $500,000 on this deal.

p. 12. Petroleum Breaks All Records. In 1914, the production of petroleum was 292,000,000 barrels, surpassing that of any previous year. This is an increase of 13 percent over 1913. Nearly 70 percent came from Oklahoma and California. Refiners throughout Oklahoma and Kansas have curtailed their output from 15 to 50 percent of capacity, due to the lack of a market, since the war.

p. 24. New Gas Well at Groesbeck, Texas. Near Mexia, about 3-1/2 miles from Groesbeck, in the Groesbeck Field, Shackelford & Jones brought in a well at 675 feet for 15,000,000 cfgpd for J. R. Stroud of Groesbeck.

p. 26. Fern Mountain Pool. The recent oil discovery 3 miles west of Muskogee in Muskogee County on the Jane Jackson Tract, is a new pool located near Fern Mountain, and will be known as the Fern Mountain Extension Pool.

Vol. 13, No. 31, January 7, 1915, p. 3. Mid-Continent Production. The apparent estimated production of the Mid-Continent fields at the close of last week was 416,000 bopd, with Kansas and Oklahoma outside of Cushing being 140,000 bopd, Cushing at 230,000 bopd, Electra at 19,000 bopd, and Caddo, La., at 27,000 bopd. Eleven new wells were completed at Cushing for 37,500 new bopd production.

p. 3. During the first 4 months of the European war, 54 merchant ships of British registry were captured or destroyed by the Germans.

p. 3. Oil is used in France to dispel fogs from rivers.

p. 4. December Field Report. Since May of 1914, there was a 60% decrease in completions of wells. In Dec. 1914, 1,052 wells were completed east of the Rocky Mountains, with 154,308 new bopd production being discovered. The greatest increase was in Oklahoma, with 133,225 bopd new production, much of which came from the Cushing and Healdton fields. There were 209 dry holes and 203 gas wells, and 640 oil wells, giving an average of 242 barrels per well, the highest average for the year. New work amounted to 1,953 wells drilling or on location. Cushing was the leading field in new work and completions east of the Rocky Mountains. Oil in Oklahoma sold for 30 to 50¢ a barrel, if wanted.

p. 4. No Change in Lease Limits. The Interior Department has decided to keep the 4,800 acre limit on leases of Indian land. White & Sinclair needed a larger limit in order to build their line to Baton Rouge, and this may stop that project. Former Governor Haskell was prominent in trying to get a larger acreage, but many smaller producers were against a larger acreage.

p. 6. Personal Mention. Charles Douglas, vice-president of the Mid-Co. Petroleum Company, extensively interested in the Cushing Pool, has returned to his home in New York City. He is one of the largest clothing manufacturers in the country. Jesse Finston, of New York, was also a visitor in Tulsa.

Alfred Landon, of Independence, Kansas, married Miss Margaret Fleming on Wednesday. Miss Isabelle Ramage, of Oil City, Pa., on Saturday afternoon of last week, entertained a luncheon for the bride. Fourteen guests were present, at the Venango Club of Oil City, at another dinner that Saturday evening, given by Mr. and Mrs. Charles D. Berry and Misses Myra and Carlotta Splane.

p. 6, 8. Noted in Passing. The electric railroad from Cushing to the gusher district has been constructed for a distance of two miles.

The Iron Mountain Train known as "Coal Oil Johnny" has been discontinued. It ran from Coffeyville, Kansas to Wagoner, Oklahoma, for oil men. The new interurban traction road between Coffeyville and Nowata is now used by the oil men.

The Bantley-Bell and Paymaster Oil Companies have sold their Cushing holdings to the Number One Oil Co. of Tulsa, and to Robert Watchorn of Dundee, Scotland, for $125,000.

The Robinson well near Muskogee in Sec. 13-15N-17E, may be drilled in soon. The Cudahy Refining Co. began buying oil from the well last week, where there was about 1,000 barrels in storage.

In the U. S. Navy, about 21,000,000 gallons of fuel oil was used from June 30, 1913 to June 30, 1914. The Navy has 45 battleships and destroyers and 50 submarines.

p. 8. Recent Deaths. D. W. Burger, aged 32 years, died Friday morning, Jan. 1, 1915, at the Tulsa Hospital. He was a driller, and formerly resided in Monterey, Pa., to which place his body was sent for burial.

Frank Nelson, 28 years old, died on the Barnsdall lease 4 miles north of Osage, Okla., on Dec. 26, 1914. He was an oil-field worker. The body was shipped to Johnson, Indiana, for burial, the former home of the deceased.

Roy Scales, 37 years old, died in Tulsa Wednesday night of last week, of pneumonia. He was a native of Wetumka, Oklahoma. He was one of the best interpreters of the Creek language in the oil fields, and his services were widely used in securing leases. For some time he had been in the service of the McMan Oil Co., and was successful in business, and was in affluent circumstances. He is survived by his widow.

p. 10, 12. Field Operations for December, 1914. In Oklahoma, for Dec. 1914, 358 wells were completed, including 26 gas wells and 69 dry holes, with 133,225 bopd new production discovered, and 764 wells drilling at the end of the year. At Cushing, 94 wells were completed, for 121, 345 bopd new production.

In North Texas, for Dec. 1914, 19 wells were completed, including 7 dry holes, for 163 bopd new production, and 74 wells drilling.

In Northwestern Louisiana and adjacent Texas, in the Caddo Fields, 26 wells were completed, including 8 dry holes, for 3,686 bopd new oil and 100 new wells.

p. 12-13. Results In The Various Fields During 1914.

In Oklahoma, 8,297 wells were completed in 1914, of which 1,324 were dry holes and 529 were gas wells, with 973,550 bopd new oil found. Of these, 758 wells were at Cushing, with 38 gas wells and 49 dry holes, and 667,448 bopd new oil found. The Healdton Pool and other areas of southwestern Oklahoma had 552 completions, with 44 gas wells and 116 dry holes, with 108,280 bopd new oil discovered, which was almost all at Healdton. In the Creek District, 2,816 wells were completed, including 163 gas wells and 650 dry holes, with 128,062 bopd new production found. In Osage County, 572 wells were completed, including 98 dry holes and 49 gas wells, with 26,538 bopd new production. In the Cherokee District, 3,352 wells were completed, including 221 gas wells and 306 dry holes, with 35,633 bopd new oil found. In Kay County, 113 wells were completed, including 6 gas wells and 49 dry holes, with 5,417 bopd new oil found.

During the entire year of 1914 for the area east of the Rocky Mountains, about 22,434 wells were completed, with 1,470,518 bopd new oil found, with 3,991 dry holes and 2,303 gas wells. The over-production at Cushing was worse on the economy than the war, and the Corporation Commission was not able to control the price or the drilling.

During the year, many prominent oil people died, including Owen A. Evans, L. A. Brenneman, Capt. Peter Grace, John M. Arters, W. S. Guffey, Benjamin Franklin Warren, J. H. Windsor, J. B. Andrews, R. D. Fletcher, Theodore E. Tack, Herman Frasch, S. F. Showalter, Henry Suhr, and Charles W. Archbold.

The oil industry never looked brighter at the beginning of 1914, and never was so demoralized by the war and over-production. At the dawn of 1915, the prospects are not very encouraging.

In North Texas, for the entire year, 755 wells were drilled, including 29 gas wells and 217 dry holes, with 24,395 bopd new production found.

In Northwestern Louisiana and Northeastern Texas, there were 448 wells completed for the entire year, including 47 gas wells and 89 dry holes, for 104,663 bopd new oil found.

p. 16, 18. Oklahoma. The Cushing Field is now being drilled out, following delays by the Corporation Commission. About 60 wells are being drilled near Boynton, in Muskogee County.

In northwestern Wagoner County, the Fenton Gas Co. has drilled 6 gas wells south and southeast of Catoosa, on 2,400 acres of leases, with the wells averaging about 5,000,000 to 8,000,000 cfgpd each at about 900 feet deep. The Kansas Natural Gas Co. is preparing to lay a line to the property, to connect south of Owasso. The company has 3 good offset locations. The Fenton Gas Co. was recently organized with $50,000 capital, with R. E. Fenton, as president, Joseph Ardizzone vice-president, and F. J. Ossenbeck secretary-treasurer.

p. 25. Oklahoma Pipe-Line List Includes 28 From Cushing. The oil pipe lines of Oklahoma are listed, including 28 from Cushing. Many lines are short and are owned by independent producers. There are thousands of miles of gathering lines, and many pumping stations, with boiler batteries ranging from 2 to 15 boilers.

The Hill Oil & Gas Co. has a 6-inch line to Depew, from Cushing.

The Texas Co. has a 6-inch line running out of the Cushing Field.

The Cosden Co. has a 6-inch line to its refinery in West Tulsa.

The Gulf Pipe Line Co. has a 6-inch line to the Perryman Station.

The Indiahoma Refining Co. has a 3-inch line to Okmulgee.

The Yarhola Pipe Line Co. has two 4-inch lines to the tank farm south of Cushing.

T. B. Slick has a 4-inch line to his tank farm at Bristow.

The Pierce Oil Corporation has a 6-inch line to its refinery at Sand Springs.

The Prairie Oil & Gas Co. has two 6-inch lines and one 8-inch line, the latter running to the North Indian Station, and from there three 6-inch lines.

White & Sinclair have one 4-inch line and one 6 and 5/8-inch line to its tank farm of 83 tanks and loading racks at Cushing.

The Jane Oil Co. has a 4-inch line to Cushing, and a 1-1/2-inch line from its gasoline plant to Cushing.

C. B. Shaffer has two 4-inch lines to his tank farm and refinery at Cushing.

The Chanute Pipe Line Co. has a 4-inch line to a loading rack at Cushing and to its refinery near Cushing.

Gunsburg & Forman have one 4-inch line to their tank farm.

The Mc-Man Oil Co. has two 4-inch lines to its tank farm and loading racks.

The Silurian Oil Co. has two 4-inch lines to its tank farm.

B. B. Jones has a 4-inch line to his tank farm.

The Twin State Oil Co. has a 4-inch line from its lease to its loading racks at Yale.

John H. Markham, Jr., has a 4-inch line to his loading racks at Yale.

The Southern Pipe Line Co. (Ayers) has a 4-inch line to its tanks and to its loading racks at Yale.

p. 32. Gas. In 1914, in Oklahoma, 2,986,616,000 cfgpd was developed as new gas, with the Creek area from Tulsa to McIntosh County being the leading gas area with 1,085,310,000 cfgpd new production. The Cherokee deep sand area was next with 775,006,000 cfgpd, Cushing next with 608,000,000 cfgpd, Osage County next with 292,150,000 cfgpd, and Healdton and southwestern Oklahoma next with 226,200,000 cfgpd, mostly from Healdton. In the Bird Creek Pool, for December, 1914, there were 58,000,000 cfgpd developed as new gas, this being the most active area for gas. In December 1914, in Oklahoma, 130,700,000 cfgpd new gas was developed.

p. 34-35. Where Not To Drill For Oil In The Fields Of Oklahoma. Charles N. Gould read the following paper at the convention of the Oklahoma Society of Engineers in Oklahoma City. No one can tell in advance of drilling where oil or gas can be found. Geologists can only point to likely places to drill, and then maybe 6 out of ten times oil and gas might be found.

In Oklahoma, the greater part of the production has come from Pennsylvanian sandstones. Oil has not been found in rocks older than the Pennsylvanian, and has not been found in red beds. There are 5 areas in Oklahoma that appear to be unfavorable for oil and gas: the Ozark Uplift, the Ouachita Mountains, the Arbuckle Uplift, the Wichita Mountains, and the Red Beds. Drilling in these areas for the past 20 years has produced only negative results.

In the Ozarks, the Boone chert or Mississippi lime covers much of the surface, and is 150 to 300 feet thick. Most oil people do not drill below the Boone, and where some wells have been drilled below the Boone, nothing has been found.

In the Ouachita Mountains, the rocks stand on edge, and the oil and gas has probably escaped. Drilling near Talihina, Redden, and Tuskahoma has yielded little of value. There are one or two small areas that might pay to investigate.

In the Arbuckles, the rocks are all older than the Pennsylvania. Some Simpson sandstones might be reservoirs.

In the Wichita Mountains, the rocks are similar to the Arbuckles, with much granite. Around the edges of the mountains, including the edges of the Arbuckles, there are many oil pools such as Wheeler, Loco, Healdton, Duncan, Lawton, Gotebo, Granite, and Willow, and in Texas, Petrolia, Electra, and Burkburnett, which are fields developed mainly from outwash from the mountains.

The Red Buds of Permian age have yielded nothing to date. During the past 15 years, Dr. Gould has closely watched the drilling in the red beds, and more than $50,000 a year has been spent on drilling there, in places such as Perry, Mulhall, Guthrie, Meridian, Fallis, Chandler, Shawnee, Oklahoma City, Spencer, Purcell, Chickasha, Ninnekah, El Reno, Fort Reno, Kingfisher, Enid, Garber, Jet, Alva, Woodward, Watonga, Winnview, Bridgeport, Clinton, Elk City, Sayre, Anadarko, and several wells in the three Panhandle counties, with negative results.

About one-half of the state has been tested, and about one-fifth of the oil and gas had been taken out of the ground. Other large areas still remain in Texas, Arkansas, and Kansas that would be better to drill than the five areas mentioned.

p. 35. Federal Trade Commission. President Wilson may appoint members of

the new Federal Trade Commission in the next two weeks. They will have jurisdiction over pipe lines, production, and refining. The Interstate Commerce Commission will have some duties blended with the Trade Commission.

Vol. 13, No. 32, January 14, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent fields at the close of last week was 427,750 bopd, including 136,000 bopd from Kansas and Oklahoma outside of Cushing, 244,750 bopd from Cushing, 19,000 bopd from Electra, and 28,000 bopd from Caddo, La. Sixteen new wells were completed at Cushing for 36,850 bopd new oil

p. 1. Air pressure instead of water is being used to push oil from partially drained strata in West Virginia, and is said to be preferable in "stripper" districts. Water drowns out the entire formation, but air does not have that effect.

p. 4. Personal Mention. L. L. Hutchison, a geologist now in Tulsa, widely known as a man of exceptional ability, has obtained a desirable lease near the Robinson well near Muskogee. He visited there last Monday.

Mr. and Mrs. Washington Hudson and daughter Bessie, of Tulsa, are at the Lee-Huckins Hotel, Oklahoma City. He is a member of the Legislature.

Robert Galbreath, Democratic National Committeeman, of Tulsa, was in Washington, and later New York, for a conference with Senator Owens.

W. W. Tarbell and associates are drilling a well in Jefferson County, Okla., in Sec. 22-4S-7W. At 1,595 feet they had a showing of oil. They are now at 1,700 feet. He is the brother of Ida. M. Tarbell, famous writer, and the Tarbell family is from Titusville, Pa.

James H. Gardner, a geologist from Tulsa, surveyed the Boynton District for the Merriett Oil Co., and did the same for the Robinsons, opening the new oil field west of Muskogee. He is receiving congratulations on his success in locating oil pools.

p. 4, 6. Noted in Passing. The new post office at Wirt, Okla., was opened Jan. 12, 1914, with John Whiteman as postmaster. This is in the Healdton Field.

The Healdton Field on Nov. 25, 1914, had 263 wells producing 68,855 bopd, and on Dec. 24, 1914, had 268 wells producing 68,058 bopd.

p. 6. Recent Deaths. Hosea Brooks, 37 years old, died at his home in Kiefer, Oklahoma, Jan. 6, 1914, after a brief illness. He was an oil-field worker and formerly lived at Waynesburg, Pa. Surviving are his widow and a 3-year old daughter.

p. 8, 10. Oklahoma. Cushing was the most active field in the past week, with completion of developmental wells in the northern end of the field. White & Sinclair will not build their 8-inch pipe line to Baton Rouge from Cushing, due to the U. S. Government refusing to allow leasing of more than 4,800 acres of Indian Land by any one company. At the end of the week, production was 244,750 bopd.

p. 10. Drilling in Arkansas. Many wells have been drilled in Arkansas, but only those around Fort Smith have been productive, and they are gas wells. Some new drilling has started in Polk, Crawford, and Franklin Counties, and acreage is bringing a good price. In Franklin County, some Muskogee operators, Levy, Decius & Hutchinson are at 2,000 feet in Sec. 33-9N-27W. At 1,000 feet there was a fair volume of gas, but it was drowned out by salt water. The Paris Oil & Mineral Co. is at 1,750 feet in Sec. 36-8N-26W.

In Polk County, the Grannis Oil & Gas Co. is spudding in Sec. 26-6S-32W.

In Crawford County, the Clear Creek Oil & Gas Co. is at 1,500 feet, but reports are lacking on this well. Fort Smith parties are behind the company.

p. 28. Waco's Gas Franchise. The fight over the gas franchise in Waco, Texas, has been decided in favor of the Barnsdall interests of Pittsburgh, Pa. They organized The Texas Gas Co., with $250,000 capital. They will lay a 10-inch line 28 miles from Mexia.

p. 35-38. Wells, Oklahoma, Texas, Louisiana, On Jan. 1, 1915. In southwestern Oklahoma, 28 wells were drilled as wildcats or developmental wells, mostly in Carter County. In Pontotoc County, near Ada, the McThwaite Gas Co. No. 1 Stewart in Sec. 31-4N-6E was completed for a gas well. They also completed a gas well in Sec. 29-4N-6E, and another one in Sec. 31-4N-6E.

About 197 wildcat wells are being drilled in Oklahoma on Jan. 1, 1915, mostly in southern Oklahoma counties. About 7 wells were drilling in Atoka County, and 31 in Marshall County, and 7 in Hughes County, and a few in Coal County. (Details given).

Vol. 13, No. 33, January 21, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent at the close of last week was 408,905 bopd, with Kansas and Oklahoma outside of Cushing being 132,000 bopd, Cushing 230,805 bopd, Electra 18,500 bopd, and Caddo, La. 27,600 bopd. Cushing's total output is estimated at more than 400,000,000 barrels to date.

p. 4, 6. Noted in Passing. According to a recent dispatch, an oil boom has struck Comanche, in Stephens County, and leases are in active demand there.

The Ardmore Refining Co. plant at Ardmore has been completed, and is now ready for business.

Frank Wheeler, whose farm was drilled upon as the first well in the Cushing Field, is now promoting an addition to Drumright, having found water in the section that he is exploiting.

The Independent Oil Producers Association now has permanent headquarters at the Lee-Huckins Hotel in Oklahoma City. C. E. Burlingame, of Bartlesville, is president, Wirt Franklin of Ardmore is vice-president, and Edward Galt, of Ardmore, is secretary.

p. 6. Recent Deaths. Gustave Jarecki, aged 80 years old, died at his home in Sandusky, Ohio. He was formerly of Erie, Pa. He was the last of the five Jarecki Brothers, founders of the Jarecki Manufacturing Co. of Erie, one of the best-known supply concerns in the oil regions.

Mrs. W. W. Shaffer, died on Jan. 14, 1914, at her home in Drumright. She was born at Salina, Pa., in 1885, where her body was taken for interment, where her parents Mr. and Mrs. W. B. Daugherty reside. Her husband, a well-known oil man, and one son, survive.

Ralph Thompson, 30 years old, died at his sister's home in Tulsa on Friday night of last week. He was visiting, when seized with a sudden illness. For two years he was a drilling contractor in Oklahoma. His sister was Mrs. D. F. Dietz.

James C. McDonald, 70 years old, died in Washington, D. C., on Jan. 13, 1915, of heart disease. He was born in Scotland in 1845. He was a former director of the Standard Oil Co., and organized and managed the European branch. The funeral was last week on Saturday, and he will be placed in a mausoleum in Rock Creek Cemetery, District of Columbia.

p. 8-10. Oklahoma. Cushing continues to be the main attraction in Oklahoma. In the northern end of the pool, gas is falling off at 2 psi per day pressure, and there is a wanton waste of gas in the field. About 154,950 bopd is now being actually taken from the field. About 21,519,280 barrels are in storage. About 230,805 barrels a day is the estimated production, based on reports of 32 major companies.

As of Dec. 31, 1914, there are listed 30,131 producing wells in Oklahoma. These are listed in about 39 categories:

Bald Hill	- 676	Glenn Pool	- 1,041	Lost City	- 142
Bartlesville-Dewey	- 4,816	Hamilton	- 89	Morris	- 474
Bixby	- 244	Haskell	- 20	Mounds	- 90
Chelsea-Alluwe	- 4,802	Healdton	- 292	Muskogee	- 368
Cleveland	- 716	Henryetta West	- 42	North Lenapah	- 70
Collinsville	- 130	Hogshooter	- 610	Nowata-Coody's Bluff	- 3,336
Copan	- 1,289	Inola	- 129	Osage	- 2,218
Cushing	- 1,153	Jenks & Perryman	- 473	Ponca City	- 98
Cushing-N. Extension	- 1,184	Kelly	- 11	Schulter	221
Delaware	- 2,062	Keystone	- 30		

Skiatook-Bird Crrek-F. R.	-	2,281
Tiger Flats	-	87
Wainwright-Boynton	-	37
Total		30,131

p. 10. Prairie Will Loop Alton Line. The Prairie Pipe Line Co. has ordered 100 miles of 12-inch pipe and 225 miles of 8-inch, and pumping equipment, to augment their lines from Cushing, Oklahoma, to Alton, Ill. This new connection to Cushing will increase the capacity by 35,000 bopd from Cushing, giving them 80,000 bopd to Alton, Illinois, at the Wood River plant.

p. 12, 14. Indian Lands- History. Agency Head Has Choctaw Blood. For the first time in history of the Interior Department, the Superintendent of the Indian Agency at Muskogee, in charge of all 5 civilized tribes, is a native citizen of Indian blood, Mr. Gabe Parker, who is one-eighth Choctaw. Twenty years ago, all of the lands in the eastern part of Oklahoma were unallotted, and held in the name of the tribe. There were no individual holdings. Leases had to be made through the Tribal Council and the Secretary of the Interior.

The Dawes Commission was created by an act of Congress at that time, to allot the lands to individual members, to lay out townsites, and provide roads, and to restore order. The commission had to determine who was Indian and how much, and had to create rolls, and had to determine when to terminate the rolls, because babies were being born every day, and intermarriages with whites were common. It was decided to segregate the coal, timber, and mineral lands, and to allot only agricultural lands to individuals, leaving the former to the tribes. The oil lands were not segregated because oil was not developed then. By statehood, the Dawes Commission began to lose its power, and was gradually replaced by the Commissioner to the Five Civilized Tribes. Recently the Commissioner's office was abolished, as Oklahoma laws and Federal laws became enacted. Now the Superintendent of the Indian Agency has charge.

Almost two-thirds of the Indian land has been relieved of department restrictions. About $4,000,000 a year in royalties are distributed to the tribes. Mr. Parker is in favor of removing all restrictions on Indian lands and to allow the Indian to go his own way.

p. 22. Good Well Near Boynton. Bird, Gaffney & Simons, Bradford, Pa. oil men, have a 75-bopd well in Sec. 17-14N-16E, located between the Boynton and Cole Pools, and a mile northwest of production. The oil is a green, high-grade product. The owners have 160 acres under lease. Ike Simons has been in Oklahoma but a short time. His first venture was in the W-1/2-SE-1/4-Sec. 21-14N-16E, which is a 15,000,000 cfgpd gas well at one foot into the sand. The gas is sold to drilling contractors in the Boynton Pool.

p. 24. Berwyn. May Open New Oil Territory. The Horseshoe Oil & Gas Co., of Berwyn, Carter County, was formed with Robert F. Scivally of Ardmore, president; and prominent Berwyn business men F. W. Fisher, vice-president, W. W. Paschall, secretary, O. O. Sparks, treasurer, and A. W. Gaines and George Paschall, directors. They have 3,090 acres under lease. J. K. Kepley and R. Downing are selling the stock. A derrick has already been built, and J. M. Sullivan is manager. He is the brother of the late Tim Sullivan, former famous New York politician. Oil springs have been known to exist in the area for years. The largest one, about 4 feet in diameter, is believed to be the biggest oil spring in the United States in point of oil flow. It is estimated that from one to two barrels a month seeps out in the sandstone. Mr. Downing brought a sample of the oil to Ardmore recently, and the oil is of a high specific gravity, almost in a refined state. They have no intention of drilling at the springs, but will follow a ledge of limestone and shale which adjoins the sandstone, about 4 miles west of the springs, where the rig is now located. The area is about 12 miles northeast of Ardmore. Standard Oil and other big interests are behind the company. Also on the Young Farm east of Berwyn, J. M. Sullivan started a well in October 1914 under the name of the Horse Shoe Oil Co. about Oct. 22, 1914. (Sec. 32-3S-4E, Johnston Co., is given).

p. 31. Ardmore Refinery Nearly Finished. The refining plant of the Chelsea company and the Crosbie interests will be ready for business next week. The pipe line from Healdton to the Wheeler Field was completed some time ago, and the first oil was run from Roy M. Johnson's lease in Sec. 5-4S-3W. The Crosbie line is 8 miles long and is a 4-inch line. The Santa Fe line extends from the Wheeler Field to the Ardmore refinery.

Vol. 13, No. 34, January 28, 1915, p. 1. Mid-Continent Production. The apparent estimated production in the Mid-Continent fields at the close of last week was 427,350 barrels of oil per day, with Kansas and Oklahoma outside of Cushing being 132,500 bopd, Cushing 248,500 bopd, Electra 18,200 bopd, and Caddo, La., 28,150 bopd. Cushing had 12 completions for 24,730 bopd new oil. In Texas, near Strawn, in Palo Pinto County, the most sensational strike in a year in North Texas was a well completed at 840 feet for 40 bopd and 800,000 cfgpd.

p. 4. Personal Mention. E. K. McCoy, president of the Oakland Oil Co., operating at Okmulgee, is in Tulsa from Denver. He has been interested in drilling near Denver, Colorado.

J. A. Twitchell, of New York, was in Muskogee last week. He and his partner, Mr. Myers, purchased the Tippit & Canfield lease in the Boock sand country recently for $300,000.

J. C. Trees and M. L. Benedum, of Pittsburgh, Pa., were visiting in Tulsa. They have been looking over the Kellyville Field, to purchase it.

H. W. Shriver, of Ardmore, who looks after the J. E. Crosbie interests at Healdton, has returned from Strawn, Texas. He reports that a paying well has been struck.

p. 4, 6. Noted in Passing. The "170" Oil Co. is the name of a new oil company formed by Madill parties, capitalized at $50,000.

Samuel Featherstone was drilling for water near Bentonville, Arkansas, and struck a vein of lead ore at 225 feet. The deposit is more than 20 feet thick.

The Broken Arrow Gas Co. of Tulsa was chartered, with $3,000 stock, by E. R. Minshall, R. Lewis, L. N. Mallory, all of Tulsa.

A man named Woods, working on a tank farm near Cushing, died of pneumonia. The body was shipped to Maple, Sequoyah County, Oklahoma, for burial.

The Ardmore Refining Co. received its first run of oil on Jan. 19, 1915. Only one still is in operation. The plant will have a capacity of 2,000 bopd when completed.

The Russian troops have advanced into Austrian oil fields, after breaking through the Uxsok Pass in the Carpathian Mountains.

Two refineries of the Vacuum Oil Co. are operating in Hungary, and are filling orders for Germany.

In the House in Oklahoma City, a bill has been introduced to require all persons in drilling wells for oil and gas and other wells more than 100 feet deep in Oklahoma, to make a monthly report to the chief mine inspector, and providing for a permanent record of the result of such drilling, and prescribing a penalty for the failure to do so; and declaring an emergency.

p. 6. Recent Deaths. L. V. Harkness, 75 years old, died Jan. 18, 1915, on a ranch near Hollister, California. He was an early associate of John D. Rockefeller in the oil business. He formerly made his home in New York City. He was an owner of extensive California lands.

p. 8, 10. Oklahoma. Many wells were completed in the Cushing Field. The latest production figure for the field is 248,500 bopd potential. Mostly in other areas, everything has been quiet.

In Okmulgee County, a few wells have been completed. Northeast of the Pine Pool, in Sec. 12-14N-13E, Smith & Wigton got a 60-bopd well in the Glenn sand at 1,824-1,850 feet.

p. 12. Death of R. J. Straight. R. J. Straight, 74 years old, died at the home of his son in Bartlesville on Tuesday of this week, of pneumonia. He was a resident of Bradford, Pa., and was prominent in the oil business, having a large

share of the production in the Bradford Field and the Shanty Field, and in other fields.

p. 16, 18. North Texas. Excitement is running high near Strawn, Palo Pinto County, Texas. The Texas Pacific Coal Co. No. 8 Fee has 40 bopd and good gas at 840 feet, in Survey No. 98, H. T. & C. R.R. Co. Block, 7 miles north of Strawn, and 3 miles northwest of the shallow-gas sand field where the Texas Pacific Coal Co. has completed a number of shallow gas wells at 700 feet, each well having about 1,000,000 cfgpd. Texas Pacific has the area solidly blocked. The gas in the new well is said to be about 800,000 cfgpd. Texas Pacific has 200,000 acres under lease.

p. 22. John F. Fisher Locates in Tulsa. John F. Fisher, for many years the general superintendent of the Gulf Pipe Line Co., the Gypsy Oil Co., the J. M. Guffey Petroleum Co., and the Gulf Refining Co. of Louisiana, has severed his connection with those companies and has gone into the oil business himself, locating at Tulsa. He went to Texas in the early days of the Gulf Coast fields, and then worked in the Caddo Field in Louisiana. He was responsible for the Gypsy Oil Co. and the Gulf Pipe Line Co. locating in Oklahoma. He is backed by large interests at Pittsburgh, Pa.

Vol. 13, No. 35, February 4, 1915, p. 3. Mid-Continent Production. The apparent estimated production of the Mid-Continent fields at the close of last week was 426,500 bopd with Kansas and Oklahoma outside of Cushing being 130,000 bopd, Cushing 250,000 bopd, Electra 18,000 bopd, and Caddo, La. 28,500 bopd.

Benedum & Trees, of Pittsburgh, Pa., have recently leased the King Ranch of 1,000,000 acres, 300 miles southwest of Houston, and will soon start testing that vast acreage.

p. 3. The pedestrian who crosses a street in a big city has cause for alarm from the many passing vehicles. Some day, it may be necessary to construct overhead or underground crossings.

p. 6, 8. Personal Mention. Andy Bartlan, an old-timer to oil men of all fields, was in Tulsa last week looking after business interests.

S. C. Redd, who is connected with the business interests of C. B. Shaffer, has moved his family from Muskogee to Tulsa.

C. R. Stewart, district foreman for the Magnolia Pipe Line Co. at Ardmore, will assist his brother David C. Stewart in directing construction on the new Mc-Man pipe line project from the Cushing Field to Addington, Jefferson County, Oklahoma. David is president and general manager of the Magnolia Pipe Line Co.

William McKinley, oil producer, of Olean, N.Y., is an inventor and patentee of the McKinley copper cup for pumping wells. He has valuable holdings in Oklahoma.

Roger Kemp will be married on Saturday to Miss Maude Painter, in Kansas City. He is an oil producer in the Mid-Continent, and for a long time has been identified with the Jennings interests. She has been popular in Tulsa society for the past two years.

L.E.Z. Aaronson, of New York City, will make Tulsa his home. He is Secretary-Treasurer of the Mid-Co. Petroleum Company, operating in the Cushing Pool. He had been Secretary-Treasurer of the Wm. Fischman, Inc. and Fischman & Nathonson Companies of New York City, manufacturers of clothes. He is an efficient and successful businessman.

p. 8. Noted in Passing. Each automobile uses an average of 583 gallons of gasoline a year. In 1914, there were 1,808,441 automobiles registered in the United States, an increase of 680,501 over 1913. If in 1915, there are 2,400,000 cars running, it will require 1,399,200,000 gallons of gasoline to be used by the cars.

At Monroe, La., the Monroe Oil & Gas Co., Inc., was formed by W. B. Clarke, president, J. E. Morgan, vice-president, O. B. Morton, secretary-treasurer, and H. D. Apgar, J. T. Austin, and J. R. Bonderaunt. They have 60,000 acres under lease, and will acquire more acreage and will drill wells immediately.

p. 10. Summaries of Field Operations for January 1915. In January in Oklahoma, 292 wells were completed, including 24 gas wells and 55 dry holes, with 123,504 bopd new production found, and 746 rigs drilling or on location.

In North Texas, there were 18 wells completed, including 6 dry holes, with 397 bopd new production, and 85 rigs working or on location.

In northwestern Louisiana and East Texas, in the Caddo District, about 21 wells were completed, including 4 dry holes, with 4,390 bopd new production, and 96 rigs working or on location.

p. 11-12, 14. Oklahoma. Mostly things have been quiet, except for Cushing. (Details Given). About 245 rigs are drilling in the Cushing Pool.

In Muskogee County, the Fern Mountain Extension Pool may extend a quarter mile or more eastward, in Sec. 19-15N-18E, where McClain et al have a good showing. About 10 tests are now drilling there.

In Creek County, a wildcat of Frank Fox No. 1 Chapman in Sec. 15-16N-7E had the Layton sand at 1,507 feet, and about 50 bopd at 1,653-1,660 feet in the Jones sand, which later went to water, and is now drilling toward the Bartlesville sand. This may open up a new pool.

The Sperry Oil & Gas Co. of Tulsa and the Muskogee Refining Co. of Muskogee held their annual meetings. John M. Crawford is president of both organizations.

p. 16. North Texas. The Texas Pacific Coal Co. No. 9 Fee well, about 1,400 feet west of No. 8 which was recently completed, has struck oil at 715 feet, but will go deeper. No. 8 is now pumping about 25 bopd. Excitement is rife in Palo Pinto County.

p. 28. Gas. In Oklahoma in January, about 131,000,000 cfgpd new gas was found. In the Cushing Pool, about 57,000,000 cfgpd new gas was found, but much of the gas is braden-headed. One well had 24,000,000 cfgpd by C. B. Shaffer in Sec. 17-18N-7E. The Mc-Man Oil Co. No. 1 Musselman in Sec. 8-18N-7E had 18,000,000 cfgpd initial production. In the Creek District from Tulsa to McIntosh County, about 51,000,000 cfgpd new gas was found. (Details given).

p. 31. New Geological Firm Formed. Roswell H. Johnson and L. G. Huntley, have formed Johnson & Huntley, in Pittsburgh, Pa. For some years Mr. Johnson was a consultant at Bartlesville, Okla., leaving there 2 years ago for the University of Pittsburgh where he has been a professor of geology and of oil and gas, which position he still retains. Mr. Huntley has been with the Associated Geological Engineers at Pittsburgh for the past 4 years. They have worked in America, Canada, Colombia, Ecuador, and Peru, and the U. S. Bureau of Mines, and the Mines Branch of the Department of Mines at Ottawa, Canada.

Vol. 13, No. 36, February 11, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent fields at the close of last week was 420,200 bopd, with Kansas and Oklahoma outside of Cushing being 128,000 bopd, Cushing 241,200 bopd, Electra 18,000 bopd, and Caddo, La. 33,000 bopd. The test in Creek County 6 miles south of the Cushing Pool has stirred up much interest.

p. 1. Sapulpa is to have a glass plant. Cheap gas is producing good effects.

p. 3-4. Personal Mention. F. R. Letcher, of Tulsa, has interests in the Muskogee Field. He is president of the New York Oil Co.

James K. Jones, of Washington, lately visited Tulsa, the guest of his partner Oscar R. Howard. Mr. Jones has been interested in the Flat Rock and shallow-sand districts for many years.

J. J. Lineham, division superintendent of the Prairie Pipe Line Co. at Bartlesville, visited Tulsa. He has followed the oil business from Olean N.Y. to the western fields.

Mr. and Mrs. Ike Simons, of Tulsa, visited their former home town of Bradford, Pa. He is a member of the Rowe Oil Co., with production in the Sapulpa Pool, and he is also identified with two other oil companies.

p. 4, 6. Noted in Passing. The Ardmore Refining Co. is running about 1,000 bopd and employs 30 men. Work of completing tankage is being rushed.

The Crystal Oil Company's property in the Healdton Field has been transferred to the Samoset Oil Co., recently organized by Robert Watchorn and J. M. Critchlow, with stock of $5,000,000. The holdings consist of 400 acres and 20 producing wells, with 2,500 bopd production. The Watchorn interests control about 2,500 acres in the Healdton Field, with about 8,000 bopd production. The Watchorn interests have also acquired a large acreage between Cushing and Paden, and are drilling north of the Cimarron River north of Cushing.

At Shreveport, La., the Atlas Oil Co. has sold its holdings for $750,000, retaining a one-sixth royalty in 15,000 acres in the Red River Parish. The Standard Oil Co. has 50% and Benedum, Trees & Parker has the other 50%.

p. 6. Recent Deaths. G. H. Linsenbigler was killed on Feb. 8, 1915, at a gas well mishap near Dustin, Oklahoma. His wife and one son survive. He was the local manager of the Eastern Oklahoma Gas Co.

p. 8, 10. Oklahoma. In Creek County, a new pool has probably been found about 6 miles S. of the Cushing Field in 15-16N-7E by Frank Fox No. 1 Chapman in the Jones sand at 1,650-1,659 feet, for about 300 to 500 bopd. The well is at 1,682 feet at present, and they may drill to the Bartlesville sand. Mr. C. B. Shaffer is a partner of Mr. Fox in the well.

p. 36-38. Wells. Oklahoma, Texas, and Louisiana. About 29 wells were completed in southern Oklahoma in January, mostly in Carter County. In Atoka County, in Sec. 18-3S-10E the Lavaca Oil Co. No. 1 well was dry. In Sec. 12-2N-12E, the Gap Oil Co. well was dry.

In Marshall County, the Smith Oil Co. No. 3 Coleman in Sec. 35-7S-5E was a gas well. This is about a mile north of Enos. The Cromwell Oil Co. No. 2 in Sec. 17-5S-5E was completed for 5 bopd. This is northwest of Madill.

About 178 wells were drilling in southern Oklahoma outside of the major producing areas. (Details given).

p. 39. Drake Museum. Many books and maps have been donated to the library of the Drake Memorial Museum of Titusville, Pa. Many newspapers have been preserved, along with journals, clippings, and U. S. Geological Survey and Pennsylvania Survey books, and photographs. Books have been sent from London and Berlin. Many relics and models are on exhibit, along with a display of lamps, starting from Egypt and India.

Vol. 13, No. 37, February 18, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent fields at the close of last week was 414,530 bopd, with Kansas and Oklahoma being 125,000 bopd outside of Cushing, and Cushing 238,530 bopd, Electra 18,000 bopd, and Caddo, La. 33,000 bopd. The Fox wildcat in Creek County, NW of Depew, is now at 50 bopd with salt water.

p. 3-4. Personal Mention. Mr. and Mrs. J. H. Chandler, of South Bend, Ind., were visiting in Ardmore. Mr. Chandler is interested in Pontotoc County oil property.

C. J. Gallagher, of Okmulgee, has decided to live in Tulsa and has purchased a home on South Denver Avenue. He is a successful oil operator.

Frank Fox and George McCamey, who drilled the wildcat well near Depew in Creek County, are now moving from Drumright to Depew, their new headquarters.

W. M. Cook, of Montpelier, Ind., has become a resident of Ardmore. He has a ranch in Texas and is interested in stock-raising and is a producer of oil.

John A. Bell, Jr. arrived in Tulsa from the East. He formerly sold his large holdings to the Roxana Oil Co., and has now decided to reenter the petroleum field again.

Robert Jordan has returned to Tulsa from Strawn, Texas, where he secured many leases, and will drill a well next week. An oil-bearing sand occurs at 830 feet there in Palo Pinto County.

John Markham, Jr. was visiting his mother in Bradford, Pa., on Congress Street, along with his sisters Lillian, Jane, and Camille. He and his mother will visit Shreveport, La., where they will visit relatives.

Charles B. Goddard, who is in charge of the Healdton and Wheeler Fields

for the Humble Oil Co., has gone to Houston from Ardmore to attend the annual stockholders meeting. He is one of the original members of this corporation. The company had a small beginning, but now has assets worth several millions of dollars.

Harry F. Sinclair, of Tulsa, has confirmed the purchase of the Kansas City Federal League franchise, which will probably be transferred to Newark, N.J. Mr. Sinclair is now in New York City, visiting Pat Powers. During the 1906, 1907, and 1908 seasons, Mr. Sinclair was heavily interested in the Kansas-Oklahoma League.

p. 4, 6. Noted in Passing. Three big tank farms near Oilton will contain 174 big tanks and will be built at a cost of $2,260,000.

The oil field surrounding Oilton is now producing more than two-thirds of the total oil production of Oklahoma, but the confines of the pool is still not determined. The field is now drifting to the north and east. About one-fifth of the proven territory has been drilled.

Hundreds of teams are hauling supplies daily to the oil fields around Oilton, from Jennings. One hundred and twenty-two wagons were loaded out Monday morning. They make the trip by ferry or the pontoon bridge near Oilton. Many teams are hauling from Riverside where the Oil Belt Terminal Railroad Co. is building a steel bridge across the Cimarron River to get into Oilton.

W. B. Munson and associates, of Denison, Texas, will drill a test on a 5,000 acre block northwest of Denison. A well was drilled some years ago which had some showings, and this is a renewal of that prospect. A rig is being moved from the Cooke well at Woodville, Oklahoma, to the new location.

The M. K. & T. Railroad, the Santa Fe, and the Frisco all make connection with the new Oil Belt Railroad - the Frisco at Jennings and the other two at Hallett, Okla. This puts the three lines in direct communication with the Cushing Field. The Oil Belt road may extend from Jennings to Drumright. The Cushing-Drumright Traction Line will connect Cushing and Drumright.

The Natural Gas Association of Oklahoma was formed at Tulsa last week, to handle all matters and problems of the natural gas business in Oklahoma.

A. L. Walker, the Federal Inspector of the Healdton Field, was in Ardmore last week. He had been scouting east of Ardmore, and had a bottle of fine oil, some lead and silver ore, and potash. The oil was recovered from a seep in a ravine, from a sand saturated with oil. He would not state where he gathered the samples.

p. 6. Recent Deaths. John H. Kison, 61 years old, died at Orlando, Florida on Feb. 11, 1915. He was a native of Armstrong Co., Pa., and was an oil producer in Pennsylvania, Illinois, and Oklahoma. His widow, and a son, Dr. H. S. Kison, of Butler, Pa., survive.

Joseph Mosters, died Tuesday morning of last week, while roofing an oil tank south of Cushing. He fell into the tank.

p. 8-10. Oklahoma. The northern end of the Cushing Pool is still being developed. In the past 6 months, the pressure of the field has decreased from 600 psi to 250 psi. About 23,313,500 barrels was in storage last Saturday, and about 109,900 bopd was being taken at that time. About 238,530 bopd is the potential production of the field at that time also.

Oilton, on the north end of the Cushing Pool, is a metropolis, the terminus of the Oil Belt Railroad from Jennings. All sorts of buildings are under construction, about 70 in number. Oilton is in Sec. 32-19N-7E. Gas is being piped into town for lighting and heating. Many businesses have started, and two banks have located in town. Telephone lines and waterworks are being constructed. The Oil Belt Railway, started by C. N. Haskell and later sold to Frank Brown, keeps a good schedule, making it easy to get to Oilton from Tulsa, although sometimes the engine leaves the tracks. The Exeter Oil Co. and Gem Oil Co. are building tank farms nearby. Almost 10,000 people receive mail at Drumright, which is also growing, with a population of 7,000. South of Cushing, White & Sinclair now have 108 tanks on their tank farm, each 55,000-barrel capacity.

In Muskogee County, west of Muskogee, in the Fern Mountain Pool, about 21 wells are drilling, with one good completion this week. The Persian Oil Co. (McLain et al) on the Dr. Clark land in Sec. 19-15N-18E was shot in the upper sand with 80 quarts of nitroglycerine, and is producing about 300 bopd. The original Robinson well a quarter mile to the west in Sec. 13-15N-17E on the Jane Jackson tract is at 1,360 feet and does not seem to have anything, and may be plugged. Water entered the pay zone a little higher and may have ruined the well.

p. 10. Oklahoma Production For Nine Years. 1906-1914. In December 1905, Robert Galbreath and Frank Chesley brought in the discovery well of the Glenn Pool on the Ida Glenn Farm in Sec. 10-17N-12E. On Dec. 9, 1913, the Prairie Oil & Gas Co. completed a well in the Bartlesville sand in the Cushing Pool at 2,600 feet in Sec. 3-17N-7E, resulting in another gusher. These discoveries opened up large reserves for the United States, placing Oklahoma's production beyond other countries such as Russia. Approximately 43,863 wells have been completed in Oklahoma, with production of 476,905,504 barrels of oil produced through 1914:

Year	Total Annual Production	Daily Average Production	Total Wells Completed
1906	18,618,583	49,399	2,779
1907	43,524,128	119,244	3,956
1908	45,798,765	125,476	2,844
1909	47,859,218	131,121	3,279
1910	52,028,718	142,544	3,777
1911	56,069,637	153,615	4,087
1912	51,427,071	140,896	5,993
1913	63,579,384	174,190	8,851
1914	98,000,000 estimated	268,493	8,297
	476,905,504		43,863

The present consumption of oil in the United States is 700,000 bopd, so Oklahoma produces almost 40% of the oil used in the United States, and most of this comes from the Cushing Pool.

p. 12. North Texas. Many wells are being started in Palo Pinto County, near Strawn. (Details given).

p. 15. Northwestern Louisiana and East Texas. In the Red River Parish, La., in the Red River Field, the town of Crichton has sprung up over night. There was nothing there two weeks ago except a flag station. It is a boom town, with men drawing $200 a month pay, and workers sleeping in blankets beside fires in the open fields, and some in tents. Two restaurants have been built, and several large rooming houses are under construction. About 20 derricks have been located within a mile of Crichton. The daily average production of the Red River and DeSoto Fields is 14,009 bopd, while all of northeastern Texas and northwestern Louisiana, (called Caddo District), is 19,660 bopd. The completion of the Commercial Oil & Gas Co. well on the Weiss lease in Red River Parish in Sec. 16-13-10 has opened up the Crichton Pool, with about 6,000 bopd from about 2,600 feet.

p. 24. Death of Dr. George Brown, Pioneer Oil Man of Kansas. (With Portrait).

Dr. George W. Brown, aged 95 years, died recently at Rockford, Illinois. He drilled the first oil well in Kansas in 1860, followed by two more before May 1861.

In Pennsylvania, in 1846, he established the Conneautville Courier, in Crawford County, Pa. He came to Kansas about 1854 and founded the Herald of Freedom in Lawrence, the first Free State Newspaper published in Kansas. Border ruffians destroyed his printing plant, and a grand jury indicted him for treason, and he was a prisoner for 4 months. At the close of the ante-bellum trouble in 1860, he went back to Conneautville, where he heard about Colonel Drake's well on Oil Creek in Venango County, Pa. His friends had started drilling near Conneautville, when he remembered that east of Paola, Miami County, Kansas, he had recently seen oil springs and had published an account of the springs in the Herald of Freedom at Lawrence in the Spring of 1855.

With the above in mind Dr. Brown hurried back to Kansas in 1860 and with a member of the Kansas Legislature they visited the oil springs on Wea Creek. They returned to Lawrence and a company of 8 businessmen of Lawrence was formed named

Brown, Solomon & Co. They obtained leases on 40,000 acres, with privileges for 30 years to develop the land for oil, gas, and mining. Work was started a few days on the first well. The following summer Dr. Brown found another oil spring 6 to 8 miles south of the first one, and there he started to drill No. 2. Each well was drilled to 100 feet or more. Every night the hole would be filled with oil, and each morning the workmen would bail it out. They drilled a third well about a mile southeast of Paola on the Mission Farm, in a previous water well that was blasted about 30 to 40 feet deep and had oil on the water. This well was 150 feet deep. In this test, they bought a steam engine and tubing and started pumping, but pumped salt water for 72 hours with only a scum of oil.

In May 1861, the bushwacker element started things in Kansas, and drilling was suspended. After the country had settled down after the Civil War, two of the company had died and one was financially ruined, another had left the country in sympathy with the south, and the company was never reorganized.

p. 28. Gas. Texas. Natural gas is becoming a factor in wealth in Texas. The larger cities have been using gas for several years. During 1914, it is estimated that 10,800,000,000 cfg was consumed in central and north Texas, at an average price of 35¢ a thousand.

The Lone Star Gas Co. is the largest concern, selling 10,000,000,000 cfg in 1914. It supplies 20 cities and towns in the northern part of the state, including Dallas, Fort Worth, Wichita Falls, Denison, Gainesville, Sherman, and other towns and has built a compressor station near Petrolia for $1,000,000.

The Pioneer Natural Gas Co. supplies Moran, Albany, Abilene, Baird, and Cisco, delivering about 375,000,000 cfg in 1914. It is affiliated with The Texas Co.

The Mexia Gas Field in Limestone County is a mile and a half west of Mexia, and is about 2 years old. It is 12 miles north-south by 3-1/2 miles east-west, containing 50 producing wells at about 725 feet. It is a dry gas, with about 1,000 BTU per cubic foot and 270 psi rock pressure, and potential production of 300,000,000 cfgpd. About 217,000,000 cubic feet was consumed in 1914. The Texas Gas Co. of T. N. Barnsdall of Pittsburgh, Pa., is laying a line to Waco from wells owned by the Mexia Oil & Gas Co. Waco has a population of about 30,000. The Driscoll interests are laying a line from Mexia to Corsicana. The Central Gas Co. of Texas of C. T. Herring and T. A. Johnson of Buffalo, N.Y. has a line to Groesbeck.

The Santa Anna Gas Co. operates in Coleman and Brown Counties and has a 16-inch line from the Trickham Field to various towns. The field is owned by J. A. and L. A. Robertson of Galveston. The company was recently organized, with $30,000 capital, and has contracts for 300 meters. Bangs, in Brown County, is furnished with natural gas by Charles Hart & Son who have two wells near the town.

The Border Gas Co. supplies Laredo and a number of smelters along the Rio Grande River, and gets its supply from the Reisor Field east of Laredo, which was developed by the Producers Oil Co. Because of the Mexican revolution, the smelters and other border areas are shut down. The Producers and Border are affiliates of The Texas Co.

The Little Giant Gas Co. supplies Teague from the Mexia Field.

San Antonio and Houston are now using artificial gas. North of Corpus Christi a 50,000,000 cfgpd well came in about a month ago by the White Point Oil & Gas Co. and has been taken over by the J. M. Guffey Petroleum Co. The well blew out, and a cavity formed below the rig, measuring 200 feet in diameter, and the rig, engine, boiler, and drilling tools disappeared into the cavity. A stream of gas, mud, and water is shooting about 40 feet into the air from the hole. San Antonio is about 180 miles away, and Houston is 225 miles to the northeast. Corpus Christi is 8 miles south.

p. 31. Oil in Other Countries, 1914. In Turkey, prospecting was active in Palestine and at Makarim, and plans have been made to develop fields in the Tigris and Euphrates Valleys near Mosul and Baghdad.

Persian developments were accelerated by the British Government to acquire a majority interest in the Anglo-Persian Oil Co. and to have access to important oil lands tributary to the Persian Gulf.

Vol. 13, No. 38, February 25, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent fields at the close of last week was 442,500 bopd, with Kansas and Oklahoma outside of Cushing being 125,000 bopd, Cushing 266,500 bopd, Electra 17,000 bopd, and Caddo, La., 34,000 bopd. Twenty-three wells were completed in the Cushing Pool for 38,000 bopd new production.

In Palo Pinto County, Texas, in the Strawn Pool, a well was completed for 90 bopd in the 830-foot sand.

In Red River Parish, La., in the Crichton Pool, thirty strings of tools are working.

p. 3. War in Persian Oil Fields. A strong Turkish force is now menacing the oil fields at Ahwaz, Persia, of which British firms have the concession, was a recent announcement. This is incorrect. There are no wells at Ahwaz. The wells in Persia are 4 miles northeast of Tembi, 50 miles east of Ahwaz. A pipe line extends from Tembi to the British refinery on Abadan Island, just north of Mohammerah, on the Shatt-el-Arab, the island upon which the British Admiralty has oil stores. A pumping station is on the eastern bank of the Karun River. The Bakhtari and other friendly tribesmen in west Persia and the British forces in Mesopotamia are considered too strong for the Turkish army to attack.

p. 3. New Torpedo Invented. Allan C. Canton, an American, claims to have perfected an electrically-propelled torpedo, which by means of a gyroscope, rushes in a given direction at 40 knots an hour, and becomes magnetized when approaching a metal vessel. Ita beak hits a ship and explodes, and then a second charge is propelled into the hole, sinking the ship. It can seek out, follow, and destroy submarines and seek out mines. The patient was offered to the U. S. Navy, but was disregarded, and not accepted. Germany tried to buy it, but Canton likes the Allies. In 200 experiments, the results have been satisfactory. When the submarine was invented by Bushnell, a Yankee genius, he was laughed at and regarded as a foolish visionary. The present war proved him right. Maybe Canton's invention will stop the war.

p. 4. Personal Mention. Ralph Brown, who looks after business for the Western Oil & Gas Co. and Clauss, Brown & Wolfe, was in Tulsa from Coffeyville, Kansas.

W. N. Sill, of Tulsa, was in Independence, Kansas, looking over producing properties. He operates in the shallow-sand pools of Nowata County, and in Okmulgee County.

E. K. Deloe, of Tulsa, was in Independence, Kansas, visiting. He was a pioneer of the Wann Pool in Washington County, Okla., which showed some gusher wells during the year. He also has interests in Chautauqua County, Kansas.

John H. Clauss and Walter F. Brown, of Toledo, Ohio, were in Tulsa. They are interested in the Western Oil & Gas Co. and the Clauss, Brown & Wolfe Co. of Coffeyville, Kansas.

Herman Livingston, of Tulsa, has returned from New York City. He was called back by the completion of a good well by Rowe Oil & Gas Co., of which he is president. He is also interested in a lease in the northern end of the Cushing Pool.

A. T. Wolfe, of the Western Oil & Gas Co. and Clauss, Brown & Wolfe Co., of Coffeyville, Kansas, has been in Tulsa. He has extensive holdings in the Trenton Rock Fields of Ohio. He looks after the field developments of the above companies. They recently purchased property in the Bird Creek Field. Their first well was 200 bopd.

p. 6. Noted in Passing. The Ozark Oil & Gas Co., capitalized at $60,000, was organized to drill 6 wells near Ozark, Arkansas. Oil seepage in a water well occurred nearby. This is in Franklin County.

In Clark County, Kansas, near Minneola, Bucklin & Dodge struck a thick bed of salt at 690 feet and are still in it at 840 feet.

Hamon & Colcord in Sec. 15-4S-3W in the Healdton Field got 50,000,000 cfgpd in a well, and after drilling deeper had 90,000,000 cfgpd. It is the biggest gas well in the state. It came in at 1,000 feet. A late gauge showed 40,000,000 cfgpd.

p. 6. Recent Deaths. J. J. B. Fink, 77 years old, died at his home in Tulsa on Feb. 18, 1915. He devoted much of his life to the oil industry in Pennsylvania and Indiana. He was the general manager of the Columbia Oil Co. in the early days of the oil business. Six years ago he came to Tulsa and managed for the Lockwoods. His widow, a son, and a daughter survive.

John Edwin Prosser. 42 years old, died at his home in Tulsa on Feb. 21, 1915. He was stricken with paralysis at the Oklahoma Iron Works. He was born in Edinburg, Clarion County, Pa., on Dec. 25, 1873. He was the inventor of the Prosser swivel socket and helped to introduce drilling by wire cable. He was a drilling expert and did fishing jobs. He is survived by his widow and two daughters.

p. 8, 10. Oklahoma. Many lines are being laid from Cushing. With overproduction at Cushing and Healdton, the drilling business is slow. One day last week, the potential production of Cushing was at 297,000 bopd. About 215 wells are drilling in the pool, and salt water is encroaching. In the Osage country, it was thought that salt water might ruin the wells many years ago, but when the pressure fell to 50 psi, very little water encroached beyond what already was the case. The same will probably be true for the Cushing Field.

In Pontotoc County, near Ada, in Sec. 31-4N-6E, Skelly and Sankey got a gas well at 5,000,000 cfgpd. They have a second well in Sec. 34, and are down to 1,000 feet. McThwaite Oil & Gas Co. has completed a number of good gas wells and are supplying Ada businesses. Their No. 7 will be in Sec. 31-4N-6E.

In Marshall County, the Cromwell Oil & Gas Co. has been getting some fair gas wells in Sec. 16-5S-6E, where a good gas sand was struck at 1,105-1,129 feet. In Sec. 19-6S-7E, Abington et al had a showing of gas at 375 feet.

In Muskogee County, in the Boynton Pool, Sheedy & King have 300 bopd in Sec. 11-14N-15E. Cole et al have a 150 bopd well in Sec. 11-14N-15E, and Nash & Co. have a 200 bopd well in the same section.

In Tulsa County, at Mohawk, the Western Oil & Gas Co. has a 200 bopd well on the Walkingstick Allotment, in Sec. 21-20N-13E.

p. 10. Arkansas. In Franklin County, Decius et al in Sec. 33-9N-27W is idle at 2,000 feet. The Ozark Oil & Gas Co. will drill 6 tests near Ozark, where some time ago some oil occurred in a well. In Sec. 36-8N-26W, the Paris Oil & Gas Co. is idle at 1,750 feet, in Logan County.

In Polk County, the Grannis Oil & Gas Co. in Sec. 26-6S-32W is rigging up.

In Howard County, near Nashville, the Perpetual Oil & Gas Co. in 9S-27W is at 650 feet.

In Jefferson County, the Jefferson Oil Co. near Pine Bluff is fishing at 750 feet.

In Sevier County, DeQueen et al is idle in Sec. 28-8S-32W, at 1,500 feet.

Other tests will be made in Independence County, near Batesville, in Benton County, near Gravette; and in Crawford County, the Clear Creek Oil & Gas Co. is drilling.

p. 10. Latest Oil Bill Fixes Market Price. The price of oil in Oklahoma has been set at 60¢ a barrel. This is the sixteenth bill to be introduced by the Oklahoma Legislature this year to allow the Corporation Commission to regulate and control the oil and gas industry in Oklahoma.

p. 12. North Texas. The third oil well of the Texas Pacific Coal Co. at Strawn, Palo Pinto County, has just been completed for 90 bopd at 830 feet. The company has gas wells shut in at 3,000,000 to 8,000,000 cfgpd. Swenson Brothers of New York own land near the wells, and have two rigs on location. They have contracted with Owens & Wilson, of Wichita Falls, to drill 6 wells. Robert Jordan, of Tulsa, will start a well near Strawn, to be drilled by M. Warner.

p. 16-17. Drumright, The Wonder City. Drumright is in Creek County in Sec. 32-18N-7E in the Cushing Field. Cushing is in Secs. 3-4-17N-5E and is not in the field but was the biggest town nearby, and the field was referred to as Cushing, but it should have been called the Drumright Field. In two years, Drumright has grown from almost nothing to 20,000 people. It is the fourth largest

city in Oklahoma and the wealthiest. Everything has been hauled overland for 12 miles from Cushing in order to build Drumright, but shortly there will be a railroad in town. The hauling rate has been 25¢ a hundred pounds. It has a water system and electric lights and a modern hotel, with $500,000 in deposits in its banks. It is constructing a sewer system. It has a post office. Stores stay open until 10 o'clock at night. About 1,500 children are enrolled in school, and many churches operate there. The town covers 300 acres, and more than 5,000 people have homes in the corporate limits of the town. Drumright is in the heart of one of the largest fields in the world, and the residents feel justified in calling the field the Drumright Field. The town is named after Aaron Drumright, who allowed oil people to plot his farm into a town, along with the farm of J. W. Fulkerson. The town was first called Fulkerson, but with the advent of the post office, the name was changed to Drumright. Drumright and Fulkerson actually did the original platting and sold lots.

p. 23. Bedford to Engage in Oil Business. J. D. Bedford, of New York, whose father is prominent as a Standard Oil Co. official, has arrived in Tulsa and will engage in the oil business. George Moody, of Titusville, Pa., will initiate Mr. Bedford in the Oklahoma business. Mr. Moody is here to assist J. E. Pew in managing the Carter Oil Co.'s property in the Cushing Field, recently purchased from J. H. Markham, Jr. George is a brother of N. K. Moody of the Prairie Oil & Gas Co., a Standard concern.

p. 28-29. Healdton Gas Well May Open New District. The new gas well by Jake Hamon and C. F. Colcord in Sec. 15-4S-3W extends the Healdton Pool southward. Government gauges on the well give 50,000,000 cfgpd. The gas will probably be piped to Ringling, 4 miles away, and to Ardmore. This is one of three tests by Hamon & Colcord. The sand was struck at 1,000-1,010 feet while looking for oil at 1,260 feet. The tools blew out of the hole. This means a possible new pool toward Joiner City. Hamon & Colcord own 115 acres around the well.

Vol. 13, No. 39, March 4, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent fields at the close of last week was 418,500 bopd, with Kansas and Oklahoma being 125,000 bopd outside of Cushing, and Cushing 242,500 bopd, Electra 17,000 bopd, and Caddo, La., 34,000 bopd. In the Cushing Field, developmental wells continue to be completed.

In Louisiana, Red River Parish, the Crichton area is very active, with 75 rigs on location.

In North Texas, the Strawn Pool in Palo Pinto County is active. In Williamson County, at Thrall, a well was just completed at 150 bopd, and has settled down to 75 bopd. This is east of Austin.

p. 2. Will Increase Gasoline Output 200 PerCent. Dr. Walter F. Rittman, chemical engineer of the U. S. Bureau of Mines, working at the Government Labs at Columbia University in New York, has discovered a better way to refine oil into gasoline and has made toluol and benzol from crude oil, after many years of research. Application has been made on behalf of the Government for patents, to be dedicated to the American people in order to prevent any monopoly.

p. 2. New Company Formed. The Portland Producing & Refining Co. has been formed by E. J. and N. B. Lambert, of Tulsa, with $250,000 capital. They will build a refinery at Okmulgee, where the Timmons process of oil refining will be used.

p. 4. Tammany Hall Member. Manuel Hirsh, died Monday night in Tulsa. He was a member of Tammany Hall, and named his companies Tammany Oil Co., Sachem Oil Co., Totem Oil Co., and had other companies. Colonel Hirsh was on the staff of every Governor of Oklahoma.

p. 4. Personal Mention. P. T. O'Herin and Miss Carrie Nims, of Cushing, were married in Oklahoma City on Feb. 16, 1915. He is manager for the B. B. Jones interests in the Cushing Field.

Lee Hager, of Houston, Texas, will be moving to Tulsa. He is one of the pioneer geologists of the Gulf Coast.

John Botts has gone to Apollo, Pa., to visit his family. For some time he has been located at Okmulgee.

Max Elser, from Fort Worth, Texas, has extensive interests in the Moran Pool of Shackelford County. He was in Taylor, Texas this week, securing acreage near the wildcat well in Williamson County.

John F. Fisher will be in charge of the Mountain State Oil Co., with permanent headquarters in the Daniels Building in Tulsa. He is an old-time oil man, and formerly was in charge of the construction of the old line of the Gulf Pipe Line Co. and had been the general manager of the Gulf company in Oklahoma, until recently.

Dave Connolly, of Tulsa, head of the Wolverine Oil Co. and advisor to The Texas Co., was in Muskogee visiting his brother John Connolly, looking at the new Robinson well.

Robert Galbreath, the Democratic National Committeeman from Oklahoma, was in Oklahoma City. He was the discoverer of the Glenn Pool, and owns an extensive granite quarry in Johnston County. He will be a bidder on the contract for building the State Capitol.

C. W. Nelson, of Tulsa, has returned from Taylor, Texas, where there is considerable excitement over the wildcat discovery in Williamson County. The well is producing about 100 barrels a day at about 1,000 feet deep. Leasing is high.

Henry Sewell, president of Vulcan Oilfields, Ltd., of London, was in Tulsa, Okmulgee, and other places in the Mid-Continent. This is his second visit since last August. His company recently purchased the producing property of Kimbley, Martin, and others, in the Boock sand district.

Sam Lester, a driller, left Tulsa to visit his old home at Bradford, Pa. He will also go to Kentucky to visit his father, Cyrus Lester, a veteran oil man of the Eastern fields.

Frank A. Gillespie, of Tulsa, has returned from Oklahoma City and from his ranch in Johnston County, where he has recently placed some registered cattle. The ranch covers 7,000 acres.

Dorsey Hager, the California petroleum geologist and engineer, has decided to move to Tulsa, with headquarters in the A. T. Patrick Petroleum Exchange in Hotel Tulsa. He has just completed a book "Practical Oil Geology", which is now in press. The book is in a plain and simple style to be understood by practical oil men.

Frank Craig, of Independence, Kansas, has gone to Mexia, Texas, to attend an annual meeting of the gas companies in which he is interested. Three companies at Mexia may consolidate. The development of the field has been very rapid, with pipe lines to Waco and Corsicana. The wells average 25,000,000 cfgpd. Mexia is within 50 miles of 20 towns, each with a population of 5,000 to 100,000.

p. 6. Noted in Passing. The Perennial Oil Co., of Tulsa, has been incorporated, with $32,000 stock, by R. G. Brownlee, George Parsons, and R. L. Reed, all of Tulsa.

Near Thorndale, Texas, a gusher was drilled in on Feb. 21, 1915. The oil is 37 gravity.

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Near Thorndale, Texas, on Sunday, Feb. 21, 1915, a well was completed and was gushing oil freely at intervals, causing much excitement. The oil is 37 gravity.

Major Gordon Lillie, or "Pawnee Bill" has organized a movie-picture enterprise to operate in the oil fields during the coming Spring. Films will be made in the Cushing Field to adorn oil-region tails and to entertain movie fans.

The Portland Producing & Refining Co., of Tulsa, has been incorporated for $250,000, by E. J. Lambert, of Tulsa, and O. A. Lambert, of Okmulgee.

Robert Lowery and C. E. Van Tackey have started a test near Ripley, Okla., where the Broyles well recently came in at 100-bopd at 1,900 feet. His well is 2 miles east of the Broyles test, and he believes that a second pool may exist in the area.

p. 6. Recent Deaths. Everett B. Huffman, died of pneumonia in a Cushing hospital last Thursday. The remains were shipped to Sistersville, W. Va., for

interment.

John Roy, 52 years old, died of pneumonia in his home in Tulsa on Feb. 25, 1915. He had been prominent in the oil business for many years. He is survived by his wife and one son. The body was shipped to Warren, Pa., for interment.

Charles Miller, 74 years old, died on March 1, 1915, in his home at Independence, Kansas. He was with the Producers Oil Co. and other big interests, and had much experience in the Eastern and Western fields. He is survived by his wife, two sons, and two daughters. the body was taken to Pittsburgh, Pa.

Col. Manuel Hirsh, 54 years old, died on March 1, 1915, at his hotel room in Hotel Tulsa, of apoplexy. He was a member of Governor Williams' staff. Some years ago he was injured in a railway accident, and this might have contributed to his death. He was a Mason and Elk and took a deep interest in the National Guard, and was a member of the Oklahoma Hunting and Fishing Club and was fond of outdoor sports. He was president of the Savoy Oil Co. and had been in the oil business since 1903.

p. 8. Field Operations for February 1915. At the close of February, 1915, Oklahoma had 293 completions including 20 gas wells and 50 dry holes, with 177,558 bopd new production, and 758 wells drilling or on location. Cushing had 63 completions, with 106,110 bopd new production, and 250 wells drilling or on location.

Arkansas had 8 wells drilling or on location.

North Texas had 28 completions, including 8 dry holes, with 1,055 bopd new production, and 73 wells drilling or on location.

The Caddo District had 37 completions, including 9 dry holes, with 11,070 bopd new production, and 126 rigs drilling or on location.

p. 10, 12. Oklahoma. The last week has been quiet except for developmental wells at Cushing and in Muskogee County.

In Muskogee County, in the Fern Mountain Field, E. C. Robinson et al No. 1 Jerry Walker Farm in Sec. 19-15N-18E is a 20-bopd pumper. About 12 wells are still drilling in the field.

In Creek County, in the Kellyville Field, Wright et al on the Kocagamy Allotment in Sec. 23-17N-10E completed for 200 bopd initial production. About 2 years ago, Dr. Scott completed a number of gas wells in Sec. 2-16N-10E, and some oil wells with 400-bopd initial production, from the Dutcher sand or deep pay. Since then more wells have been drilled.

In Okmulgee County, a mile northeast of Okmulgee, McDowell et al on the Dan Rawley Farm had an 8,000,000-cfgpd completion at 1,924-1,930 feet.

In Muskogee County, in the Boynton Field, the Merritt Oil & Gas Co. No. 2 Morrison completed a 125-bopd well in Sec. 15-14N-16E. W. B. Pine No. 2 in Sec. 22-14N-16E completed a well for 150 bopd.

p. 12. Oklahoma Oil Production 1914. In 1914, Oklahoma produced 102,897,327 barrels of oil, subdivided into 9 districts:

Cherokee deep sand District	12,681,839
Cherokee shallow sand	3,783,485
Osage	10,284,245
Cleveland	2,332,950
Cushing	47,222,250
Creek	16,185,178
Kay	1,187,530
Healdton	7,784,250
Miscellaneous	1,435,100

p. 14. North Texas. In Palo Pinto County, near Strawn, the Texas Pacific Coal Co. No. 4 Fee was completed for 130 bopd initial production. It is 1,200 feet west and 400 feet south of their No. 1 Fee. The depth is 840 feet. The wells can be drilled in 6 to 10 days with a rotary drill, and cost $1.00 to $1.25 a foot. Nine gas wells are shut in by the same company, each ranging from 3,000,000 to 8,000,000 cfgpd production.

In Shackelford Co. near Moran the Producers Oil Co. has 8 oil wells and 11 gas wells in the Moran Field. On Feb. 3, 1915 they brought in another well

on the Webb Survey No. 77, 2 miles southwest of Moran. The wells are said to be about 25 to 500 bopd each, but little is actually known about them. A year ago, a 20-car loading rack was built at Moran. The Texas Company laid a 50 mile 6-inch line to Abilene, west of Moran, to supply gas to that town, and laid a smaller gas line to Cisco, 18 miles southeast of Moran. The steel tank near the loading rack is 55,000 barrel capacity, and The Texas Company has contracted to ship 18 cars of oil a week from Moran.

In Williamson County, near Thrall, the wildcat completion was made about 9 miles southeast of Taylor. It is about a 50-bopd pumper.

p. 15-16. Louisiana and East Texas. The Crichton Field has 75 rigs working in Red River Parish, La. Several good wells were completed. (Details given).

p. 16. The Thrall Wildcat. In Williamson County, Texas, Thrall is about 7 miles east of Taylor, and the well is on the Fritz Fuchs Farm 2 miles south of Thrall, and is pumping about 75 bopd. The well is owned by a group of local people from Rockdale, about 10 miles east of Thrall: Dr. T. D. Roundtree, Dr. P. I. Sessions, R. W. Wallis, J. T. Marrs, H. C. Vance, Helen Ashby, William Garner, and Judge J. S. Perry. Lee Lanham is the drilling contractor, and Roy Willis and William Allen are the drillers. A cap rock occurs at 780-782 feet deep, and the underlying pay sand is about 20 feet thick, from 782-802 feet. The gravity of the oil is 39° Baume. Another rig is now going up east of the well. Taylor is the headquarters of Scouts and oil company people.

p. 28. Gas. Oklahoma had 125,000,000 cfgpd new production in February, 1915. The Cherokee deep-sand District had 7,500,000 cfgpd new production, the Creek District had 66,000,000 cfgpd new production, and southwest Oklahoma had 51,500,000 cfgpd new production.

In Pontotoc County, near Ada, about 11,000,000 cfgpd new gas was developed.

In Carter County, in the Healdton Field, the Colcord et al well in Sec. 15-4S-3W had an initial flow of 40,000,000 cfgpd, at 600 psi pressure.

In Muskogee County, in the Cole Field, Shaffer Brothers No. 1 Jefferson in Sec. 4-14N-15E was completed for 10,000,000 cfgpd.

(Details given on other areas with smaller yields).

p. 29. Oil Dome Discovered by Tulsa Man in New Mexico. James H. Gardner, a Tulsa geologist, discovered a dome about 40 miles southeast of Seven Lakes and 50 miles northwest of Albuquerque in the San Juan Basin of McKinley County, while surveying lands for Santa Fe. The dome is about 7 miles long and 3-1/2 miles wide. A. E. Humphrey, of Denver, and Robert R. Whitesides, of Duluth, Minn., have leased about 13,000 acres of the dome, and Brock & Holmes of Gallup, New Mexico will do the drilling. Mr. Humphrey and Mr. Whitesides have interests in the wells near Muskogee and Boynton, Oklahoma. James Whitesides, son of Robert, is also associated with Mr. Humphrey in drilling a test north of Muskogee.

Vol. 13, No. 40, March 11, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent fields at the close of last week was 413,745 bopd, with Kansas and Oklahoma outside of Cushing being 125,000 bopd, Cushing at 237,745 bopd, Electra at 17,000 bopd, and Caddo District 34,000 bopd.

Fourteen wells were completed in the Cushing Field, with 14,190 bopd new production added.

p. 2. Deep-Well Company Disbanded. The Bradford Deep Well Co. has disbanded. The company's well near Bradford, in Foster Brook Valley, at Derrick City, was drilled to 5,830 feet deep, but no oil was found.

p. 4. Personal Mention. A. L. Funk, of Tulsa, of the firm of Funk & Ritter, producers in the Cushing Field, was visiting Muskogee this week.

W. L. Curtis, of Bradford, Pa., and F. M. Aiken, of New York City, of the firm Curtis & Aiken, were in Tulsa looking after their business here.

Dan Almen, with the Winona Oil Co. of Bartlesville was in Tulsa. He is from Oil City, Pa., and has made good in the West.

J.S. Wick celebrated his 72nd birthday on Tuesday of last week at Sapulpa.

He came to Oklahoma from Butler, Pa., when Sapulpa was only an Indian village of less than 100 people. He drilled in the first well in the Cushing Field.

J. M. Critchlow, who opened the Healdton Pool, has returned from his winter home in Florida. He is formerly of the ministry, and came to Oklahoma on his own original oil quest from Titusville, Pa., where for some time he had been prominent in church work.

E. D. Forquer, of Tulsa, secretary of the March Oil Co., has returned from New York. He visited his old home in Pennsylvania. His brother-in-law, W. J. Rattigan, of Butler, Pa., died while he was there.

Mr. and Mrs. P. T. O'Herin, of Cushing, have returned from a honeymoon. He is superintendent for the B. B. Jones' interests in the Cushing Field since the first well was drilled in that field. She was formerly Miss Carrie Nims, of Cushing.

Walter Bovaird, of the Wibo Oil Co. of Sapulpa, was in Tulsa. He was a football player in Pennsylvania, the son of the late David Bovaird, the pioneer boiler maker in the oil region of Pennsylvania, and under the name of Bovaird & Seyfang conducted an oil-well supply business at Bradford, Pa.

Edward W. Bisett and his brother Walter Bisett, of Bradford, Pa., arrived in Tulsa last week, for a visit with their brother Charles F. Bisett, a well-known oil man. They were returning from the Panama Exposition Fair at San Francisco.

p. 4, 6. Noted in Passing. Houston B. Teehee, of Tahlequah, Okla., has been nominated to be Registrar of the Treasury to succeed Gabe Parker, who recently became Commissioner of the Five Civilized Tribes. President Wilson made the nomination.

The Vogler oil property in the Cole Pool, near Morris, has been sold to the Dalsa Oil & Gas Co. of St. Louis, Mo., for $250,000. There are 8 producing wells covering 1,500 acres, yielding 700 bopd.

Winston Churchill, First Lord of the Admiralty, says that the British fleet has ample supplies of fuel oil.

The Oil Products Co. has been formed at Paola, Miami County, Kansas, using Canadian capital, to build a refinery at Paola. Oil from the Paola and Rantoul Fields will be used. The company proposes to drill their own wells. The refinery is to have a 1,000-bopd capacity.

The Adams Oil & Development Co., of Washington, D.C., composed of negro business men, will produce oil from the Healdton Field, Okla., having negotiated with L. C. Hivick and others to take over part of a lease in Sec. 15-4S-3W.

Oklahoma City has one refinery and now will have two. The Capital Refining Co. was incorporated, with $25,000 capital, by Walton Atwood. The plant should be ready by May 1, 1915, with 300-bopd capacity. Later on it can be enlarged. The Oklahoma Refining Co. has a 1,000-bopd capacity.

In the Madill Field, Ardmore, Oklahoma City, and Madill people are drilling. The Indian-Chief Oil & Gas Co., of Oklahoma City, announced that work will begin near Lark. Two drills are at work near Aylesworth. The Bell Co. is drilling near Oakland, two miles west of Madill. Arrington people are drilling almost inside the city limits of Madill, in the Arbuckle Field.

p. 6. Recent Deaths. Charles Aaron Larson, died on March 6, 1915, of pneumonia, at Yale, Okla. He was a member of the Masonic Lodge of Duke Center, Pa. The whereabouts of his relatives are unknown.

p. 8, 10. Oklahoma. Mostly large concerns are interested in buying Cushing oil. Mostly the pool seems to be outlined, and production seems to be falling off in the Bartlesville sand, which last week was at 237,745 bopd on Saturday. (Details given).

In Carter County, in the Healdton Field, in Sec. 6-4S-3W, the Mc-Man Oil Co. No. 3 Richards Farm was completed for 650 bopd and 5,000,000 cfgpd. Their No. 6 in the same section same farm made 500 bopd and 15,000,000 cfgpd. Their No. 10 is a 500-bopd well at 1,049 feet. J. Hernstadt No. 1 Fee in Sec. 6-4S-3W had a 300-bopd well and 12,000,000 cfgpd.

In Muskogee Co. near Boynton, McNutt et al No. 2 Peters in Sec. 11-14N-15E

completed a well for 500 bopd. The Cole Pool Oil Co. No. 2 Cole in Sec. 11-14N-15E got a 500-bopd well. Their No. 3 is in the sand at 1,480 feet and got about 10,000,000 cfgpd well.

In the Fern Mountain Field, Ransom et al No. 1 Bruner in Sec. 23-15N-17E got 12 feet of pay and a 10-bopd pumper, after a 60-quart shot. The first well in the field continues to make 400 bopd in Sec. 13-15N-17E on the Jane Jackson Farm. The second well to be finished was the McLain well in Sec. 19-15N-18E, about one-half mile to the east of the discovery, which came in at 300 bopd. The Robinson No. 1 Walker in Sec. 19-15N-18E was a 20-bopd pumper. These are the 4 producing wells in the field to date, with 12 dry holes.

In Marshall County, east of Madill, in Sec. 25-5S-5E, three small wells have been finished in shallow beds, each at 5 bopd.

Coleman & Co. have a 4,000,000 cfgpd well at 493 feet in the NE-1/4-SW-1/4 Sec. 35-7S-5E, north of Enos.

In Johnston county, the Pyramid Oil Co. will start a test in the NW-1/4-NE-1/4-Sec. 4-2S-8E, east of Bromide. This is a Tulsa concern headed by W. H. Walker and Dr. Hawley, who have secured a 10,000-acre block.

In Pawnee County, north of Jennings, the Republic Oil & Pipe Line Co. will drill a well in the SW-1/4-SW-1/4-Sec. 21-20N-7E, in order to connect the Cushing Field with the Cleveland Field. A test to the Bartlesville sand will be made. They have 5,000 acres under lease. The officers are H. D. Van Valin, of New York and Parkersburg, W. Va., director; C. A. Hanson, of Chicago, formerly with International Harvester, Vice-president; P. L. Hart, of Chicago, secretary-treasurer, and Edward C. Ryan, superintendent.

In Payne County, in the Yale District, many wells have started. (Details given).

Arkansas. Many tests have been started, but to date all have been dry holes or they have not been completed. In Franklin County, Decius, Hutchinson et al in Sec. 33-9N-27W was plugged at 1,986 feet. The Ozark Oil & Gas Co., near Ozark, will drill several tests.

In Logan County, the Paris Mineral Oil & Gas Co. well in NW-1/4-SE-1/4-Sec. 36-8N-26W was idle at 1,750 feet.

In Jefferson County, near Pine Bluff, The Jefferson Oil Co. in the NE-1/4-NW-1/4-Sec. 33-5S-9W? is fishing at 750 feet and may have to abandon the well.

In Polk County, The Grannis Oil & Gas Co. has a rig in the SE-1/4-W-1/2-NW-1/4-Sec. 28-6S-32W.

In Howard County, near Nashville, the Perpetual Oil & Gas Co. in Sec. 29-9S-27W is at 650 feet.

In Sevier County, near DeQueen, Wilson et al in the SW-1/4-SE-1/4-Sec. 28-8S-32W are idle at 400 feet.

In Independence County, near Batesville, a location has been made by unknown parties.

In Crawford County, the Clear Creek Oil & Gas Co. is drilling.

In Benton County, near Gravette, a test is to be started.

In Washington County, McGoos Oil Co. in Sec. 29-17N-30W is at 455 feet. Also, in the SE-1/4-Sec. 30-17N-30W, unknown parties are drilling on the Thomas land. Also, the Sulphur Rock Development Co. in Sec. 13-13N-30W is drilling at 1,190 feet.

In Hempstead County, at Hope, the Hope Waterworks in Sec. 32-12S-24W is at 1,865 feet.

p. 12, 14-15. Hearing on Osage Lease Renewal. The hearing on the proposed extension of the Foster Lease began today before Secretary Lane of the Interior Department in Washington, D.C. About 100 oil men were present. About 17,000 people in the United States, Canada, and England have been interested in the property. The Indians have received about $5,000,000 so far, and the sublessees have made about $3,000,000 profit. Either 680,000 or 1,500,000 acres could come under consideration. In the last 19 years, about 3,700 wells were drilled in the Osage Nation, of which 940 were dry holes. About 60,000 acres are actually desirable to the oil people. No one has wanted to drill in the western part of the tract. D. F. Connolly, superintendent of the Sagamore Gas Co., Wigwam Oil Co., and Central

Petroleum Co. operated on 17,020 acres, and wanted to keep the original sublease. Judge Ames, of the Osage & Oklahoma Co., working a sublease of 115,000 acres, also wanted to retain the subleases. S. S. Mehard, representing the Barnsdall interests, from Pittsburgh, Pa., said that they had 300,000 acres of subleases, and that the Standard Oil Co. had a $9,000,000 mortgage on the company from a loan to develop the property. The Barnsdall Oil Co. drilled almost half of the wells on the Foster lease, and 25% of those were dry, at a cost of $6,500,000 by the company. Most of the Standard mortgage is paid off, and if Mr. Barnsdall were to lose the property he would be out $1,147,000. Almost every oil man wanted the Foster lease renewed, if they had substantial subleases.

p. 16. North Texas. The Strawn Field, in Palo Pinto County, is the center of attraction. (Details given).

In Montague County, near the old Rock Crossing on the Texas side of the Red River, the Badger Oil & Gas Co. had a good showing of gas at 600 feet, and a slight showing of oil at 370 feet.

In Williamson County, near Thrall, five rigs are at Taylor to be used in the new Thrall Pool. About 12 to 15 more rigs are enroute to Taylor, the largest town nearby.

p. 23. Young Inventor Explains His Remarkable Discovery. Dr. Walter F. Rittman had his early training at Swarthmore College, and then went to work for the United Gas Improvement Co. of Philadelphia, and then joined the U. S. Government, doing research on oil and gas. He recently gave a lecture, explaining his new method of refining oil, to make toluol, and to make gasoline 200% more efficiently than from previous methods. At a temperature of 450°C and pressure of 90 to 500 psi, he showed how to break kerosene molecules into gasoline. Chemists for oil and powder companies have pronounced the method practicable and economical, and accepted the findings of the 31-year old chemist. The processes will be patented and given to the public.

Independent refiners produce about 12,000,000 barrels of gasoline a year, but now they can produce about 36,000,000 barrels a year with this process, from the same amount of oil. Toluol and benzol are used in explosives and dyestuffs, and these have largely come from Germany in the past.

p. 24. Concerning the Foam System to Extinguish Burning Oil. The National Transit Co., Dept. of Machinery, Bulletin No. 3, presents some facts concerning the foam system of fighting oil fires. Essentially, two chemicals are mixed which form a thick carbon dioxide foam on top of the burning oil, shutting off contact with the air. The process is of German origin, and was first reported in the Spring of 1909 by U. S. Consul Thomas H. Norton of Chemnitz. The two solutions are: (1) Aluminum sulphate, with either powdered licorice or acetic acid and glue and glucose, and (2) Sodium bicarbonate with some glue and glucose; each dissolved in water when needed, and circulated back and forth between tanks to avoid any precipitates. (Details given).

p. 27. Thrall May Be Another Electra in Vicinity of Roundtree Well. Dr. Roundtree, a local physician, got some fellow physicians together and said that he suspected that oil could be found somewhere near Taylor, Texas, in Williamson County. He had some land about 8 miles east of Taylor, and he wanted it tested, and so they raised the money for a well. The well recently came in on the Roundtree property, at 60 to 300 bopd, of 37° gravity, at 830-835 feet. The area is fine farming country and some farmers are not too happy, and will not lease. The M. K. & T. RR is one and a half miles away. The oil will probably be shipped to the Oriental Refinery in Dallas. A well can be drilled for $1,500, and four wells a month can be drilled. The oil oozes up in the 4-inch tubing, with little gas pressure. There are 3 tanks, 100 barrels each, at the well. Corsicana is about 170 miles away, and is the closest oil district. Thrall is one and one half miles away.

p. 28. Gas. Healdton Field. The Healdton Field has ample gas for Ardmore, and other surrounding towns. Wilson will probably get a line next. The Hamon-Colcord well made more than 40,000,000 cfgpd, but the rock pressure is not as high as it should be.

p. 36-38. Wells. Oklahoma, North Texas, Louisiana-East Texas. In southwestern Oklahoma and miscellaneous areas, including Carter, Stephens, Marshall, Pontotoc, and Oklahoma Counties, about 20 wells were completed in February, of which 4 were gas wells and 2 were dry holes, outside of the main areas.

In Pontotoc County, near Ada, two gas wells were completed in Sec. 11-4N-6E, by Skelly & Sankey No. 1, and McThwaite Gas Co. No. 5.

In Marshall County, a gas well was completed in Sec. 36-5S-6E by McDougal et al No. 1.

In Stephens County, near Loco, the Diamond Oil & Gas Co. completed 7 oil wells in Sec. 9-3S-5W: No. 4 at 10 bopd; No. 5 at 10 bopd; No. 6 at 5 bopd; No. 7 at 5 bopd; No. 8 at 20 bopd; No. 9 at 20 bopd; and No. 10 at 35 bopd.

About 185 wildcat wells were drilling or on location outside of the main fields, in Pontotoc, Bryan, Pushmataha, Atoka, Pittsburg, Coal, Choctaw, Hughes, Seminole, Adair, Love, Marshall, Stephens, Carter, Comanche, Jefferson, Jackson, Beckham, Garfield, Noble, Oklahoma, Pottawatomie, Lincoln, Grady, Garvin, Murray, and Miscellaneous Counties. (Details given). In Atoka County, J. M. Givens et al No. 1 was drilling in Sec. 16-3S-10E. Southwestern Petroleum Co. was drilling in Sec. 33-1N-14E. Bannon & O'Day No. 1 was drilling in Sec. 13-2S-11E.

In Bryan County, Nelson et al No. 1 Disney was drilling in Sec. 28-6S-12E.

In Marshall County, about 26 wells are drilling. One well is the Mannsville Oil & Gas Co. No. 1 Colbert in Sec. 35-4S-4E.

About 293 wells were completed in Oklahoma in February, including 20 gas wells and 50 dry holes, for 117,558 bopd new production, with 752 new rigs working or on location.

In Arkansas, eight rigs are drilling or on location.

In North Texas, 28 wells were completed including 8 dry holes, with 1,055 bopd new production, and 72 rigs drilling or on location.

In North Louisiana and East Texas, 37 rigs were completed, including 4 gas wells and 9 dry holes, with 11,070 bopd new production, and 126 wells drilling or on location.

Vol. 13, No. 41, March 18, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent fields at the close of last week was 378,500 bopd, with Kansas and Oklahoma outside of Cushing being 120,000 bopd, Cushing 202,500 bopd, Electra 17,000 bopd, and Caddo, La. 39,000 bopd. There was a decline in the Cushing Field. The second well at Thrall, Texas, was a dry hole to 1,000 feet so far. The Strawn Field, Palo Pinto County, Texas, has 6 oil wells with a combined production of 505 bopd, and has 13 gas wells.

p. 1. R. L. Lunsford of the Oklahoma Land Commission, has been authorized to investigate gold prospects in the Wichita Mountains. Gold is $2.50 per ton of ore.

p. 2. Americans Are Leaving Turkey. As a result of the attack by the Allies on Turkey at the Dardanelles, Christians are in a dangerous predicament. It is feared that fanatical Turks will massacre Christians. Moslems have the idea that they are serving a pious cause in destroying Christians. Americans may not be safe in Turkey. When Turkey declared war, the teaching of English was prohibited. All missionary schools have been closed, and oil men and their families are leaving.

p. 4. Personal Mention. Judge J. R. Keaton, of Oklahoma City, was in Tulsa. He is affiliated with the Carpathia Petroleum Co., and has holdings in the Cushing Pool.

J. Roy Auers, of Denver, Colorado, has arrived in Tulsa and will make it his future home. He is interested in Kay County, and is looking for acreage and production in other pools.

Thomas Morrisey of Vincennes, Ind., president of the Illinois Torpedo Co. and a representative of W.C. McBride, was looking over holdings in North Texas,

spending several days at Wichita Falls.

H. W. Black, a manager of sales of the Wright Wire Co. of Worcester, Mass., will open a branch office in Tulsa, having secured a warehouse.

William Hanley, of Bradford, Pa., was in Tulsa looking over oil interests. He is active in building, in oil, and in brick making, etc., and is president of the Bradford Pressed Brick Co. and the Hanley Oil Co. and was one of the men who opened the Wyoming oil fields. He and his wife were enroute to San Francisco.

Thomas F. McKinney, of Titusville, Pa., of the Titusville Iron Works, was in Tulsa on his way to the Gulf Coast. The McKinney family dates back to the early days on Oil Creek, the Titusville Iron Works being established in the early 1860's. He was formerly in charge of the South Penn Oil Co.'s field operations at Bradford, Pa.

p. 4. 6. Noted in Passing. The Gusher Oil Co., at Shreveport, La., with stock of $100,000 has been organized to operate in the Caddo District.

The new Thrall Field, is about 44 miles from Austin, Texas. Thousands of acres have been leased northeast of town, amounting to almost $400,000.

Near Wister, LeFlore County, a test well will be drilled on a 5,000 acre block in T5N-R25E by C. B. Shaffer & Co., beginning April 1, 1915. The well will be located on an anticline located by geologists.

The First Thrall Oil Co. was incorporated by the men from Rockdale, Texas, who drilled the discovery well near Thrall. The capital is $26,000. The five directors are H. C. Vance, R. W. Wallis, T. D. Roundtree, J. W. Garner, and J. T. Marrs.

At Dallas, Jackson County, Mo., oil was found last week, at a depth of 300 feet by men drilling for a private gas supply on the W. E. Adams property adjoining the Methodist Church. The yield is estimated at 8 to 10 bopd.

D. A. Cochran, of Ringling, and H. M. Pennington, of Ardmore, have leased the property of the Abernathy Oil Co. at Wilson, and will move the equipment to Ringling. They will manufacture oil products, such as gasoline, engine oils, etc., under the name of the Oklahoma Oil Co.

The recent British naval victory in the North Sea was due largely to the usage of oil as a fuel by the British ships. The ships had better time in generating power, were readily manuvered, and had higher speed, with little visible smoke. The firing was done at a 10-mile range.

M. S. Musselman, the former Syrian peddler and now a rich oil producer, won a suit in Muskogee last week. Musselman owns 40 acres in the Boynton Field, worth $4,000, which C. B. Wilson claimed.

Ramon Diaz, a nephew of the former President of Mexico, and brother of General Felix Diaz, is investigating properties near Luling, Texas. He is said to have interested some people from San Antonio in the prospect. He was interested in the Tampico District under the regime of his uncle. Luling is in Caldwell County, about 50 miles east of San Antonio. Some gas was recently discovered on the Voight tract, 9 miles southwest of Gonzales, at 400 feet. This is the third shallow gas well drilled in that vicinity since January 1913. Gonzales is about 10 miles south of Luling.

p. 6. Recent Deaths. Mert Hilliard, aged 35 years, died of pneumonia at his home in Okmulgee on March 12, 1915. He was the manager for the Atlas Supply Co. in Okmulgee. He leaves a widow and daughter.

p. 8, 10. Oklahoma. Wildcatting is somewhat active, but mostly things have been quiet this week.

In Okmulgee County, near Natura, the Vance Brothers et al in the SE-1/4-Sec. 29-15N-13E have gas at 1,964 feet, and a 25-bopd natural well at 1,977 feet. This is 2 miles southeast of the gas well, the nearest production, and this may open a new pool.

In Muskogee County, in the Boynton Pool, the Keith-Platt Oil Co. No. 2 in the SE-1/4-Sec. 16-14N-16E was completed for about 50 bopd at 1,490-1,537 feet.

In Rogers County, in the Inola Pool, operators are now going deeper than the shallow-sand pay. The Subert et al No. 2 Drew in Sec. 19-18N-15E completed a 25-bopd well at 1,240-1,262 feet. Total depth was 1,267 feet. The old pool

in T19N-R16E, which had many wells each yielding 100 to 500 bopd in the 500-foot sand, is now down to a total of 150 bopd total for the field.

In Carter County, in the Healdton Field, L. C. Hivick et al on the Ingram Farm in Sec. 15-4S-3W has 6,000,000 cfgpd from 2 zones, one at 765 feet for 3,000,000 cfgpd, and another at 1,010 feet at 3,000,000 cfgpd, and now is on top of the sand that Hamon & Colcord drilled for 40,000,000 cfgpd. Another good completion was that of the Gilmer Oil Co. No. 3 Nora Hernstadt Lease in Sec. 6-4S-3W, with 300 bopd and 12,000,000 cfgpd at 1,047 feet.

In Okfuskee County, near Weleetka, the Burr Oil & Gas Co. in Sec. 29-10N-11E had a small volume of gas at 2,870 feet. This well has been drilling for 2 years, and will probably go deeper.

In northern Kay County, north of Blackwell, the Duluth-Oklahoma Oil Co. gas well on the wolfe Farm in Sec. 6-28N-1E had 12,000,000 cfgpd at 2,630 feet. There was another stratum at 2,300 feet that had 3,000,000 cfgpd. The Blackwell Oil & Gas Co. will take the gas. An anticline has been discovered by a geologist in T29N-R4E, and the leaseholders there are E. W. Marland, the Monitor Oil Co., and the Chanute Refining Co. They will do some testing soon.

In Muskogee County, in the Fern Mountain Pool, Robinson et al on the Robinson Farm in Sec. 30-15N-18E have a small gas well. Barber et al, about two locations south of the McLain well in Sec. 19-15N-18E, probably have about 25 bopd, on a pump. There is trouble with sand cutting the cups.

In LeFlore County, C. B. Shaffer has about 5,000 acres under lease near Wister in T5N-R25E, where the U. S. Geological Survey has mapped an anticline extending from near Heavener 16 miles westward.

In Pittsburg County, about 10 miles northeast of McAlester, the Gladys Belle Oil Co. has 1,500 acres which they will drill for gas.

p. 10. Death of Mrs. J. D. Rockefeller. Mrs. John D. Rockefeller died at her home in Tarrytown, N.Y., at 10:20 o'clock this March 12, 1915, at Pocantico Hills, where she had been ill for some time. Her husband and son were at Ormond, Florida, and they took a special train back from Jacksonville. Mrs. E. Parmalee Prentiss, Mrs. Rockefeller's daughter, was the only immediate relative present when she died.

Mrs. Rockefeller's maiden name was Laura Spellman, and she was married on Sept. 8, 1864, and was a school teacher in Cleveland at that time. Laura and John were schoolmates in Cleveland and they formed an early attachment. Their courtship and engagement covered the period of Mr. Rockefeller's hardest struggles to get into business. In later years he acknowledged that his wife's sagacity and aid helped him immensely, or he would have remained a poor man. She was a woman of quiet, domestic tastes, avoiding publicity all her life.

The Rockefeller family has four homes: in New York City, Lakewood, N.J., Tarrytown, N.Y., and Cleveland, Ohio. Three children survive: Mrs. Parmalee Prentiss, of New York, Mrs. Harold McCormick, of Chicago, and John D. Rockefeller, Jr., of New York.

p. 12, 14. Development at Thrall, Texas. Taylor, Texas, a town of 6,500 people, has been transformed into an oil town. For miles around, land is worth $150 to $200 an acre. The entire area is settled mostly by Bohemians. The discovery well is about 2-1/2 miles south of Thrall, a station in the International and Great Northern Railroad. The original company that drilled the discovery well only had 245 acres around the well and 600 acres scattered, in Williamson County. Many experienced oil men decided not to lease and did not think that this was a large play. The Thrall well was completed on Feb. 21, 1915, by Rockdale parties. Rockdale is about 20 miles east of Thrall. The well is flowing at 75 bopd, on the Fuchs Farm, with a 4-inch tubing and a packer set above the cap rock at 785 feet, and one joint of perforated pipe set on bottom, about 20 feet or more below the 2-foot thick cap rock. The oil is green and is 40° Baume.

Lee Hager, of Houston, said that the surface rocks are shales and clays like those at Corsicana, but that it is impossible to know much about the field as yet. The oil comes from the Taylor marl series of the Upper Cretaceous, and the sand is purely local. It does not crop out to the west, and is not found in several deepwater wells several miles from the field. The field is apt to be spotted. Within

a few months the wells will probably fall off, and in a few years they will probably be like the stripper wells at Corsicana, at 2 to 3 bopd. A well can be drilled in 4 or 5 days, so the field should be defined quickly.

p. 15-16. North Texas. In Palo Pinto County, near Strawn, in the Strawn Pool area, hundreds of thousands of acres have been leased. The T. & P. Coal Co., a subsidiary of the Texas & Pacific Railroad, holds several thousand acres in the immediate pool area, and owns the land. Acreage is being leased in Eastland County and in Stephens County. The first well was struck for oil in February 1915, but the company was looking for gas. There are now 6 oil wells, 13 gas wells, and 4 dry holes. The initial well, the Texas Pacific Coal Co. No. 16 came in at 75 bopd initial flow, and is now down to 30 bopd. No. 17 was 30 bopd and it is still making that flow. No. 18 is holding to its initial production of 100 bopd. No. 19 is making 200 bopd, and is the best producer in the field. The Swenson Brothers just completed a well at 100 bopd. Hamill et al is doing most of the drilling for T. & P.; the latter is a New York promotion. They have five 500 barrel and three 250 barrel tanks, and are putting in two 1,600 barrel tanks. The oil is of high gravity and is a green color. Swenson & Son are from New York also. Many people are leasing and will drill in the area. Robert Jordan of Tulsa has 30,000 acres in the area. Taylor et al from Norman, Oklahoma, are starting a test near the C-N line-Survey No. 1736 of the T. E. & L. Co.'s Survey. Mr. Taylor is a geologist.

In 1900, a good showing of gas was struck in a water well drilled on the Dalton Ranch, 30 miles northeast of the Strawn Pool and 15 miles west of Mineral Wells, and some people will start a well there. Many other companies are drilling or leasing within many miles of the Strawn Pool.

Strawn is 79 miles south of Wichita Falls, and has a population of 650 people. Most operators stay in Mineral Wells, an ideal summer resort.

In the discovery well, the coal bed occurs at 525-530 feet deep, and the oil sand occurs at 825-828 feet (T. & P. Coal Co. No. 16). (Details are given for each producer and dry hole).

p. 22. Showing in Grayson County. J. M. Hopper, formerly president of the Twin Oaks Oil & Gas Co., is drilling a test for the Snyder Oil Co. of Dallas, in the western part of Grayson County, Texas, on the Bosses land. A very good showing was reported at 237 feet. This is east of the Skillen well and west of the Indian Chief well. The Smith Coleman gas well is 10 miles to the east.

p. 23. Markham Gets Its Post Office. Markham, formerly Dropright, in Creek County, has a post office, with mail to be forwarded from Yale, the nearest railroad point eight miles northwest of Markham.

p. 23. Asphalt at Lawton, Oklahoma. Springfield, Mo., will pave their streets with rock asphalt known as the Geronimo asphalt, from mines on the farm of H. C. Stubblefield, 6-1/2 miles northeast of Lawton, Ok. Immense quantities of asphalt underlie this farm, and it is of good quality, having twice taken first premium at the State Fair. The asphalt will be hauled in wagons to Lawton, Oklahoma, and from there shipped to Springfield, Missouri. The paving will begin in April.

p. 27. Adopts Baby Girl. H. F. Sinclair and wife have returned from Kansas City and New York, bringing with them a baby girl which they adopted in Kansas City. Mr. Sinclair was too busy praising the baby to talk baseball, Cushing production, or anything else.

p. 27. Gillespie Wins Tax Protest. Gross income tax on oil producers is to be figured by deducting the cost of drilling and shooting wells. So decides Washington officials in a controversy in which Frank Gillespie, of Tulsa, was the complainant. The decision is important to producers with considerable incomes.

p. 28-29. Mr. Cullinan. Osage Lease. J. S. Cullinan, former president of The Texas Co., now of Houston, favors leasing the 1,500,000 acres of Osage Indian land to one party. He said that the U. S. probably has a 17 to 18 year supply of oil, and that we will probably run out in 65 yrs and that we need to

conserve oil as much as possible. One company would probably do a better job than many companies in producing from the Osage lease. About 46,000,000 barrels of oil is in storage in Oklahoma, and the Osage Nation produces about 20,000 bopd. The United States production has doubled five times since 1897, with production being about 300,000,000 barrels a year. At this rate, the United States will be producing a billion and a half barrels a year in 17 years, which means that our supply would run out in 7 years. Others figured this at 18 years. Oil should not be sold outside of the country to foreign markets. Mr. Cullinan advocates Government control of oil, so that the supply will last longer. The gas on the Osage lease was not marketed until about 3 years ago, and then could not be sold outside of the state, so the market was limited. Also, the oil wells produce better if the gas is not taken, so many wells cannot yield the gas until the oil is depleted. About 75,000,000 barrels of oil has been taken from the Osage area in the past 20 years. The Indians received $5,452,000, I.T.I.O. received $2,445,000, and 170 sublessees received $13,720,000, and the refiners, mostly the Standard Oil Co., made $36,873,000 over the past 20 years. He would favor a 30 to 40 year lease, because it takes 15 years for a refiner to build up his markets.

Vol. 13, No. 42, March 25, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent fields at the close of last week was 362,750 bopd, with Kansas and Oklahoma outside of Cushing being 120,000 bopd, and Cushing 209,750 bopd, Electra 17,000 bopd, and Caddo 36,000 bopd. The Cushing Field is falling off, with only 14 completed wells this week at 19,900 bopd new production from the Bartlesville sand. The Strawn, Texas, Field had two new producers at 275 bopd. The second well in the Taylor, Williamson County, Texas area was completed at 890 feet and is reported to be flowing at 2,000 bopd. In the Crichton Pool, Louisiana, two wells were completed last week for 6,000 bopd.

p. 1. Oklahoma University. According to a rule in the School of Journalism of Oklahoma University, students must study the Bible. Journalists are not so familiar with Holy Writ as they might be, and this idea is to be commended.

p. 2. Tax on Gross Production. To Make Oil-Tax Collections. The new Oil Tax Law passed on March 12, 1915, and signed by Governor Williams, fixes a 2% gross-production tax on oil. Also, it eliminates a tax on leases. The money raised will go 50% to local schools in that county and 50% into the State Treasury. Ad valorem taxes will only apply to derricks and power plants, and not on other physical property, and oil in storage; and capitalization tax on oil in storage, and the ad valorem tax will be collected by each county. A franchise tax and an income tax for oil producers were also eliminated.

p. 4. Personal Mention. Everett Brooks is in charge of a string of tools on the Carter Oil Co. property in the Cushing Field. He spent a few days at his home in Tulsa this week.

P. H. Gallagher, of Council Hill, Okla., was in Tulsa. He came from Pennsylvania and is now with the Oklahoma Pipe Line Co.

William Leschen has been in Tulsa for a number of years, representing the Leschen interests in Oklahoma. He left Tulsa last week for his former home in St. Louis, Mo., where he will make his new headquarters.

T. B. Slick is said to have purchased a 90,000 acre ranch in Mexico.

W. E. Jones of Dewey, Okla., is drilling near Strawn, Texas.

W. F. Gates, president of the Prairie Pipe Line Co. of Independence, Kans., George Coyle, general superintendent from Tulsa, and J. J. Lineham, division superintendent of Bartlesville, were looking over their washington County property.

Williard S. Lavan, with the Indiahoma Refining Co. at Okmulgee for a number of years, left for St. Louis, Mo. on Monday, where he will be promoted to a higher position. He is also interested in the Niotaze Refinery in Kansas.

George W. Giffert has been promoted to the Tulsa office of the Gypsy Oil Co. He had been in Okmulgee for 2 years, working in the Okmulgee, Muskogee, and McIntosh Districts. Bus Rushmore will succeed Mr. Giffert.

p. 4. 6. Noted in Passing. The "Coal Oil Johnny" train will soon make daily runs via the Frisco and Oil Belt Terminal roads, from Tulsa to Oilton, giving access to the Cushing Field from the north.

The Devonian Oil Co. is to take over the holdings of the Hecla Oil Co. in Oklahoma. Devonian is a Pittsburgh, Pa., firm, and owns property in the Cushing and other fields. They have raised their stock to $1,000,000.

p. 8, 10. Oklahoma. Drilling has been quiet this past week. Most operators and producers are attending the Osage hearings. In the Cushing Field, about 47,000,000 barrels of oil was produced in 1914. The pressure is falling off and the field is probably defined. Almost 75 Wheeler sand wells have been plugged. The total production from the Wheeler and Layton is only 5,875 bopd, leaving the remainder of the production from the Bartlesville and/or Tucker sands, mostly in the northern end of the field.

In Muskogee County, in the Boynton Field, there has been considerable work in the past 6 months. Three pay sands are known to produce in the pool. The Cole Pool Oil Co. No. 3 Peters in Sec. 11-14N-15E struck 10,000,000 cfgpd at 1,490 feet and 500 bopd oil at 1,568-1,617 feet. The Caney River Gas Co. No. 1 Sells in the SE-1/4-NW-1/4-Sec. 9-14N-15E got 4,000,000 cfgpd. The Dalsa Oil Co. No. 1 Peters in Sec. 11-14N-15E have 100 bopd at 1,639 feet. Hill et al No. 3 Rentie in Sec. 18-14N-15E have a 25-bopd well at 1,233 feet. Shepard & Co. No. 1 McIntosh in Sec. 14-14N-16E is making 60 bopd natural at 1,455-1,496 feet. The Gypsy Oil Co. in the NW-1/4-NW-1/4-Sec. 27-14N-16E is pulling casing at 2,150 feet and will plug back to the Boynton sand at 1,550 feet, where they had a showing for about 20 bopd. (Cole Field is 15E).

In Okmulgee County, near Beggs in an older field, the Oklahoma Natural Gas Co. No. 1 George Sneed in the NW-1/4-Sec. 26-15N-12E, 3-1/2 miles east of Beggs, got about 25 bopd at 2,190 feet. East of Okmulgee, the Gainsmoor Oil Co. in the NW-1/4-NW-1/4-Sec. 13-13N-13E got 3,000,000 cfgpd at 1,815 feet, but plugged the well after going to 1,537 feet and not finding oil. The Hecla Oil Co. No. 2 Mahsey Farm in the SE-1/4-NE-1/4-Sec. 29-13N-13E got 7,000,000 cfgpd at 1,495-1,507 feet.

In Creek County, in the Kellyville Field, the Hohman Oil Co. No. 2 R. Fulson Farm in Sec. 2-16N-10E got 180 bopd at 2,484-2,500 feet.

In Tulsa County, in the Wicey Pool, the Annex Oil Co. No. 9 Buck in Sec. 4-16N-13E had a 75-bopd well at 1,993-2,033 feet. The Wolf Oil Co. No. 1 Jenks Townsite in Sec. 19-18N-13E has a 20-bopd well.

In Creek County, southwest of Sapulpa, the Twin State Oil Co. No. 1 Sam Jack in Sec. 9-18N-11E has a 75-bopd well natural at 1,756-1,770 feet. The Quaker Oil & Gas Co. No. 1 Weaver in Sec. 16-18N-11E had 100 bopd.

Many wells are still being drilled in the older shallow sand districts.

In Atoka County, 12 miles northeast of Atoka in Sec. 9-1S-13E, Charles Douglass has made a location for a test. He has made another location in Sec. 12-1S-13E for a deep test to 2,500 feet. There has been a little shallow gas sand found in this area. A number of wells have been drilled in Atoka County with showings of oil.

p. 12. Syrian Becomes Millionaire By Means of Land Purchase. M. S. Musselman came to the United States from Syria about 3 years ago. In the Cushing Field, 1-1/2 miles south of Oilton, he purchased a tract of land for $362.50, at $5.00 an acre, which was surplus Creek Indian land, along the Cimarron River. Today it is worth $2,500,000. Musselman was a visitor in Oilton recently, traveling in a big touring car. (The farm was in Sec. 8-18N-7E).

He came from New York City to Tulsa upon the advice of friends, to start a truck-farm business, but upon arriving, he found that farm land was about $100 per acre. One real estate agent told him about the 72 acres in the Cimarron River valley south of oilton, and Mr. Musselman and a cousin or friend drove a wagon with one plug horse, carrying all of their possessions. Mostly the land was on the side of the valley, and was hilly, with rocks and gullies, and not enough space for a house garden. He offered to sell it to the other Syrian for $100, but he couldn't even give it away. He was disgusted and left for Kiefer, where he secured work as a day laborer.

As the Cushing Field progressed northward Robert M. McFarlin of the Mc-Man

Oil Co., had the Musselman tract inspected by a geologist. Charles Rogers, a Tulsa attorney for the McMan Company, finally found Mr. Musselman at Kiefer. He leased the tract at $1.00 an acre a year, for $72.00 a year. Musselman would have sold him the land in fee if Mr. Rogers wanted it. The McMan Company made a big strike on the property, and the property now yields about 30,000 bopd.

p. 12. Taylor's 2,000 Barrel Well. In Williamson County, Texas, Witherspoon & Bowers drilled their second well near Taylor and got about 2,000 bopd at 890 feet. The flowing well is 600 feet east of the discovery well. The first test by Witherspoon & Bowers No. 1 Mager, northwest of the discovery well, was a dry hole and was abandoned at 1,280 feet. The original discovery well of the Roundtree Oil Co. No. 1 Fuch's Farm is still making about 100 bopd after one month. Two miles of 2-inch line has been laid from the Fuchs Farm to the tracks of the International & Great Northern Railroad, where a loading rack will be installed.

The J. M. Guffey Petroleum Co. No. 1 Stauffer, south of the discovery well, and the Giddings-Taylor No. 1 Altman west of the Witherspoon duster, are both showing oil. The courthouse in Georgetown has on record about 2,000 acres of leases near the discovery well. (Details given).

p. 14. Louisiana and East Texas, by M. L. Vaughn. Crichton's Good Wells. Many wells are being drilled in the Crichton Pool. The Commercial Oil & Gas Co. No. 2 Weiss was completed for 4,000 bopd. Their first well was 6,000 bopd but is now down to 3,200 bopd. The Gulf Refining Co. got 2,600 bopd on their No. 1 Natalie Oil Co. lease, and 1,000 bopd at their No. 2 Natalie Oil Co. lease. Mud is very deep, and it is difficult to haul equipment, but many wells continue to be completed. (Details given).

p. 16-17. Drumright. (With map, showing location of wells). Drumright will be the terminus of the Cushing-Drumright Interurban and the Oil Belt Terminal Railroad. More than 14,000 people get their mail there, and this city is now the fourth largest in Oklahoma.

p. 22. New Line at Catoosa. The Kansas Natural Gas Co. line in T19N-R15E from two miles south of Owasso to south of Catoosa will be completed on Friday, and gas will be taken from the pool 2 miles south of Catoosa. The Ardizzone Co. is laying the 12-mile line. Four miles is 12-inch, three miles is 10-inch, and five miles is 8-inch. About 6 miles of land around the area is productive, southeast of Catoosa. The field yields about 75,000,000 cfgpd. The pay is at 670 feet and at 900 feet, the deeper sand being the better. In the shallow sand, the production of each well averages about 2,000,000 cfgpd, while that of the deeper sand varies. Some wells are 8,000,000 to 13,000,000 cfgpd. The rock pressure is about 405 psi. At present, about 7 wells are drilling. Al Nickel et al have about 30,000,000 cfgpd, while Ardizzone & Ossenbeck have 35,000,000 cfgpd, and Tack and Associates have 10,000,000 cfgpd.

Vol. 13, No. 43, April 1, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent fields at the close of last week was 407,000 bopd, with Kansas and Oklahoma outside of Cushing being 120,000 bopd, Cushing 230,000 bopd, Electra 17,000 bopd, and Caddo, La., 40,000 bopd. About 16 wells in the Cushing Field were completed in the Bartlesville sand for 16,350 bopd.

Six wells were completed in the Crichton Field, La., for 2,350 bopd new production. Sixty-four wells are drilling or on location. A freak well was the completion of a chalk-rock well two miles east of the Jenkins Pool in DeSoto Parish, with 200 bopd of 42-gravity oil at 1,100 feet.

In Williamson County, Texas, another gusher came in the Thrall Pool for 3,000 to 4,000 bopd. Ten wells are drilling in the Strawn Pool of Palo Pinto County, where two wells were completed last week.

p. 1. Morgan Robertson died last week. He wrote a sea story and outlined the concept for a periscope, an attachment for a submarine to enable one to see surface objects while submerged. Robertson patented the idea, from which he netted much money. His sea story was a success also. It is a case of fiction and truth coming together.

p. 4. Personal Mention. J. M. Critchlow, of Titusville, Pa., with interests in Carter County, Okla., left for his summer home in Florida.

C. R. Armstrong, W. B. Bassett, and J. E. Crosbie visited the Healdton Field last week. They own the Ardmore refinery.

George J. Younger, who is credited with drilling the first well in Oklahoma, is in Los Angeles and will probably locate there permanently. He made a fortune in Pennsylvania oil, and formerly lived at Titusville, Pa.

A. E. Humphrey, of the Merritt Oil Co., has returned from his home in Denver, Colorado, and from a business trip to west Virginia. He has interests in the Muskogee Field.

Robert Watchorn, of Dundee, Scotland, was in Ardmore, from England. He is with the Samoset and Dundee Petroleum Co.s that operate in the Healdton Field.

Dorsey Hager, of Tulsa, with The Petroleum Co., has written a handbook on oil geology. He is now entertaining his brother, Lee Hager, of Houston, Texas.

Mr. and Mrs. A. R. Simons have returned to Tulsa after a visit with home folks at Bradford, Pa. He was a merchant and oil man, and had served in the Spanish-American War. He is called Ike, and is interested in several oil properties in Oklahoma.

William Fitzgibbon, of Carnegie, Pa., was in Tulsa last week, coming from Sapulpa. He has been in the oil business for 50 years, as driller, contractor, and producer. His brothers, Mike Fitzgibbon, of Bradford, Pa., and Charlie Fitzgibbon, of Bradford, Pa., are equally successful oil men.

p. 4, 6. Noted in Passing. The Ardmore Refining Company has received 25 new tank cars. The capacity of the plant will be doubled shortly.

The Anglo-Egyptian Oilfields, Ltd. No. 7 Hurgada well in Egypt has been re-opened after having been clogged for many months, and is producing 3,000 tons or 21,750 bopd.

Government reports state that near Madill, at 1,700 feet in the Arbuckle Field, that the Trinity sand is 400 feet thick. The wells drilled there so far are only 500 feet deep, so they should drill deeper.

C. M. Van Pelt of the Samoset Oil Co. has returned from Stephens and Palo Pinto Counties, Texas. Almost 30,000 acres are now leased there by him.

Last week, passenger service was opened from Jennings to Oilton, Oklahoma, by the new Oil Belt Terminal Railroad. The Katy and Frisco connect at Jennings. The Frisco will run a daily train from Tulsa to Jennings.

p. 6. Recent Deaths. Allen Holt, 52 years old, died of dropsy on March 26, 1915, at his home in Tulsa. He was an oil man. His wife and two sisters survive.

William A. Henry, died of heart disease at Claremore, on March 22, 1915. He was employed by the Cudahy Oil Co. formerly of Bartlesville. He was a Mason and was buried according to the rites of Masonry at Pryor Creek, Oklahoma.

Richard L. Mildren, 76 years old, died at his home in Brady's Bend, Pa., on March 21, 1915. He was a native of England and came to America when quite young. He mostly lived near Brady's Bend, and had been in the oil business for 45 years. He is survived by his wife and three sons: L. I. Mildren, of Chanute, Kansas, C. R. Mildren, of Independence, Kansas, and Harry Mildren, of Newark, Ohio, and by one daughter, Mrs. Clyde Hare, of Newark, Ohio.

p. 8. Field Operations for March 1915. In Oklahoma for March 1915, about 284 wells were completed, including 27 gas wells and 63 dry holes, with 85,025 bopd new production found, and 745 wells drilling or on location. About 83 of the wells were in the Cushing Field, with 77,135 bopd new production found.

In North Texas, about 20 wells were completed for 680 bopd new production, including 2 dry holes, with 69 wells drilling or on location.

In East Texas and Northern Louisiana, about 28 wells were completed for 20,525 bopd new production, including 6 dry holes, with 147 rigs drilling or on location.

p. 10, 12, 14. Oklahoma. More wells are still being completed in the Cushing Field. An unexpected surprise was the completion of a Layton sand well by the Mc-Man Oil Co. No. 5 Long Farm in the SE-1/4-Sec. 9-17N-7E, for 1,000 bopd at 1,475 feet.

This is the largest producer from the Layton in the field in more than a year, and many operators are now looking at this formation in the southern end of the field. The Bartlesville estimated production is 295,000 bopd to 230,000 bopd for the week ending Saturday March 27, 1915.

In Muskogee County, there are two pools near Boynton, termed Cole Pool and Boynton Pool. The Cole Pool is 5 miles northwest of Boynton. The Cole Pool Oil Co. is the largest producer with 750 bopd production. Much of the production is in Sec. 11-14N-15E, where the latest completions have been made. Other wells were completed in Secs. 17, 19, 21, 22, and 27. The Boynton Pool was opened northeast of the town in T14N-R16E. There are 3 sands that pay in the pool, at 1,550, 1,610, and 1,700 feet, the discovery well and early wells being in the 1,550-foot sand. In Sec. 22-14N-16E, Stien et al No. 1 Franklin had 40-bopd at 1,540-1,569 feet. In Sec. 15-14N-16E, Hull et al have 3 sands at 1,365-1,380 feet, 1,413-1,425 feet, and 1,460-1,465 feet, with 40 bopd from the top two sands. The total depth was 1,596 feet. About 25 wells are now drilling in these pools, and about 2,500 bopd is produced from both of them together. In Sec. 6-14N-16E Hampton et al got 150 bopd from a sand at 1,614-1,618 feet, after initial production of 250 bopd. This well is 1-1/2 miles northeast of the Cole Pool and 1-1/2 miles northwest of the Boynton Pool, and may be a new pool.

In Okmulgee County, north of Hoffman, Newman et al is at 1,810 feet in Sec. 10-12N-14E. At 1,782 to 1,800 feet they had about 15 bopd.

In Pontotoc County, near Ada, much gas is being developed. The McThwaite Oil & Gas Co. No. 6 in Sec. 32-4N-6E is good for 5,000,000 cfgpd. The Penn West Oil Co., composed of Pittsburgh, Pa. operators, is at 1,575 feet in Sec. 4-7N-8E. At 1,100 feet they got 1,000,000 cfgpd, and at 1,220-1,250 feet they got about 10 bopd, and they intend to go to 3,000 feet, in Hughes County.

p. 14-15. North Texas. In the Strawn Pool, Palo Pinto County, Texas, about 10 rigs are working, with activity as far as Mineral wells taking place almost 35 miles away. Also leases are being taken as far away as Stephensville, Dublin, and Lingleville on the southeast side, 30 miles from Strawn. Two more wells were completed in the pool, the Texas Pacific Coal Co. No. 20 Fee at 25 bopd at 750 feet, and the Swenson & Son No. 3 Fee 400 feet south of their No. 2 for 10 bopd at 810 feet. Near Ranger, 10 to 12 miles from Strawn, many leases are being taken. Canfield & Son, of Oklahoma, have 2 rigs near Eastland, in Eastland County.

p. 15. East Texas and Louisiana. by M. L. Vaughn. At Crichton, in Red River Parish, six wells were completed for 14,050 bopd new production. All but one were in Sec. 18-13-10, close to the Weiss well. The oil sells for about 50¢ a barrel. A year ago it was $1.05 a barrel. About 64 rigs are drilling or on location near Crichton. The average daily production is about 21,296 bopd. In the DeSoto Parish of Louisiana, a chalk-rock well was completed at 1,100 feet by the Producers Oil Co. No. 16 Christine in Sec. 6-12-11, for 200 to 300 bopd of 42-gravity oil. Only one other well is like this in the Caddo region, the Standard Oil No. 2 Scales, completed at 2,400 feet in the DeSoto Parish. (Details given).

p. 28. Gas. Oklahoma and Kansas. In Oklahoma, 109,500,000 cfgpd new gas was discovered in March 1915. The Creek Nation lead with 38,000,000 cfgpd, with Cushing at 25,000,000 cfgpd, and Southwest Oklahoma, mostly Healdton, at 26,500,000 cfgpd. Kay County was 10,000,000 cfgpd, the Osage Nation at 7,000,000 cfgpd, and the Cherokee deep sand District at 3,000,000 cfgpd. In Okmulgee County, Vance Brothers in Sec. 26-15N-13E completed a well for 6,000,000 cfgpd. Near Okmulgee, the Hecla Oil Co. No. 1 Marsey in Sec. 29-13N-13E got 7,000,000 cfgpd.

In Carter County, in the Healdton Field, Hivick et al in Sec. 15-4S-3W got one gas completion for 20,000,000 cfgpd.

In Marshall County, three gas wells were completed for 5,500,000 cfgpd. In the Cushing Pool, in Creek County, the Hill Oil & Gas Co. in Sec. 22-17N-7E got 18,000,000 cfgpd.

p. 31. Oil Men Give Valuable Books. The oil men of Oklahoma have shown their interest in the strong department of geology of the University of Oklahoma by donating a collection of geological books and maps to the library valued at more than

$200. Most of the college-trained geologists operating in Oklahoma are products of the University of Oklahoma and a large part of the oil has been brought in by these geologists. The oil men felt that they owed the institution something for its service to them.

Vol. 13, No. 44, April 8, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent fields at the close of last week was 418,780 bopd, with Kansas and Oklahoma outside of Cushing being 120,000 bopd, Cushing at 241,780 bopd, Electra 17,000 bopd and Caddo, La., 40,000 bopd.

In the Cushing Fields, about 22 wells were completed for 39,750 bopd new production from the Bartlesville sand. Two gas wells were completed on the southeastern edge of the southern end of the field.

In Texas, in the Taylor or Thrall Field, six wells are producing at 14,500 bopd. Two wells were completed each at 2,000 bopd, that of the First Thrall Oil Co. on the Fuchs Farm and the Taylor & Giddings well on the Stiles Farm, all in Williamson County. One well east of the field and one well west of the field were dry holes.

p. 8, 10. Oklahoma. In Creek County, in the Cushing Field, approximately 31 companies have sold about 241,780 bopd, at the close of last week. The actual output is curtailed, and about 40 wells are still waiting on top of the Bartlesville sand. The companies are:

Aiken Oil Co.	-	3,250	Hill Oil & Gas Co.	-	6,450
Black Panther Oil Co.	-	6,750	B. B. Jones	-	23,750
Carter Oil Co.	-	7,250	Kathleen Oil Co.	-	24,600
Channell Oil Co.	-	-----	Katy Oil Co.	-	750
Clover Leaf Oil Co.	-	755	McMan Oil Co.	-	28,700
Twin State Oil Co.	-	6,250	Mid-Co. Petroleum Co.	-	7,910
Cortes Oil Co.	-	980	Okla Oil Co.	-	3,220
Cushing Gas & Gasoline Co.	-	925	Pleasant Hill Oil & Gas Co.	-	80
Franchot et al	-	3,150	Prairie Oil & Gas Co.	-	28,250
Gem Oil Co.	-	4,150	Producers Oil Co.	-	17,975
Shultis et al	-	1,700	Quaker Oil & Gas Co.	-	7,250
Devonian Oil Co.	-	8,275	Samoset Petroleum Co.	-	-----
Gunsburg & Forman	-	4,265	C. B. Shaffer	-	8,750
Gypsy Oil Co.	-	7,200	Sinclair Oil Co.	-	5,310
Numa Oil Co.	-	10,000	Slick Oil Co.	-	6,850
			Southwest Oil Co.	-	375
				Total	241,780

Some parts of the field have dark or black oil, and some wells have water, while the pressure is decreasing. It is thought that in the near future, the production will fall off. Sediment in the oil is running from 1 to 6% in some places. The Carter Oil Co., Prairie Oil & Gas Co., and Okla Oil Co. are making large deals to buy out other operators. The Prairie Oil & Gas Co. recently took over the tank farm of White & Sinclair, 2 miles south of Cushing, consisting of 72 tanks, each 55,000 bbl. capacity, with 3,710,000 barrels of storage, for about $2,200,000. The Carter Oil Co. purchased parts of the John H. Markham, Jr., the Mc-Man, and Devonian storage facilities, with about 26 tanks next to the Prairie storage. About 27,796,650 barrels are in storage. Approximately 219 wells are drilling or on location. About 175 new tanks of 55,000-barrel capacity are being erected. The first oil to be shipped from Oilton by tank car was on April 1, 1915 by Frank Brown who sent 10 tanks cars to Kansas City.

Within a week a new town will be founded at the terminus of the new line from Cushing to Drumright, and the first train will be started within the next few days. Dunn & Eaton started the town and have wired Washington to establish a post office and name. There is no name at present.

p. 10. Yale Has Fire Loss. Last night, fire practically wiped out Yale, in Payne County. Only one business house, of Morris Schuman, was left standing. The total loss was almost $100,000. Most of the structures were wooden.

p. 12. North Texas. Wildcat in Young County. The Archer-Young County Oil Co. on the Anderson Ranch got a 200-bopd well at 960 feet, according to S.M.J. Benson, president of the company. It is light oil, and the well will probably settle down to 10 or 20 bopd. This is near Olney, and 500 feet from the old well of Miller & Puffenburg, a pumper that caused some excitement several years ago.

In Palo Pinto County, in the Strawn Pool, the pool area is expanding. Leases are being taken on the Cage Ranch in Erath County, comprising about 18,000 acres. Professor Taylor, a state geologist of Oklahoma, is actively drilling. Almost all counties in North Texas are being drilled, such as Hardeman, Wilbarger, and Foard. (Details given).

At Corsicana, Texas, a new refinery will be built, which will take the oil from the new Thrall or Taylor Pool. The Central Oil Co., formerly charted as the Climax Refining Co., will open a refinery in East Corsicana, Texas. This company is composed of F. H. Miller and Waco capitalists, with $50,000 stock. The plant will employ 50 people, with an average monthly payroll of $4,000. They expect to handle from 5 to 10 cars a day. Jerry Robinson will be the manager. He was formerly connected with the old Climax Refining Co., which closed about a year ago, and he went to Pecos, Texas, with the Pecos Refining Co.

p. 30. Muskogee County, Boynton Field, Big Deal. The Oklahoma Producing Oil Co. has acquired one half of the Cameron interest in 1,600 acres of the Boynton Pool, with 8 producing wells. M.M. Jackson of Muskogee is president of the Oklahoma Producing Co. Citizens from Quincy, Ill. and Washington, D.C. are also connected with the company. The Cameron interest is about $250,000, and Mr. Jackson will do about $75,000 worth of development.

p. 31. Primitive Method of Getting Oil Out of Shale and Coal. In 1850, Thomas Young, a Scotch chemist, discovered how to extract oil from coal and shale, in Scotland. The coal contained a large amount of volatile hydrocarbons, with fixed carbon at 56.16%, volatile matter 35.9%, water 4.36%, sulphur 2%, and mineral matter 1.78%. The coal soon became exhausted, and Dr. Young turned from coal oil to making oil from shale.

The shale contained 20% volatile matter, with a small amount of nitrogen. The distillation process produced gas, crude oil, and ammonium sulphate. Wax or pyro-paraffin was produced which is different from natural wax or proto-paraffin in oil. About 22 gallons of crude oil and 76 pounds of ammonium sulphate were produced from one ton of oil shale. About 10% of the crude was used for lubricating oil. The shale oil contains saturated hydro-carbons of the paraffin series, and the unsaturated hydro-carbons of the olefine series, and naphthenes, and aromatic hydrocarbons. The shale oils were the first to displace animal and vegetable oils.

The coal-oil extraction process was soon imported into the United States, and a plant was set up near Lafayette, in McKean County, Pa., where later the Bradford Oil Field was discovered. There was a bituminous coal mine there, and oil was extracted from coal many years before the Drake well was drilled. Hon. E. A. Boyne, of Bradford, Pa., is still living, and he was an assemblyman at the old plant. He was also interested in the enterprise. Although salt wells struck oil in the 1830's, no one was interested, except for medicinal purposes, but when the Drake well came in in 1859, and oil became commercial, the coal-oil process was stopped in America.

Vol. 13, No. 45, April 15, 1915, p. 1. Mid-Continent Production. The apparent estimated production in the Mid-Continent fields at the close of last week was 411,655 bopd, with Kansas and Oklahoma outside of Cushing being 115,000 bopd, Cushing 239,655 bopd, Electra 17,000 bopd, and Caddo, La., 40,000 bopd.

In Creek County, the Cushing Pool had 14 completions for 20,400 bopd new oil. With decreasing pressure, these will probably fall off shortly.

In Texas, in the Thrall Pool of Williamson County, eight wells were completed for 7,000 bopd, the latest being 1,200 bopd in the last well. Water has appeared in some of the wells. A University of Texas geologist said that the producing formation at thrall was from the Taylor marl.

In Northern La., 5 new wells were completed in Red River Parish in the Crichton Pool for 3,650 bopd new oil. A cable tool well near Monterey was

drilled into a deeper sand and the production was increased from 10 to 500 bopd.

p. 1. The Mexican revolutionists have destroyed 150,000 barrels of oil near Tampico. The producers at Cushing have not resorted to those means to dispose of overproduction.

p. 4. Personal Mention. George B. Keeler, A. D. Morton, and J. J. Shea, of Bartlesville, were in Tulsa. Mr. Morton purchased the interests of the Paden Oil Co. of Paden, Oklahoma.

E. K. McCoy, head of the Oakland Oil Co., was in Tulsa, from his home in Denver, Colorado. He recently organized the Oakland Company, and is acquiring some good production.

David F. Connolly, a banker and producer of Tulsa, has been visiting his brother James Connolly of Sanford Street, Bradford, Pa. He formerly resided there and was a member of the firm of Connolly Brothers, oil producers.

Judge J. S. Barlow, of Bartlesville, and John Fitzgerald, an oil man from Bradford, Pa., were in Tulsa. They have holdings near Bartlesville. Mr. Fitzgerald had not been to Tulsa and he liked the town.

p. 8-9. Comprehensive Review of Oil Refining Conditions. by H. G. James, continued from issue of April 8, 1915. The year 1914 was an epoch-making period in refining in the Mid-Continent. At the close of the year, 60-61 gasoline was selling at 6¢ a gallon, 40-42 kerosene was selling at 1-1/2¢ a gallon, and fuel oil was 37-40¢ a barrel. More refineries were built in 1914 than in any other previous year in the Mid-Continent, being 11 in all. In 1913, about 55,345 barrels of oil a day was processed and in 1914 about 70,000 bopd was used in the Mid-Continent refineries. About 5,177 tank cars and 1,077 miles of lines are used, connected to at least 5,000 wells. About 327 cars a day are moved, or 117,777 cars a year. There are 49 refineries in operation counting the Standard and small ones.

The following list of refineries are in addition to the 5 Standard Oil Co. refineries at Neodesha, Kansas, Sugar Creek, Mo., Wood River, Ill., Baton Rouge, La., and Whiting, Indiana, which also take crude from the Mid-Continent.

		Total Invest.	Daily Used
1905	Cudahy Refining Co., Muskogee, Okla.	$ 95,900	300
	Great Western Oil Refining Co., Erie, Kansas	754,000	1,000
	Muskogee Refining Co., Muskogee, Okla.	300,000	750
	Schock Refining Co., Niotaze, Kansas	275,000	500
1906	American Refining Co., Okmulgee, Okla.	500,000	1,500
	Chanute Refining Co., Chanute, Kans.	450,000	1,750
	Eastern Kansas Refining Co., Moran, Kans.	300,000	400
	Kansas City Refining Co., Kansas City, Kans.	350,000	1,000
	Kansas Co-Operative Refining Co., Chanute, Kans.	200,000	500
	Kansas Oil Refining Co., Coffeyville, Kans.	250,000	1,800
	Miller Petroleum Refining Co., Humboldt, Kans.	30,000	350
	Oklahoma Refining Co., Oklahoma City, Okla.	100,000	---
	Uncle Sam Oil Co., Cherryvale, Kans.	125,000	400
	Uncle Sam Oil Co., Tulsa, Okla.	50,000	600
1907	Indiahoma Refining Co., East St. Louis, Ill.	100,000	700
	Kanotex Refining Co., Caney, Kansas	250,000	500
	National Refining Co., Coffeyville, Kans.	500,000	3,000
1908	Cudahy Refining Co., Coffeyville, Kans.	1,000,000	3,000
	Rollins Refining Co., Rollins, Kans.	19,000	40
	Sapulpa Refining Co., Sapulpa, Okla.	337,000	2,000
1909	Cleveland Petroleum & Refining Co., East St. Louis, Ill.	50,000	600
	Kansas Crude Oil Co., Chanute, Kans.	12,000	---
1910	Indiahoma Refining Co., Okmulgee, Okla.	335,000	1,200
	Milliken Refining Co., Vinita, Okla.	999,800	800
	Petroleum Products Co., Independence, Kans.	2,500,000	3,500
1911	Constantine Refining Co., Tulsa, Okla.	70,000	1,000
	Fort Smith Refining Co., Fort Smith, Ark.	15,000	150
	Webster Refining Co., Coalton, Okla.	15,000	350

1912	Ponca Refining Co., Ponca City, Okla.	225,000	2,000
1913	Cleveland Petroleum & Refining Co., Cleveland, Okla.	100,000	500
	Consumers Refining Co., Cushing, Okla.	464,701	4,500
	Cosden & Co., Tulsa, Bigheart, Cushing, Okla.	3,000,000	7,200
	Phoenix Refining Co., Sand Springs, Okla.	300,000	1,000
	Pierce Oil Corp., Sand Springs, Okla.	600,000	6,600
	Riverside Western Oil Co., Tulsa, Okla.	300,000	---
	The Texas Co., Tulsa, Okla.	1,000,000	5,000
	Wilhoit Refining Co., Joplin, Mo.	90,000	500
1914	Ardmore Refining Co., Ardmore, Okla.	30,000	1,000
	Chanute Refining Co., Cushing, Okla.	300,000	2,750
	Chelsea Refining Co., Cushing, Okla.	100,000	3,000
	Cushing Refining Co., Cushing, Okla.	90,000	934
	Jane Oil Refining Co., Cushing, Okla.	150,000	2,600
	Lesh Oil Co., Arkansas City, Kans.	25,000	500
	Magnolia Refining Co., Fort Worth, Texas	1,000,000	10,000
	New State Refining Co., Cushing, Okla.	51,000	1,000
	Twin State Refining Co., Yale, Okla.	200,000	3,000
	Wichita Refining Co., Wichita, Kans.	3,000	100
	Webster Refining Co., Bristow, Okla.	20,000	200
	Hillman Refining Co., Cushing, Okla.		600
New Refineries being built.			
	Capital Refining Co., Oklahoma City, Okla.		300
	Portland Oil & Refining Co., Okmulgee, Okla.		1,000
	St. Joseph Viscosity Refining Co., St. Joseph, Mo.		400
	C. D. Webster Refining Co., Yale, Okla.		250
	Producers Refining Co., Gainesville, Texas		7,500

There are about 1,206 independent stations in the Mid-Continent, connected with the above refineries, for a retail market for gasoline and oil. (Details given).

p. 10, 12. Oklahoma. The Cushing Field is about the only main attraction in Oklahoma and Kansas, and most of that is infill drilling. About 28,000,000 barrels of oil are in storage at Cushing. About 210 rigs are drilling.

In Muskogee County, C. B. Shaffer is blocking out some leases south of Muskogee in new territory in T12-13N, R20E.

Much acreage is being leased in other counties and in western Oklahoma, now that the Cushing Field is beginning to fall off. (Details given).

In Carter County, the Healdton Field could yield about 70,000 bopd, but very little is actually being sold, especially when the price is 30¢ a barrel.

In Rogers County, in the Inola and Catoosa Fields, some fair gas wells are being completed for which there is a good market by the Kansas Natural Gas Co. which has a gas line into those fields. The old Inola Field has little oil left, but it now has gas. Bilby et al No. 1 Seir in Sec. 15-19N-15E completed a well for 3,000,000 cfgpd, and the Fenton Gas Co. No. 3 Marshall in Sec. 15-19N-15E had a 12,000,000 cfgpd well at 855-865 feet.

p. 12, 14. North Texas. In Palo Pinto County, in the Strawn Field, things are booming. Strawn has a population of 2,000 now, whereas just a few months ago it was a flag stop on the railroad. The most needed item is lodging, and a new hotel will be built. The Moran Pool in Shackelford County was found in October 1913, and with continued exploration from that play, the Strawn discovery was made 30 miles away, to the east of Moran. The T. P. Coal Co. was drilling for gas, and had finished a number of gas wells in the Strawn Pool and piped the gas to the nearby towns, and they used the gas in the brick plant at Thurber, Texas. They struck oil at 700 to 900 feet, and about 13 wells have now been completed, with some better than 100 bopd. The oil is 34.2 gravity and is paraffin base. The

discovery well was the Texas Pacific Coal Co. No. 16 on the Thomas Court land which struck the oil sand at 830-840 feet, and began flowing at 25 bopd. No. 17, 1,200 feet northwest of No. 16, was a light pumper. No. 18, 1,800 feet north and 650 feet east of the west line of the Thomas Court land, came in at 50 bopd. No. 19, 800 feet south of the T & P. Ry. tract is flowing 60 bopd. No. 20, 1,800 feet north and 400 feet east of No. 18, came in at 10 bopd. No. 21, 400 feet north of No. 19, was about 10 bopd. No. 22, 400 feet south of No. 19, is flowing 20 bopd with 1,000,000 cfgpd. No. 23, 400 feet south of No. 22, is 10 bopd on the pump. No. 24, 400 feet north of No. 21, is 10 to 15 bopd. No. 25, 200 feet east and 200 feet south of the NE corner of the Swenson lease in the B.B.B. & C. Survey No. 101, is being cleaned out. Swenson et al of New York have completed 4 wells, on the west side of the T. P. Coal Co. tracts. No. 1 is 2,600 feet south and 20 feet W of the NE corner of the B.B.B. & C. Survey No. 101 at 10 bopd on the pump. No. 2 is 200 feet each way from the NE corner of the B.B.B. & C. Survey No. 101 and is flowing 20 bopd. No. 3 is 400 feet south of No. 1 and is temporarily abandoned. No. 4 is 400 feet south of No. 2 and is being cleaned out. The wells are making water. Many wells are being drilled in this area. (Details given).

In Coleman County, three miles from Coleman, on the Babbington Ranch, Robertson & Son struck oil at 1,080 feet, but the amount is small. It is mostly high-grade distillate, and was analyzed at Austin.

In Childress County, the Consolidated Oil & Gas Co. is drilling 5 miles east of Childress, on the NW corner of Survey No. 525 at the old Cooper well, and got a showing of oil at 1,530 feet. At 1,800 feet a hard limestone was encountered, changing to chalk at 1,812 feet, and oil was reported but not confirmed.

p. 14. Healdton Oil. In Carter County, the Healdton oil makes a superior grade of fuel oil, gasoline, and kerosene than that at Cushing. C. R. Armstrong of Pennsylvania, and W. B. Bassett of Tulsa, part owners of the refinery at Ardmore, state that they are using the new Rittman process of refining, resulting in 50% of the Healdton crude being turned into gasoline. Sulphur has given them some trouble, but not very much.

p. 25. Oil Prospects in Texas, by William B. Phillips, director of the Bureau of Economic Geology, the University of Texas. The Strawn Pool and the Thrall Pool, about 170 miles apart, are the two new oil fields found in Texas, with nothing being reported in between. The former pool is in Carboniferous rocks and the latter is in Cretaceous rocks, and they are unrelated. In 1911, 1912, and 1913, the yield of Carboniferous oil was 13,969,561 barrels, whereas the younger beds have yielded 22,301,448 barrels during the same period. The Bureau has already published one report on the Oil and Gas Fields of Wichita and Clay Counties, and is preparing another on Carboniferous rocks of north central Texas by Dr. J. A. Udden.

Most of the Coastal Plain oil is Tertiary. In 1902, Spindletop produced 17,420,949 barrels, falling off to 8,600,905 barrels in 1903, to 3,433,842 barrels in 1904, and was 1,700,000 barrels in 1905 and later, falling off each year. The oil is heavier oil than that of the Carboniferous oil, yielding less gasoline. The Sour Lake Field was 6,442,357 barrels in 1904, and 3,362,153 barrels in 1905, and about 2,000,000 barrels in 1906 and 1907, and has declined ever since, until in 1913 it was 1,348,053 barrels. The Batson Field was 10,904,737 barrels in 1904, and 3,774,841 barrels in 1905, and was 741,350 barrels in 1913. The Humble Field was 15,594,310 barrels in 1905, and 3,571,445 barrels in 1906, and 1,504,883 barrels in 1913.

p. 35-38. Wells. Oklahoma, Texas, Louisiana, Arkansas. In Atoka County, the Velvet Oil Co. No. 1 Pashel in Sec. 31-1N-14E was a dry hole. Southwestern Petroleum Co. No. 1 in Sec. 33-1N-14E was drilling in the Redden Field. Bannon & O'Day No. 1 was drilling in Sec. 13-2S-11E. Charles Douglas has two locations, in Sec. 9-1S-13E and Sec. 12-1S-13E. J. M. Givens et al No. 1 has a rig in Sec. 16-3S-10E.

In Marshall County, about 26 wells are drilling, and 3 gas wells were completed.

In Pontotoc County, about 12 wells are drilling.

In Johnston County, Lang et al No. 1 Boles is drilling in Sec. 32-3S-4E, and the Horsehoe Oil Co. is drilling in the same section also.

About 166 wells are drilling or on location in southern Oklahoma outside of the main areas of interest, drilling in 26 counties. (Details given).

In Arkansas, Hutchinson et al No. 1 Decius was a dry hole in Sec. 33-9N-27W, in Franklin County. About 12 wells are drilling or on location in Arkansas in Franklin, Polk, Howard, Sevier, Independence, Crawford, Hempstead, Benton, and Miscellaneous Counties. (Details given).

In North Texas, about 20 wells were completed in March 1915, with 1 gas well and 4 dry holes and 660 bopd new production, and 69 rigs drilling or on location.

In East Texas and Northeastern Louisiana, about 28 wells were completed in March 1915 with 1 gas well and 6 dry holes with 20,525 bopd new production, and 147 rigs working or on location. (Details given).

Vol. 13, No. 46, April 22, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent fields at the close of last week was about 399,000 bopd, with Kansas and Oklahoma outside of Cushing being 115,000 bopd, Cushing 225,000 bopd, Electra 17,000 bopd, and the Caddo District, La. 42,000 bopd.

In Creek County, in the Cushing Field, a Tucker sand well was completed in the northern end of the field. The Tucker is below the Bartlesville sand. About 12 wells were completed in the Bartlesville for 19,500 bopd new production.

In Osage County, near Prue, oil and gas occur in what is supposed to be the Bartlesville sand.

In Muskogee County, in the Cole Pool, four oil wells were completed, one for 1,000 bopd. In the Fern Mountain Field, one 20-bopd well was completed.

In Texas, in Williamson County, in the Thrall Pool, about 2,500 feet north of the field, the Independent Thrall Oil Co. completed a well for 350 bopd. The fourteenth producer was completed last week for 700 bopd in this field.

In north Texas, three oil wells were completed in Palo Pinto County in the Strawn Field, for about 10 bopd each. A number of wildcats are about to reach the Strawn sand.

In northern Louisiana, in Red River Parish, in the Crichton Pool, there were 5 completions for 8,300 bopd new production. No dry holes have been drilled in this field as yet.

p. 6. Noted in Passing. The capture of Basra, Baghdad, by the British, is of interest because it is near the site of the Garden of Eden and is the location of the Anglo-Persian Oil Company's big refineries. Oil is piped 150 miles from the Bakhtara Mountains of Persia, where prolific gusher wells are located.

p. 6. Recent Deaths. L. B. Meadows, former superintendent of the Louisiana Oil Refining Co. of Shreveport, La., was found dead of a heart attack in the road near Piney, Arkansas, on Sunday, April 11, 1915. He was walking to his parents house from a relatives house about 5 miles away.

p. 10, 12. Oklahoma. In Creek County, in the northern end of the Cushing Field, the Mc-Man Oil Co. No. 12 Samuel Vance on the east line of the NE-1/4-Sec. 7-18N-7E got 500 bopd in the Tucker sand at 2,500-2,521 feet. The Bartlesville was dry at 2,323-2,423 feet. The Tucker is 70 to 170 feet below the Bartlesville and has made good wells in the Bird Creek Field of Tulsa County. One other Tucker well was reported by C. J. Wrightsman in Sec. 22-18N-7E who got a small producer at 3,027 feet, with the Bartlesville sand being at 2,778 feet.

In Osage County, one mile north of Prue, the Canadian Oil & Gas Co. in the NE-1/4-NE-1/4-Sec. 34-21N-9E struck 7,500,000 cfgpd at 2,180 feet in what is thought to be the Bartlesville sand because it is the correct distance above the Oswego lime. The 8-inch casing filled with oil to within 10 feet of the surface. The Steele Brothers own the Canadian Oil & Gas Co.

There is much wildcatting in Oklahoma. With a low market, the wildcatters are not too anxious to complete wells. Geologists are going over many of these areas.

In Muskogee County, in the Cole Pool, the Dalsa Oil Co. No. 2 Charles Davis in Sec. 11-14N-15E had 1,000 bopd at 1,600 feet. Their No. 2 Peters was 125 bopd, and their No. 3 was 75 bopd in the same section. King et al No. 1 Cole in Sec. 11-14N-15E have 300 bopd at 1,556 feet.

The Fern Mountain Field got a producer, the McClain et al No. 2 Lewis Farm in Sec. 19-15N-18E, for 20 bopd at 1,240 feet. In the same section, Colcord et al got a 25 bopd well in the same sand. Bradstreet & Co. No. 1 Davidson in Sec. 24-15N-17E got 5,000,000 cfgpd at 1,280 feet.

In Tulsa County, in the Day Pool, the Day Brothers No. 2 Miller in Sec. 31-20N-14E have 80 bopd at 700 feet. In Sec. 28-20N-14E the Belevedere Oil Co. No. 1 Vann has 5 bopd at 700 feet. The Henry Oil & Gas Co. No. 5 Roach in Sec. 14-20N-13E got 2,500,000 cfgpd, and the Caney River Gas Co. No. 1 Hardman got 2,000,000 cfgpd in the same section. In the Mohawk Pool, in Sec. 21-20N-13E, near Tulsa, Utterback & Fischer sold their lease to Northup-Bell Oil Co. for $35,000. The 60 acres had 4 producing wells for 200 bopd. This area was opened up by Scott Murdock during the Summer of 1914.

p. 12, 14. North Texas. In Palo Pinto County, the Strawn Field is being drilled in all directions, but seems to be better toward the west. (Details given).

p. 27. Thrall Oil in Serpentine. by J. A. Udden, University of Texas. The Thrall Field, in Williamson County, Texas, is in serpentine, a soft, porous, green crystalline glassy igneous rock, with crystals of augite, magnetite, and olivine, with phenocrysts, spherulites, and amygdaloidal structures, some of which are pyroclasts. It is an eruptive and partly intrusive rock, cutting through the sedimentary rocks. It is one of many intrusives in a belt of the Balcones Fault escarpment, marked by faults and monoclines, extending from near Rockwall, past Waco and Austin to San Antonio westward to Del Rio, separating the edwards Plateau on the northwest from the Gulf Coastal Plain to the southeast. The volcanic belt follows this escarpment, and not all of the igneous rocks have been discovered. Some may be buried. A dozen or more outcrops are known near Austin. At Knippa, on the Southern Pacific RR to Uvalde and beyond, like intrusives appear in many places. The westernmost occurences are the sills capping Turkey, Moros, and Pinto Mountains in Kinney County. R. T. Hill considered some of the volcanic rocks near Austin to be Cretaceous submarine eruptions. Others are evidently later in age, because they have baked the Austin chalk and later sediments. These volcanics are nearly all basic dark rocks, almost black, and heavy. The black rock in Pilot Knob was called nepheline basalt, or limburgite, by J. P. Kemp. In South Austin, one small outcrop is a black amydaloidal basalt. These intrusives mainly cluster in the upper Austin chalk and lower Taylor marl.

In the Thrall Field, the top of the serpentine is 820 feet deep, in the Taylor marl, and the top of the Austin chalk is at 1,050 feet. Organic remains, especially foraminifera, occur in these formations, and the volcanic rock baked the rock enough to generate oil from the organic remains. The oil is 0.827 gravity. The first wells penetrated the surpentine about 20 feet, but later deepening to 97 feet of serpentine showed that there was more oil. Some drillers say that there are different beds, while others say that there is only one bed, suggesting that some areas may have sill-like intrusions along bedding planes in the Taylor. There are 8 or more producing wells in the field, located less than one half mile apart. About one mile away from the discovery well, there are dry holes, proving the absence of the igneous body. The oil is about the same quality as the Corsicana oil.

Vol. 13, No. 47, April 29, 1915, p. 1. Mid-Continent Production. The apparent estimated production in the Mid-Continent fields is 392,000 bopd, with Kansas and Oklahoma outside of Cushing being 115,000 bopd, Cushing 218,000 bopd, Electra 17,000 bopd, and Caddo, La. 42,000 bopd.

p. 3-4. Personal Mention. A. J. Diescher, head of the Quapaw Gas Co. at Bartlesville, is in New York City on business.

H. Bruner, of Paris, France, was in Tulsa. He is associated with Homer Preston in Oklahoma.

A. E. Humphrey, of Charleston, W. Va., of the Merritt Oil & Gas Co., is looking over his holdings in the Cole and Boynton Fields in Muskogee County. His company was one of the first ones in the field.

Joseph Evans, head of the Devonian Oil Co., has returned from Pittsburgh

to Tulsa. His company was consolidated in Pittsburgh with three other companies.

p. 4, 6. Noted in Passing. Robert Galbreath is drilling a test at Bromide, Oklahoma, where he has extensive stone quarries. The rig is up and he expects to finish in three weeks. The formation is like the rock in the Whittler Pool.

In Travis County, Texas, near Elgin, at Manor, north of Taylor, four companies have been organized and several rigs have gone up, about 30 miles from the Thrall Field. The money is coming from Austin and San Antonio capitalists.

The Oklahoma School of Mines at Wilburton is being asked to include a course on the history and importance of the petroleum industry.

p. 6. Recent Deaths. A. M. Gamman, aged 98 years, died at his home in Buffalo, N.Y., on April 24, 1915, from shock over his shoe business burning down. He was the father of J. A. Gamman, a Tulsa oil man. He is survived by his widow, two daughters, and the son.

J. M. Stotts, aged 55 years, of Coffeyville, Kansas, was shot on Wednesday, April 21, 1915, by Ed Gordon, and died. Jealously was the motive. Mr. Stotts lived in Coffeyville for several years, and was a drilling contractor and oil man, and was drilling two wells south of town.

p. 8, 10. Oklahoma. Rain has halted almost all work in Oklahoma this past week. Cushing continues to be the main attraction. Approximately 100 wildcats are drilling in the southern part of Oklahoma. In the Cushing Field, some rigs have broken loose in the Cimarron River bed, with high water, and the Clover Leaf Oil Co. No. 1 in Sec. 17-18N-7E broke loose and is flowing 2,500 barrels of oil a day into the river. The rig is tilted, and no one can get to it. A well was completed in the Skinner sand for 50 bopd in the Monitor Oil & Gas Co. test in Sec. 33-19N-7E, at 2,300 feet, but generally the Skinner is not considered a very good reservoir above the Bartlesville, because it does not have staying qualities.

In Muskogee County, in the new Harris Field, Prendergast et al in the SE-1/4-NW-1/4-Sec. 6-14N-16E have 300 bopd at 1,627 feet, diagonally northwest of the Harris-Hampton discovery well, which is holding at 100 bopd. In the Fern Mountain Field in Sec. 24-15N-17E Bradstreet et al No. 1 J. Davidson got 7,000,000 cfgpd at 1,275 feet. The Success Oil Co. No. 1 Brown in Sec. 36-16N-17E got 1,000,000 cfgpd at 1,638 feet, in Wagoner County, southeast of Porter.

In Kay County, the Duluth-Oklahoma Gas Co. in the SW-1/4-Sec. 6-28N-1E got 20,000,000 cfgpd at 3,260-3,268 feet, with a little oil. The sand is supposed to be 50 feet above that of the Buehl & Jones Swenson well in Sec. 32-29N-1E, which is reported to be Bartlesville, or Mississippi lime, or a stray.

In Washington County, near Vera, south of town, in Sec. 36-23N-13E, Oakes et al had 15,000,000 cfgpd at 1,345 feet. A second test is now drilling one half mile away. The well was going to be plugged, but blew itself out overnight.

p. 10. North Texas. Active Leasing in Erath County, Texas. Almost 80,000 acres have been leased near Stephensville, Erath County, almost 30 miles from the Strawn Pool, upon which the leasing is based. (Details given).

p. 26-27. Wildcat Drilling in Many States. Very little is heard of the wildcat ventures of Alabama, Arkansas, Arizona, Colorado, Florida, Iowa, Maryland, Michigan, Mississippi, Missouri, Montana, Nebraska, New Mexico, Utah, Washington, and Wyoming. (Details given). In Alabama, some gas has been found in the Fayette Field. No oil as yet been found. In Arkansas, only the Fort Smith area has production, and that is gas. Previous work is repeated. In Mississippi, three wells are drilling, but have found nothing as yet. Previous reports are repeated.

p. 27. Estate of James McDonald. On April 22, 1915, the estate of James McDonald was filed at Washington, D.C., for $3,762,860. He died on Jan. 13, 1915, at his home at 1701 22nd St. NW in Washington, D.C. He was a Standard Oil Company magnate.

p. 29. Vera Well. Gilchrist & Gilchrist brought in a 10,000,000 cfgpd well near Vera, Washington County. This was a wildcat, at least 1 mile away from any production. It was thought to be a dry hole, and in the absence of a crew at night the well blew the bailer out of the hole, and they did not plug it.

Vol. 13, No. 48, May 6, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent fields at the close of last week was about 387,000 bopd, with Kansas and Oklahoma outside of Cushing being 115,000 bopd, and Cushing 215,000 bopd, Electra 17,000 bopd, and Caddo, La., 40,000 bopd.

In Creek County, in the Cushing Pool, 11 wells were completed for 10,750 bopd new production.

In Louisiana, in the Crichton Pool in Red River Parish, a well was completed for 1,500 bopd.

In Texas, the Thrall Field is now yielding about 6,000 bopd from 15 wells. An average of two oil companies a day are being formed at Taylor and Thrall.

p. 1. Tulsa, Fort Smith, Muskogee, and Little Rock are boosting a movement to make the Arkansas River navigable, and a convention will be held at Fort Smith on July 4, 1915.

p. 1. Four hundred carloads of zinc ore has been shipped from Australia via the Panama Canal to Galveston, Texas, to Bartlesville, Oklahoma, to be smelted.

p. 4. Personal Mention. Richard A. Conklin, oil geologist in Tulsa, married Miss Winnifred Winnie of Chicago on Saturday last at the bride's parent's home. He is a graduate of the University of Chicago.

J. E. Schell, who opened the Cleveland Pool 10 years ago, was in Tulsa from his Beverly Hills, California home. After a year of sickness he is enjoying good health. He has been in the oil business his whole life.

J. E. Cavanaugh, of McAlester, Okla., was in Tulsa, from his old home in Iowa. He has oil, coal, and timber interests. Many years ago, he and Charley Page, the millionaire oil man of Tulsa, were young businessmen at Everett, Washington, selling town lots in that town. They made big sales.

p. 4, 6. Noted in Passing. The Grafman Crude Oil & Gas Co., of Tulsa, has been incorporated, with capital stock of $125,000.

The Whitcomb Oil Co. has been incorporated for $200,000 to test 35,000 acres near Oneide, Tennessee.

At Taylor, Texas, the Citizens Oil & Gas Co. has been chartered for $40,000, with 120 acres north and northwest of the field.

The Pawhuska Oil & Gas Co. have been trying to get a producing well near Pawhuska, Osage County, during the past few years. One well had 500 barrels, but it soon failed. They are trying again near that well.

At Ardmore, the Lawrence Gas Co. purchased the Healdton properties of the Rex Oil & Refining Co. owned by the Skirvins of Oklahoma City, for $212,500, consisting of 100 acres, 8 wells, and 1,800 bopd. The Lawrence company is owned by the Snowden Brothers.

The Producers' Refining Co. will build a refinery at Gainesville, Texas, for $600,000, with capacity of 10,000 bopd. George A. Todd of Ponca City is in charge of planning, along with F. H. Thwing, of Kansas City, Mo., H. M. Evans, of Pasadena, California, and Thomas Smith, of Denver, Colorado. A line is to be built from the Healdton Field.

p. 6. Recent Deaths. L. T. Coldwell died in Cleveland, Oklahoma, on April 25, 1915, of tuberculosis. He was an oil field worker. His father, Thomas Coldwell, died at Bradford, Pa., two weeks before. Surviving are one daughter, two sisters, and a brother.

John N. Coleman, aged 89 years, died at his home in Youngsville, Pa., on May 1, 1915. At the close of the Civil War he moved to Youngsville to live, having served almost 4 years in the 145th New York Regiment Volunteer Infantry. He is survived by a daughter, Mrs. W. B. Phillips, of Bowling Green, Ohio, and four sons, E. A. Coleman, of Tulsa, Oklahoma., J. N. Coleman, Jr., of Bowling Green, Ohio, L. A. Coleman, of Jamestown, N.Y., and Alen E. Coleman, of Youngsville, Pa.

p. 8. Field Operations for April 1915. In Oklahoma, there were 324 completions, including 32 gas wells and 52 dry holes, with 146,026 bopd new production, and 701 rigs drilling or on location, for April 1915.

In Arkansas, there were 12 rigs working.

In North Texas, there were 27 completions including 4 dry holes, and 82 rigs working, with 633 bopd new production.

In East Texas and NW Louisiana or Caddo District, in 17 fields, there were 43 wells completed for 18,645 bopd new production, and 8 dry holes and 151 wells drilling or on location. The fields are named Crichton, Abington, DeSoto, Sabine, Mooringsport, Oil City, Jeems Bayou, Harts' Ferry, Monterey, Hosston, Lewis, Pine Island, Black Bayou, Shreveport, Blanchard, LaChute, and NE Texas. (Details given for each field). Crichton had 22 completions and 72 wells drilling, with 16,515 bopd new production.

p. 10, 12, 14. Oklahoma. The price of oil is about 40¢ a barrel, and not much is moving. Most drilling in Oklahoma is developmental, especially in the Cushing Field, and production is declining there. About 108 wells were completed in April at Cushing for 136,850 bopd new production, with 1 dry hole and 1 gas well and with 217 wells drilling or on location. Water is coming into some of the wells, and the pressure is declining. (Details given).

Work continues in many of the shallow fields, such as South Coffeyville or Lightning Creek in Nowata County, or Chelsea or Catoosa in Rogers County. (Details given).

In Wagoner County, in the Catoosa Field, gas is being developed for the Kansas Natural Gas Co. The rock pressure is 250 to 425 psi, and the gas comes from two sands, at 600 and 945 feet. Two completions by Ardizzone & Ossenbeck at 945 feet with pressure of 345 psi were the No. 1 in the NW¼-NE¼-Sec. 21-19N-15E at 6,000,000 cfgpd and No. 2 in the NW¼-SW¼-Sec. 21-19N-15E at 5,000,000 cfgpd, with Fenton Gas Co. as a partner.

In Carter County, the Wildcat Jim Oil Co. in Sec. 18-2S-2W, has a good showing at 1,620 feet, but the owners are keeping it a mystery well. Oil has been seen in the sand pumpings. This is far in advance of known production.

In Creek County, south of Bristow, the Bristow Gas Co. sold its production in Secs. 2, 8, and 9-15N-9E to Joe Abraham, of Bristow. These are all gas wells. Two additional wells will be drilled.

p. 19. Norton's Sentence Commuted. President Wilson has commuted the 7-year sentence of William L. Norton to 1 year and a day in the Federal Penitentiary at Leavenworth. He was the former president of the American National Bank at Bartlesville, the Columbia Bank & Trust Co., and other institutions in Oklahoma, with interests in oil loans. When the Columbia Bank & Trust Co. failed, it brought down the Farmers' National Bank of Tulsa, the American National Bank of Bartlesville, the State Bank of Kiefer, and a State Bank in Bartlesville in which Norton was interested along with A. E. Lewis. Only Norton was indicted by a Federal Grand Jury about 5 years ago, for false entries on the books of the American National Bank of Bartlesville. The case went to the Supreme Court. Norton's friends recently convinced President Wilson to commute the sentence.

p. 24. New Book on Geology. "Practical Oil Geology" by Dorsey Hager, of Tulsa is available for $2.00 by McGraw-Hill Book Co. of New York. The book is free of technical phrases, and the ideas are expressed in simple language. There are many drawings and valuable statistical data.

p. 24. General Villa Captures Panuco in the Mexican Oil Country. Panuco is about 50 miles southwest of Tampico. A month ago, a well of the Shell Co. was set on fire near Ebano. The British are worried because this oil is used in the British navy. Villa and the Obregon forces may be battling near Celaya now.

p. 28. Gas. In April 1915, Oklahoma developed 96,000,000 cfgpd new gas, mostly in the Creek Nation where 55,500,000 cfgpd was found. Wagoner and Muskogee counties had 28,500,000 cfgpd from 11 wells. (Details given). In the Tulsa-Taneha District, about 25,000,000 cfgpd of new gas was developed from 9 wells. About 23,500,000 cfgpd new gas was developed in the Cherokee deep sand District.

p. 28. Ada Franchise Petition Withdrawn. The Ada Oil & Gas Co. of Skelly & Sankey have withdrawn their petition for a special gas franchise for Ada and have filed a new petition for a general gas franchise. An election will be held June 1.

The McThwaite Oil & Gas Co. already has a general franchise and they are supplying a part of the city with gas.

p. 30. Sale of Healdton Property. The Rex Oil & Refining Co., composed of W. B. Skirvin, C. J. Skirvin, and R.S. Rowland of Oklahoma City, and J. McYoung, of New York, has sold its Healdton holdings to the Lawrence Gas Co., owned by the Snowden Brothers, for $212,500. The property is 80 acres in the NE¼-Sec. 9-4S-3W and 20 acres in the SE¼-Sec. 9-4S-3W, with 8 wells at 1,800 bopd production, and 100,000 barrels in storage. The Rex people owned three-fourths of the lease. The other part is owned by Apple & Franklin, and J. W. Harreld, W. T. Ward, and Miss Helen Ward.

Vol. 13, No. 49, May 13, 1915, p. 1. Mid-Continent Production. The apparent estimated production in the Mid-Continent fields at the close of last week was 406,000 bopd, with Kansas and Oklahoma outside of Cushing being 115,000 bopd, Cushing 232,000 bopd, Electra 17,000 bopd, and Caddo, La. 42,000 bopd.

In Creek County, in the Cushing Pool, about 16 wells were completed for 24,250 bopd new production.

In Muskogee County, the Harris Pool had a 1,000 bopd well.

In Texas, in Palo Pinto County, in the Strawn Pool, a new sand was found at 1,270 feet, producing 25 bopd, causing some interest.

In Louisiana, in the Crichton Pool, 9 wells were completed, each averaging about 936 bopd.

In Texas, in Williamson County, in the Thrall Pool, good oil wells are reported, along with some dry holes.

p. 1. Teapot Dome in Wyoming has been declared a Government reserve for fuel oil, to be used in the United States Navy in years to come. The area will be very valuable territory.

p. 2. Destruction of the Lusitania! On Friday last, the Cunard liner, the Lusitania, was sunk with an appalling loss of life, off the coast of Ireland, by a German torpedo. Many Americans died. The vessel carried contraband goods, and therefore the Cunard line cannot be held blameless. This fact was known to the Germans and they decided to take drastic action. No passenger vessel should be carrying contraband. Never before has man's inhumanity to man been so flagrantly exploited. Elbert Hubbard, a popular writer, died with the sinking. (p. 1). R. J. Timmins and R. T. Moody, oil men of Gainesville, Texas, of the Developers Oil Co. were also missing. (p. 25).

Germans also attacked the Cushing oil tanker and the Gulflight, both American ships, and three men were killed on the Gulflight, but the aerial bombs missed the Cushing. America is still neutral, but the entire nation is astounded and grieved.

p. 3. Lucey and Hoover Helping Suffering Belgians. Two well-known oil men of the Pacific Coast have given up their business to help the starving Belgians. Capt. J. F. Lucey and Herbert C. Hoover. Hoover first went abroad to help in the promotion of an English syndicate to take over the Union Oil Co. These men have been supervising the distribution of supplies to Belgium to help feed the people.

p. 3-4. Personal Mention. George F. Getty, a California oil man, was in Ochelata and Bartlesville last week.

E. C. Lufkin, of New York City, president of the Texas Company, was in Tulsa.

M. E. Haskell, of Muskogee, visited his parents at the Hotel Tulsa, the former Governor C. N. Haskell and wife.

Fred A. Chapman, of Tulsa, whose father is one of the principal stockholders of the McMan Oil Co., was in Ardmore, and Waxahachie, Texas, last week.

Mr. and Mrs. Dana H. Kelsey and two sons have moved from Muskogee to 713 N. Denver Ave. in Tulsa. He is with the land department of the Prairie Oil & Gas Co.

Thomas A. Galey and Miss Henryetta Dow, both of Pittsburgh, Pa., are to be married. They will live in Tulsa. He is a well-known oil man.

Charles F. Martin, general manager of the Chelsea Refinery and International

Refinery, was in Chicago to open a sales agency, with C. R. Bruce in charge. He has now returned to Tulsa.

Charley Griffith, a contractor in the Cushing Pool, was in Tulsa. Before coming to Oklahoma, he and his brother Berry Griffith, were drilling in Potter County, Pa. They worked with William T. Herrick, now with Ardizzone & Ossenbeck. Now all three are in the Southwest.

p. 4, 6. Noted in Passing. The Pagosa Oil Co. was incorporated in Muskogee for $24,000.

The Jacksonville-Thrall Oil Co. has been formed at Jacksonville, Texas, with $30,000 capital, to operate in the Thrall Field.

A. T. McGhee, credited with discovering the Healdton Field, has leased 60,000 acres near Stephensville, Texas. Some business associates are also in on the deal.

Near Vera, Washington County, the well is producing 46,000,000 cfgpd and is spraying some oil. The well is owned by Oakes and others, and many people are interested.

At Yale, Payne County, Oklahoma, the Corsicana Oil Co. drilled in a well last week near the town, with initial production of 500 bopd. Yale is now ambitious.

The Cleveland Petroleum Co., with plants at Cleveland, Okla., and East St. Louis, Ill., has purchased 61 distributing plants in Ohio, New York, and Michigan, for the sale of its products, requiring 5 tank cars of gasoline a day.

The C.D. Webster Oil Refinery, at Bristow, Okla., was sold at bankruptcy sale, to Joseph Abrams. He will soon have the refinery in operation.

At Ozark, Arkansas, a sample of oil was taken from a water well. It is 50° gravity and almost white. The well yields about 3 barrels a day at 25 feet deep. The locality is to be tested by a local company. G. C. Eaton, a Tulsa driller, has been showing the sample to people.

The Taylor Oil & Gas Co. No. 4 E. Stiles Farm in the Thrall Field of Williamson County, Texas, is said to have been completed at 2,800 bopd. The Corsicana Oil Co. No. 3 H. A. Stiles Farm was credited with 1,000 bopd. Operations in the new field are brisk.

The Sapulpa Refining Co. plant will be improved with $300,000 new capital. Baltimore capitalists will finance the deal. T. Garland Tinsley is president, W. D. Richardson is vice-president and general manager, and James E. Whitney is secretary-treasurer.

p. 6. Recent Deaths. Mrs. Martha J. McElroy, died on May 1, 1915, at her home in Pittsburgh, Pa. She was an invalid. She was the widow of Hon. Joseph McElroy, formerly mayor of Oil City, Pa., and member of the Legislature from McKean County, Pa. He was also a pioneer oil operator in the Oklahoma oil fields.

H. C. Edrington, of Fort Worth, Texas, died on May 7, 1915. He was found under some oil-tank cars on the Texas & Pacific RR., after being out walking. He was president of the Lone Star Gas Co., and a banker and pioneer in the gas business. He was a Confederate Civil War veteran, and at the close of the war he had located in Texas. He leaves a widow, a son, and three daughters. His estate is valued at $1,000,000 to $2,000,000.

p. 8, 10. Oklahoma. Cushing continues to be the most important field. Many of the older wells are being shot at the rate of 20 wells a day, using 20 to 60 quarts of nitroglycerin per well, with not too much success. Heavy shooting brought in water to many wells. The sands are soft and light shooting seemed to work better. About 33 companies were producing about 232,000 bopd at the close of last week, but some people have figured the production from 150,000 to 288,000 bopd. There is some discussion of the Tucker sand being separate from the Bartlesville sand. The Tucker got its name from the Bird Creek Field, where a new sand was found on the Tucker Farm, 100 feet below the water streak in the bottom of the Bartlesville sand. The Tucker sand is greenish brown in color and finer than the Bartlesville, which is a brown pay. Outside of the Bird Creek Pool, the Tucker has proven a flashy pay. In Sec. 33-18N-7E, the Prairie Oil & Gas Co. got a well in the green-sand formation. The Slick Oil Co. No. 4 Manuel Farm in Sec. 17-18N-7E got the top of the Bartlesville at 2,419 feet and completed at 2,596 feet, or 177 feet in the sand.

In the upper part of the sand, the well made 80 bopd. After drilling through a black shell, the drill entered a green sand and the production was 2,400 bopd flowing. Other wells in this area have a similar performance. About 750 wells are now producing from the Bartlesville sand in this field, and probably no more than 1,000 will be the final total, which should be reached in 90 days. About 32,268,700 barrels are in storage. (Details given).

In Muskogee County, in the Harris Pool, the Harris & Hampton test in the SW¼-NE¼-Sec. 6-14N-16E struck a sand at 1,610 feet, with gas at 1,618 feet, and about 1,000 bopd at 1,618-1,621 feet. In the Boynton Pool, Hull & Bradstreet No. 2 Doyle in Sec. 15-14N-16E got 500 bopd after being deepened.

In Carter County, the Wildcat Jim Oil Co. well in Sec. 18-2S-2W has developed into a 5 bopd pumper at 1,620 feet. This is in virgin territory, but the excitement has died down.

p. 12 Petroleum Reserve. Teapot Dome. A United States Navel Reserve for oil has been recommended by Secretary of the Interior Lane to President Wilson to be located on 9,481 acres in Natrona County, Wyoming, covering Teapot Dome southeast of the Salt Creek Field, about 30 miles north of Casper. Also, 12,559 acres southeast of the Big Horn Mountains in central Wyoming has been recommended for the same purposes. Under the Enlarged Homestead Act of March 31, 1915, the total enterable land is now 231,809,225 acres.

p. 14. North Texas. In Palo Pinto County, in the Strawn Field, a new sand has been discovered a mile west of the proven territory by the Texas Pacific Coal Co. No. 4 Stewart Ranch which struck oil at 1,270 feet for 25 bopd. The main producing sands are at 750 to 850 feet, but these were barren. (Details given).

p. 22. Mahogany Rig, Cuba. James Cremin, of Tulsa, drilled a well near Cardenas, Cuba, in 1907, the rig being built of solid mahogany. It was started by the American Sugar Co. and they gave up after a year and took their rig down. The company asked Mr. Cremin to drill a new well, and he built a new rig out of local mahogany. After 3 years of drilling and $50,000 he got one barrel of oil a day at 2,096 feet. He used sewer pipe at Havana for the surface string of 450 feet.

p. 22. Another Cushing Oil Town. Gano is the new name of a town in the Cushing District, on the M. K. & T. RR., near Cushing. It is named in honor of J. K. Gano of the C. B. Shaffer oil interests.

p. 22. Oklahoma's Gas Association. The Natural Gas Association of Oklahoma was permanently organized in Tulsa on Tuesday. About 21 companies were present who are engaged in the production, transportation, and marketing of natural gas in Oklahoma, representing 80% of the present production in the state. Some of the companies and officers are:
Ardmore Gas Co., G. W. Russell, on board of governors.
Caney River Gas Co., R. A. Alexander.
Central Light & Fuel Co., C. C. Cantrell.
Creek County Gas Co., W. J. Rowland.
Guthrie Light, Gas & Fuel Co., W. B. Dibbens, on board of governors.
Oklahoma Natural Gas Co., R. H. Bartlett, president of the association, L. A. Bentley, W. R. McCarthy, and W. R. Sparks.
Osage & Oklahoma Gas Co., W. H. Bagley, secretary-treasurer, Charles W. Blair.
Quapaw Gas Co., H. P. Davis, F. P. Fisher; and B. C. Russum of Bartlesville on board of governors.
Sapulpa Central Light & Fuel Co., C. C. Cantrell, second vice-president.
Shawnee Gas Co., G. S. Thompson.
Smelter Gas Co., C. R. Kayser.
Smith & Swan, William Williamson of Henryetta, on board of governors.
United Fuel Supply Co., W. Omohundro.
Vinita Gas Co., Paul Johnson.
Western Natural Gas Co., O.K. Eysenbaugh.
Others present were:
W. W. Bruce of Chandler, on the board of governors.
A. J. Diescher of Bartlesville, vice-president.

p. 25. Continental Refining Company. At Bristow, Okla., the Continental Refining Co. will operate, with $7,500 capital, with Tulsa organizers being A.A.T. Rollenstone, Leon Thevenin, and E. F. Gester.

p. 25. Refinery Project at Drumright. George Ames and associates are building a refinery at Drumright, to be completed in 60 days, and to have an output of 1,000 barrels a day.

p. 30. Governor Williams Intervenes To Settle The Oil-Tax Disputes. Governor Williams sent a letter to each county assessor notifying them that the physical property of oil and gas companies are exempt from taxation. The gross production tax takes care of that problem, in place of ad valorem taxes. One half of the taxes collected revert to the county in which the gross production tax is collected. Pipe line companies can now be assessed on certain property, now that the new law separates pipe line companies from the production end of the oil and gas business.

p. 35-38. Wells. Oklahoma, Arkansas, Texas, Louisiana. In Oklahoma, outside of the main producing areas, in Atoka County, the Velvet Oil Co. No. 1 in Sec. 31-1N-14E was a dry hole. The Southwest Petroleum Co. No. 1 in Sec. 33-1N-14E was a dry hole. The Givens et al No. 1 in Sec. 16-3S-10E was a dry hole.

In Pontotoc County, near Ada, Sankey & Skelly No. 1, and No. 2 were gas wells, with about a total of 5,000,000 cfgpd.

About 198 wells were drilling or on location outside of the main areas. In Bryan County, in Sec. 28-6S-12E the Nelson et al No. 1 Disney was still drilling.

In Marshall County, about 26 rigs were working. (Each listed).

In Coal County, about 6 rigs were working. (Details given).

In Arkansas, about 12 rigs were drilling. (Details given).

In North Texas, about 55 wildcats were working in 16 counties. (Details given).

In Northern Louisiana, about 43 wells were completed for 18,645 bopd new production, including 3 gas wells and 8 dry holes, with 151 rigs working. (Details given).

Vol. 13, No. 50, May 20, 1915, p. 1. Mid-Continent Production. The apparent estimated production in the Mid-Continent fields at the close of last week was about 423,000 bopd, with Kansas and Oklahoma outside of Cushing being 115,000 bopd, and Cushing 250,000 bopd, Electra 16,000 bopd, and Caddo, La. 42,000 bopd. In the Cushing Pool, about 12 wells were completed in the Bartlesville sand with 19,050 bopd new production.

The Thrall Field, in Williamson County, Texas, is yielding about 7,500 bopd, but much of the excitement has died down.

p. 2. Cushing Oil District. The producing area of the Cushing Field is 14,275 acres, and 1,432 wells are producing on this acreage.

p. 3-4. Personal Mention. Nocona, Texas is 34 miles south of the Healdton Field. C. B. Shaffer has leased about 3,600 acres south of Nocona where he will do some drilling.

p. 4, 6. Noted in Passing. The Prehistoric Oil Co. has been organized at Holdenville, with $20,000 capital.

The Sunlight Oil Co. has been incorporated at Muskogee, for $24,000, by A. W. Culp, J. M. Givens, and C. A. Cowper.

In Coal County, Okla., the Pierce Oil Corporation will do some drilling, based upon reports by geologists.

Ward E. Pearson, of the Pearson interests in the United States, was at the White House and Department of State, asking the U.S. Government to help him recover the bodies of his parents who perished on the Lusitania.

p. 6. Recent Deaths. P.F. Kearns, 61 years old, was found dead Sunday morning in the Keystone Building in Tulsa, and died of apoplexy. He was an oil leaser. He is survived by a wife, a son, and a daughter in Missouri.

Andrew F. Jackson, age 47, drowned on May 16, 1915, along with his 14 year

old son John Jackson, in Silver Lake, 6 miles south of Bartlesville. Andrew was an oil man in the Mid-Continent.

p. 8, 10. Oklahoma. More wells were being completed in the deep pay in the Cushing Field, at about 2,598 feet. Some wells were coming in at 300 barrels an hour. People are still guessing that this is the Tucker sand. Seven wells are producing from this lower pay. In the Cushing Field, the Layton, Wheeler, Bartlesville, and Tucker sands all produce, with 800 wells in the Bartlesville, and 632 in the Layton and Wheeler. The first Bartlesville discovery well in the Cushing Field was the Prairie Oil & Gas Fred Tucker in Sec. 3-17N-7E, in the upper part of the Bartlesville.

In McIntosh County, south of Hoffman, in Sec. 6-11N-14E, in the middle of the south line of the NW¼-NW¼, Grundish et al No. 6 Kanard got 200 bopd at 1,760 feet.

In Payne County, north of Yale, the Corsicana Petroleum Co. in Sec. 7-19N-6E got a 40-bopd well after a 15-quart shot at 3,132-3,142 feet, in a hard pay, said to be the Bartlesville sand.

In Okmulgee County, in the Natura Pool, the Smith & Cline No. 1 in the middle of the N. line of the SE¼-SE¼-Sec. 25-15N-13E got 350 bopd at 1,718 feet, after drilling a few feet into the sand.

In Tulsa County, in the Lost City Pool, Charles Page completed his No. 1 in Sec. 18-19N-12E for 21,400,000 cfgpd at 1,800 feet.

In Carter County, in the Healdton Field, Apple & Franklin in Sec. 15-4S-3W have 50,000,000 cfgpd at 1,067 feet.

A new town of Pemeta between Oilton and Drumright has been piped for natural gas. Truman H. Dunn was in charge of the work.

p. 19. Gas Strike Near Ada. The Rex Oil Co. of Ramsey & Skirvin struck 2,000,000 cfgpd at 1,172 feet in their first well in the Ada area in Sec. 30-4N-6E. It was completed yesterday. This is below the sands found in the other wells, in Pontotoc County.

p. 20. Scott County, Tennessee Well. Near Oneida, Scott County, Tenn., the Mohney Brothers of Monticello, Ky. drilled to a lower depth than necessary to test the Beaver sand, and got 300-500 bopd, according to Col. Charles W. Whitcomb, owner of the well. The Nevin Electric Survey Co. of New York states that the test is in the Big lime. About 12 more wells will be drilled. Mr. B. DeMossin is president of the Nevin company, and he will drill several wells on his own in the area.

p. 29. In Pittsburg County, near Canadian, the citizens of Canadian granted a 21-year franchise to the Oil & Gas Co. of Tulsa to pipe the town. Gas has been found in large quantities around Canadian, and a deep well will be sunk in town by the new company.

Vol. 13, No. 51, May 27, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent fields at the close of last week was 435,000 bopd, with Kansas and Oklahoma outside of Cushing being 110,000 bopd, and Cushing 267,000 bopd, Electra 16,000 bopd, and Caddo, La. 42,000 bopd.

In the Cushing Field about 22 wells were completed for 15,380 bopd new production. Little work was being done outside of Cushing.

The Thrall Pool, in Williamson County, Texas, now has 39 wells, with 7,225 bopd production. Plans are being made for a refinery at Taylor.

p. 1. In McCurtain, Choctaw, Pushmataha, Latimer, LeFlore, and other counties of southeastern Oklahoma, much wildcatting will be started, with prospects of opening new pools.

p. 2. Ladies Organize Oil Company. Some women of Madill have organized the first strictly feminine corporation of its kind in the state, under the name of the Juanita Oil & Gas Co. No stock is to be issued to men. Mrs. Carrie Arbuckle is president, Miss Juanita Arbuckle is secretary, and Mrs. W. E. Hornaday is treasurer. Men will be allowed to do the drilling and other rough work, but the ladies will do the managing and share the dividends. Thus, a new move in an unexpected quarter for the emancipation of women is inaugurated.

p. 3. Kearns Might Have Been Millionaire. P.F. Kearns died last week in Tulsa, of apoplexy, unattended in his room. Burial was in Oaklawn Cemetery, and by his wishes expressed some time ago, there was no funeral service. No relative was present, and few people knew him. He was quiet and unobtrusive, and shunned publicity and objected to personal exploitation. He was a lonely disappointed man. In Pennsylvania, in the early days of the Bradford Field, he owned valuable oil property and was well-to-do, but his fortune deserted him. He was energetic, and continued to be active in the oil business. Some years ago he leased much acreage in the Cushing Field, but owing to litigation, he lost his leases, and with them he lost an immense fortune. This depressed him and he often brooded over this. He died a lonely man.

p. 3-4. Personal Mention. W. B. Stewart, an oil man from Muncie, Indiana, was in Tulsa, accompanied by C. L. Retherford, his son-in-law.

W. A. Koch, of Bradford, Pa., arrived in Tulsa Friday, and will be employed in Tulsa by Cosden & Co.

M. Z. Dibble, of the Oklahoma Producing Co., was in Tulsa on business. He is a resident of Washington, D.C.

W. C. McBride, head of the Silurian Oil Co. and vice-president of the Pure Oil Co., was looking over the Cushing Field this week, coming from his home in St. Louis, Mo.

Thomas H. Kennedy, of Bradford, Pa., George L. Craig, of Pittsburgh, Pa., and F. M. Aiken of New York City, were visitors in Okmulgee. They are directors of the American Refining Co., with the refinery being in Okmulgee.

Archie W. Deuel, a Tulsa oil man, and Miss Irene M. Kingsland were married at the home of the bride's parents at Oil City, Pa., on May 20, 1915. They will live in Tulsa.

Mrs. Louise Cole, whose home is in London, England, is visiting her son, A. W. Cole, an oil-lease man in Sapulpa. She was a passenger on the Lusitania from Liverpool to New York. On the return trip the Lusitania was sunk, and Mrs. Cole said that there were rumors of an impending attack on the way over to New York. The prevalent idea was that the Lusitania could not be sunk.

p. 4, 6. Noted in Passing. In the Thrall Field, Texas, thirteen new oil companies have been incorporated.

No oil was found in a well drilled recently south of Comanche, Stephens County, and the Amis Company has abandoned the hole as a failure.

The Waco Petroleum Co. well on the Stewart Ranch east of Marietta, Okla., is said to have good indications of oil at 200 feet.

The Duncan Oil Co. has obtained leases on 3,000 acres near Duncan and a wildcat will be drilled.

Charles Lockard and associates have leased a large area in northeastern Pittsburg County, Okla., and are making preparations to drill a test well there.

Between Berwyn and Ardmore, Okla., the Maurice well will be drilled deeper, and new money will be raised for the project.

In Persia, the Ango-Persian Oil Company's line was recently cut by enemies of the Allies, and the oil has been shut off for a time. The cutting of the line was not made public until now.

p. 8, 10. Oklahoma. In the Cushing Field, there is deeper drilling. On Saturday, the output of the field was estimated at 267,000 bopd. (Details given).

In McIntosh County, south of Hoffman, Grundish et al No. 7 Kanard Farm in Sec. 6-11N-14E was completed for 200 bopd natural. Also Smith & Swan No. 2 Grayson in Sec. 8-11N-14E completed a well for 2,500,000 cfgpd. This county has become one of the best gas areas of the state.

p. 10, 12. North Texas. In Palo Pinto County, in the Strawn Field, about 28 wells have been drilled, with only 6 dry holes. The yield is about 850 bopd, over an area 1¼ miles long by ½ mile wide. Leasing continues into adjoining counties. In Erath County, 6 miles south of Thurber, a gas sand was struck at 400 feet, and about 500,000 cfgpd was produced. Stephens and Eastland Counties are being leased also. (Details given).

p. 25. Tulsa Man Wants Stigler Franchise. J. P. Flanagan, of Tulsa, offers to furnish gas to Stigler, and asks for a franchise. He proposes to build a plant and to drill wells. On June 22, 1915, the citizens of Stigler will vote on the issue.

p. 26. Ohio As An Oil Producing State. Oil was first found in Ohio about 1812-1814 by persons drilling for salt. Dr. Thorley drilled a well within a mile of Caldwell, Noble County, Ohio, in southeastern Ohio, about 1812-1814. In 1816, Robert McKee started drilling for salt in the same area, and found oil, called "Seneca" oil, which was sold for medicinal purposes. In the early 1850's, James Dutton drilled a well 1.5 miles southeast of Macksburg, for salt, with a springpole, and got oil. In 1865, considerable developmental drilling took place in southeastern Ohio. About 1875 a pipe line was installed in the area, and thousands of wells were drilled in the region. In 1889, the Mecca-Belden Field in Lorain and adjoining counties were opened. In the 1880's, the Sugar Grove Gas Field was developed in Fairfield and Hocking Counties, and extended from Vinton County on the south to Lake Erie on the north. About 50,000 wells have been drilled in central and southeastern Ohio, and about 50,000 have been drilled in northwestern Ohio. On May 9, 1885, northwestern Ohio was opened when Benjamin F. Faurot found oil at his paper mill at Lima, Ohio, opening the Lima Field. On May 1, 1886, the Buckeye Pipe Line Co. built its first storage tank, and on May 11, 1886, they bought their first oil from the Lima Field at 40¢ a barrel. About 17 counties covered the Lima Field, in the Trenton Rock zone. The Trenton is a limestone, but in this area it is a porous dolomite, with oil, and this type of production was new to the oil business. Some wells produced 10,000 bopd and 40,000,000 cfgpd. One well in Hancock County produced 40,000 bopd, which was the record for Ohio.

Since 1885, the following list shows the number of wells completed in Ohio:

Year	Completions	Oil Wells	Gas Wells and Dry Holes
1885-1889	7,335	5,940	1,395
1890	2,151	2,010	141
1891	1,572	1,326	246
1892	1,465	1,277	188
1893	1,877	1,557	320
1894	3,001	2,561	440
1895	5,559	4,729	830
1896	4,339	3,713	626
1897	2,755	2,265	490
1898	2,852	2,485	367
1899	4,469	4,056	413
1900	5,129	4,535	594
1901	3,672	3,220	452
1902	4,439	3,971	468
1903	4,072	3,773	299
1904	3,131	2,908	223
1905	1,578	1,427	151
1906	1,535	1,373	162
1907	890	761	129
1908	848	768	80
1909	872	787	85
1910	572	515	57
1911	527	495	32
1912	551	481	70
1913	972	882	90
1914	861	776	85
	67,024	58,591	8,433

p. 33. Oklahoma Oil Man Tells of Conditions in Taylor, Texas. John M. Givens of Tulsa, visited Taylor, Texas, near the Thrall Pool. Some leases are $1,500 an acre. The original well is flowing 4,800 barrels a day. There are 3 stock exchanges in Taylor. The streets are jammed morning, noon, and night. People are leasing 30 miles away at $50 an acre. The producing rock is not a

sand but is some type of blue marl, considered a freak. Mr. Givens decided to return to Tulsa, and wait until things quiet down.

p. 33. Drake Drilling Tools. Senator Lewis Emery of Bradford, Pa., obtained the original Drake drilling tools in 1870 from a junk dealer in Titusville, Pa. The junk dealer had purchased the old iron, engine, etc. at the Drake well. In the drilling of the original well, the first tools were replaced by heavier tools and larger tools. The original tools were lighter and smaller, being like those used to kick down holes with spring poles in the Oil Creek Valley. Col. Drake used a steam engine and a walking beam later. The original bit was 2 inches wide by 5½ inches long, and weighed 18 pounds. The sinker bar was 16.75 inches long and weighted 7 pounds. The stem was 2 feet 9½ inches long and weighed 14.5 pounds. The jars were made of square iron and weighed 31.5 pounds. The reamer was 4.75 inches wide and 32¼ inches long. (Details given).

Vol. 13, No. 52, June 3, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent fields at the close of last week was about 453,000 bopd, with Kansas and Oklahoma outside of Cushing being 110,000 bopd, Cushing 285,000 bopd, Electra 16,000 bopd, and Caddo, La. 42,000 bopd. Deeper drilling in the Cushing Pool has caused the increase in apparent production.

In northern Louisiana, in Red River Parish, in the Crichton Pool, 63 producing wells have been drilled to date without one dry hole, all within an area of 6 square miles.

In Williamson County, Texas, in the Thrall Pool, 42 wells have been completed for 6,300 bopd, and speculation is on the wane.

In North Texas, wildcat drilling is still taking place in 12 counties.

p. 3. Natural Gas Going to Waste. The Cushing Field has a potential gas capacity of 800,000,000 cubic feet of gas per month, and less than 200,000,000 is actually used each month from the field. The average rock pressure is 175 psi. Gas is being wasted in the Cushing Field and is a menace to life and property. It is regarded by oil men as a liability rather than an asset.

p. 3-4. Personal Mention. G. F. Bays, an expert civil engineer for the McMan Oil Co., has returned to Tulsa from a visit to Texas.

Frank Frantz, former territorial Governor and now oil man, was in Tulsa, visiting from Bartlesville.

James King Duffy, president of the Export Oil Corporation and the Phoenix Oil Co., has arrived in Tulsa from New York.

John R. Wheeler will move his family from Titusville, Pa. to Tulsa this fall. He is an attorney for the White & Sinclair interests.

H. Clay Pierce, of St. Louis, Mo., of the Pierce-Fordyce Oil Association, was in Ardmore and Ringling on business.

A. W. Cannon, a veteran oil man, and brother of Uncle Joe Cannon, former Speaker of the House, is now a resident of Oilton, where he expects to engage in the oil business. For a long time he was in the service of the Royal Dutch-Shell Co.

R. D. Benson, president of Tidewater Pipe Co., and Dickson Q. Brown, president of the Okla. Oil Co., a subsidiary of Tidewater, were in Tulsa to see about laying a line from Illinois to the Mid-Continent.

p. 4, 6. Noted in Passing. At Thrall, Texas, the new field now has 54 producing wells, and 11,500 bopd. The field is 3 months old, and 91 wells have been drilled. Amyx & Coats, of Kansas City, Mo., are promoting to build a refinery at Taylor, if local citizens will subscribe to $10,000 stock.

The Shamrock Oil Co. of Vinita has dissolved its corporation. In 1914, its total production was 620 barrels, and it has produced no oil since.

p. 6. Recent Deaths. J. S. Fritz, an oil-well worker, died at Dewey, Okla., Friday, May 14, 1915. He formerly resided in Bradford, Pa., and the body was sent to that city for interment.

Mrs. Eliza J. Goe aged 80 years, widow of Bateman Goe a pioneer oil man, died at the home of her daughter Mrs. C.L. Wheeler in Bradford, Pa. on May 23,

1915, of neuritis. Surviving are three daughters, Miss Rose Goe, Mrs. C. L. Wheeler, and Mrs. F. H. Willis, of Bradford, Pa., and one son, Harry B. Goe, of Muskogee, Oklahoma.

p. 8. Field Operations for May 1915. In Oklahoma, for May 1915, about 275 wells were completed, including 22 gas wells and 38 dry holes, with 136,360 bopd new production, and 718 rigs working or on location. Cushing had 117 completions.

In Arkansas, 13 rigs were drilling or on location.

In North Texas, 23 wells were completed, with 9 dry holes and 615 bopd new production, and 83 rigs drilling or on location.

In East Texas and Northern Louisiana, or Caddo District, with 17 fields, about 38 wells were completed, with 1 dry hole and 19,340 bopd new production, and 163 rigs working or on location.

The Thrall Field in Williamson County, Texas, had 38 completions, with 16 dry holes and 10,700 bopd new production. In April, there were 26 completions and 13 dry holes, with 8,925 bopd new production. There were 23 wells drilling or on location in May 1915 in the Thrall Field.

p. 10, 12. Oklahoma. The Cushing Pool is being drilled deeper, in what is called the Tucker sand. (Details given). Some wells are coming in at better than 7,000 barrels a day.

In Payne County, northwest of Cushing, about 3.5 miles, the New England Oil & Gas Co. of the Fortuna Oil Co. completed a fair oil pumper in Sec. 25-18N-4E, in the Layton sand at 1,864 feet. The Corsicana Petroleum Co. completed a 50-bopd well north of Yale in the Bartlesville sand in Sec. 7-19N-6E. The first test is east of Ripley.

In Pontotoc County, near Ada, Skelly & Sankey No. 4 Ford & Harris Lease is a 5,000,000 cfgpd well at 1,080 feet.

p. 14. North Texas. There are many wildcats, in Hardeman, Childress, Wilbarger, Tom Green, Concho, Shackleford, and Limestone Counties. In Palo Pinto County, in the Strawn Pool, developmental drilling is continuing. (Details given).

p. 23. Death of Pioneer Oil Man. Joseph Tomlinson, aged 73 years, a pioneer in the oil business, died at a Tulsa hospital Wednesday. He had been in the oil business for 50 years, beginning at Oil Creek. His family home is at Beaver, Pa., but he has lived in Tulsa since 1905. The body is to be taken to Beaver for interment. Everett Tomlinson, a son, will arrive tomorrow to take charge of matters.

p. 28. Gas. Oklahoma. May 1915. During May 1915, about 179,500,000 cfgpd of new gas was developed in Oklahoma. The Creek District had about 102,500,000 cfgpd of new gas developed. In Kay County, 20,000,000 cfgpd new gas was discovered.

In Tulsa County, near Vera, one gas well was finished, that of Oakes et al No. 1 Tiblow in Sec. 1-22N-13E, for 2,000,000 cfgpd. This is the second producer. In the Lost City Field, Charles Page No. 1 in Sec. 18-19N-12E got 21,000,000 cfgpd, with a rock pressure of 425 psi. The gas will be used for fuel by Mr. Page at Sand Springs.

In Creek County, Cushing Field, most wells are shut in. One was completed, that of Hill Oil & Gas Co. No. 3 Barnett in Sec. 22-17N-7E, for 5,000,000 cfgpd, in the Cushing Field. Near Bristow, the Orange Oil Co. in Sec. 30-14N-9E got 2,000,000 cfgpd., south of Iron Post. (Bristow is in 16 N).

In Carter County, in the Healdton Field, Colcord et al No. 1 in Sec. 15-4S-3W got 15,000,000 cfgpd, and Apple & Franklin in the same section got 12,000,000 cfgpd.

In McIntosh County, Smith et al No. 2 in Sec. 8-11N-14E got 2,500,000 cfgpd.

In Muskogee County, in the Fern Mountain Field, Bradstreet et al No. 2 in Sec. 24-15N-17E got 7,000,000 cfgpd. The Oklahoma Oil Co. in Sec. 28-14N-16E got 7,000,000 cfgpd, in the Boynton Field.

In Okmulgee County, near Natura, Young et al in Sec. 23-15N-13E got 18,000,000 cfgpd. The Oklahoma Natural Gas Co. No. 1 in Sec. 26-15N-12E got 12,000,000 cfgpd.

In Pontotoc County near Ada Skelly & Sankey in Sec 31-4N-6E got 7,000,000

cfgpd. The Rex Refining Co. in Sec. 30-4N-6E got 2,000,000 cfgpd.

In Wagoner County, in the Catoosa Field, about 100,000,000 cfgpd is now the capacity of the field. A line was laid and placed in service a week ago, taking 5,000,000 cfgpd. Ardizzone & Ossenbeck in Sec. 21-19N-15E completed their No. 1 for 6,000,000 cfgpd, and their No. 2 for 15,000,000 cfgpd. The Fenton Gas Co. and the Ardizzone interests own about 75,000,000 cfgpd capacity of the field.

In Wagoner County, the Caney River Gas Co. No. 1 in Sec. 16-16N-16E got 6,000,000 cfgpd, and their No. 2 in Sec. 18-15N-15E got 5,000,000 cfgpd. The latter well would be across the river in Muskogee County, southwest of Haskell. The first well would be southwest of Red Bird near Choska.

p. 29. Lone Star After Gas Land. The Lone Star Gas Co. has applied to the Indian Bureau through George C. Greer to acquire gas areas on Indian Land in Stephens County, Oklahoma, to service North Texas, including Dallas, Fort Worth, Denison, Sherman, Wichita Falls, Gainesville, and Denton. The area near Duncan, Oklahoma would supply the gas, and local citizens support the application. The U. S. Government has established that no one company could lease more than 4,800 acres of oil property and 9,600 acres of gas property owned by the Indians, but they will make some exceptions. The Stephens County Field is not wholly proven.

p. 29. Ada Gas. The fire of the Rex Oil Co. well was put out by steam. The well was struck by lightning Thursday and caught fire. About 20,000,000 cfgpd was being lost along with some oil. A new rig will be built, and the well will be drilled deeper.

Adam L. Beck, of Ada, complained to the Attorney General that much gas was being vented near Ada, and wasted. This is one of the first reports of a violation of the Conservation Act just passed by the last Legislature. The State Mine Inspector, Ed Boyle, will investigate the matter, and report to the Attorney General.

Vol. 14, No. 1, June 10, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent at the close of last week was 437,000 bopd, with Kansas and Oklahoma outside of Cushing at 110,000 bopd, Cushing 269,000 bopd, Electra District or North Texas 16,000 bopd, and the Caddo District of NW Louisiana and NE Texas being 42,000 bopd.

In the week ending June 5, 1915, the Cushing Field had 15 wells completed in the Bartlesville sand for 20,000 bopd new production. Many of the new wells the previous few weeks have fallen off, and some wells have some salt water in the lower sand.

In the Caddo District, the Crichton Field of Red River Parish, La., is the leading attraction, with 5 new wells completed for 4,550 bopd new production. Deep drilling in the Pelican Field will probably cease because the wells are small in production.

In the Thrall Field of Williamson County, Texas, many dry holes have been drilled. A test is now being drilled 2 miles north of Thrall.

p. 1. Tulsa has a moving-picture plant. Wild west, oil region, pastoral, and urban scenes are easily accessible, and there are several real life Charley Chaplins in Tulsa. The business should be successful.

Al Jennings, moving-picture hero, former long rider, politician, and reformer, has become a religious agitator.

At Healdton, Oklahoma's new conservation law is being enforced. Producing oil is now a matter of permission, remission, omission, or commission, a la Henshaw.

Reports of the killing of American oil men during the Mexican revolution are disturbing. Reprisals from the Americans should be prompt.

Three men were killed on the tanker Gulflight by a German submarine attack. The Germans pleaded that this was murder by mistake, even though America remains neutral in the war. William Jennings Bryan believes that President Wilson is too war-like, and that we should have peaceful negotiations with Germany.

p. 2. Five Civilized Tribes Acreage Restriction. Ten years ago, Secretary of the Interior Hitchcock ruled that a producer could only lease 4,800 acres of Indian land in Oklahoma. This rule is still enforced by Secretary Lane. Former Governor Charles N. Haskell recently went to Washington, D.C. with a petition signed by 28,000 resident landowners of the Five Civilized Tribes, asking that the rule be modified, but the petition was rejected.

p. 2. Suspensions in Okmulgee and Muskogee Counties. On June 6, the Prairie Pipe Line Co. suspended the taking of oil in the Okmulgee and Muskogee Districts, for an indefinite period. The Standard Oil Co. of Louisiana has an over-supply and cannot take the oil.

p. 3-4. Personal Mention. Isaac Ruby, of Tulsa, went to Porter, Okla., last week. He is interested in drilling operations there.

William Burns, a gasoline-making expert of Kiefer, Okla., was in Tulsa last week.

C. E. Strouvelle, in charge of the oil properties of the Savoy Oil Co. of Tulsa, has returned from a business trip to Shreveport, La.

Otto Holland, general manager of the McMan Pipe Line Co., will have his headquarters in Tulsa. His family will join him shortly.

J. B. Foster, of the firm Wrightsman & Foster Co. of Tulsa, has recently purchased a block of stock in the Taylor National Bank of Taylor, Texas.

Charles N. Hunt, a prominent attorney of Duluth, Minn., will probably locate in the Cushing Field, and engage in the oil business.

H. F. Sinclair is one of the directors of the Federal Baseball League of Chicago, Ill.

Mr. J. A. Johnson, of Tulsa, a lease man for C. J. Wrightsman, was in Ardmore last week. His wife is a daughter of M. M. Doan, of the Gypsy Oil Co.

C. J. Humphreys, with the National Oil & Development Co. of Tulsa, has secured leases near Fox, Okla., where operations will begin soon.

Joseph Laing, of New Orleans, La., and his son-in-law, P.J. White, president of the Exchange National Bank of Tulsa, left for Kansas City to inspect property recently purchased by Mr. White.

J. Edgar Pew is the head of the Carter Oil Co. in Oklahoma. Formerly he was head of the Sun Co. in the Gulf Coast.

Judge J. S. Barlow, of Bradford, Pa., has large producing interests near Bartlesville, Okla.

T. M. Dees, of the Thelma Oil Co. of Midlothian, Texas, operates a pipe line from the Healdton Field to Ringling, Okla., and has a good market for the oil.

Mr. J. A. Hull, an old resident of Tulsa, has production in various districts of Oklahoma, and he has recently been appointed assistant to F. A. Leovy of the Gulf Pipe Line Co.

George Harmon has been in Mexico for the past two years, and has recently sold his holdings to White & Sinclair. He has recently returned to his family in Tulsa, where he will stay.

C. H. Hanson, vice president of the Republic Oil & Pipe Line Co., and H.D. Van Valin, a director, of Chicago, visited the Cushing Field, where they are drilling a well on the Rhinehart farm.

Judge B. F. Burwell, counsel for the Pierce Oil Corp. for Oklahoma, living in Oklahoma City, is one of the pioneers of Oklahoma. He was Chief Justice of the Supreme Court of the Territory of Oklahoma before Statehood.

J. T. Jackson, a drilling contractor in the Healdton Field, will enter the producing business. He will operate at Normangee, Texas.

F.A. Gillespie has 300 head of cattle on his Johnston County ranch, Okla. The ranch covers 8,000 acres. He is also developing manganese deposits about 12 miles away from his oolithic-stone quarries near Bromide. Assays show the ore to be of high grade.

p. 4,6. Noted in Passing. The Tulsa Gasoline Manufacturing Co. has increased its stock to $15,000.

In Texas, the Supreme Court has decided that an oil and gas lease is taxable the same as tangible property.

Near Ripley, Okla., W.O. Broyles has sold 160 acres of his farm to New York interests for $16,000. This is the land upon which is located a big gas well.

In Nevada, Mo., there is an oil boom. On the Lawson farm, an oil well has been completed for 10 bopd.

In northern Kay County, Okla., Marland and others are drilling a deep test in Sec. 4-28N-4E, and the test is being watched with great interest.

The Webster Refinery at Bristow, Okla., has been purchased by the Constantine interests, and will be operated by them in connection with their refinery at West Tulsa.

At Cushing, Okla., the International Refinery of Gunsburg & Forman has a capacity of 5,000 bopd. The oil is from their own wells.

Ripley, Okla., had its first car load of oil shipped out from the Anabel Switch loading rack. Drilling operations are to be active this summer.

Charles Davis, who suffocated in an oil tank in the Cushing Field, was employed by the Kathleen Oil Co. He was 35 years old, and leaves a widow and a little daughter whose home is in Albany, Kansas.

Supreme Court Commissioner Watts, in Oklahoma City last week, ruled that Cherokee Indians of less than full-blood who held surplus allotments were subject to taxation of their property.

The Producers Refining Company at Gainesville, Texas, will lay a 50 mile, 8-inch diameter line from the Healdton Field, Okla., to Gainesville.

Edward B. Henry, a prominent resident of Oilton, Okla. has disappeared. It is thought that he was robbed and murdered, and his body dumped into the river.

In Stephens and Eastland Counties, Texas, about 10,000 acres have been leased by Henry S. Livingstone and Robert Watchorn, of Ardmore, Okla. They will drill about 15 miles west of Strawn, Texas.

W. M. Parker, of St. Louis, Mo., is erecting an oil-refining plant at Pemeta, Okla.

In the Thrall Field, Texas, the J. M. Guffey Petroleum Co. abandoned its Stauffer well in hard lime at 2,500 feet. There was a small showing of oil in the Austin chalk at 1,207'.

In Muskogee County, Okla., the Crown Petroleum Co. will operate a 27-mile pipe line from Okmulgee County to the Muskogee Refining Co. plant.

p. 6. Recent Deaths. J. H. Wallen, 45 years of age, died in Tulsa on May 4, 1915. He leaves a wife and two sons.

Clark Stevens, 70 years old, died in an accident on the Okla. Oil Co. lease near Ochelata, Okla., last Saturday. He is survived by his wife and 3 children.

Louis Heilperin, age 46 died at Colorado Springs, Colorado, on June 2. He lived in Shreveport, La., coming from Russia 30 years ago. He was one of the pioneer oil men of Louisiana, and was president and director of several large businesses in Shreveport. He is survived by his wife and one daughter.

p. 8, 10. Oklahoma and Kansas, by R. H. Whitney.

In Creek County, Okla., in the Cushing Field, the deep sand pay 100 feet below the Bartlesville sand is the source for some of the most productive oil wells in the field, causing an over-supply. Most of these wells are in Secs. 7, 8, 9, and 17 of 18N-7E, on the north end of the field, each well averaging about 6,000 bopd, with one at 350 bop hour. Some operators say that this is the Tucker sand but others say that it is a deep Bartlesville sand. Some of the wells have salt water, and many fall off after a few days. The C. B. Shaffer #4 Abraham in Sec. 17 came in at 350 bop hour, but in one week was making 2,000 bopd. The Silurian Oil Co. on the Walter Starr farm, #6, 7, 8, tests, had much water, and No. 6 was ruined. (Details given for other wells). Estimates of production in the field range from 250,000 to 300,000 bopd. The McMan Oil Co. is the largest producer in the Cushing Field, with 33,100 bopd, followed by the Prairie Oil & Gas Co. at 32,120 bopd, the Slick Oil Co. at 20,200 bopd, then

White & Sinclair Co. at 17,500 bopd, and the Producers Oil Co. at 17,500 bopd, followed by B.B. Jones Co. at 15,200 bopd, and Gunsburg & Forman at 15,200 bopd, and C.B. Shaffer at 14,750 bopd, Mid-Co Petroleum Co. at 12,000 bopd, and the Quaker Oil & Gas Co. at 10,200 bopd. The 35 major producers are listed for the Cushing Field, including the Kate Barnard Oil Co. with 150 bopd. Nineteen pipe line and refining companies are listed, showing the daily oil handled, with the Prairie Pipe Line Co. handling the largest amount at 50,000 bopd. Much drilling is being started in T. 19 N., R. 7 E. (details given). About 35,822,500 barrels are in storage (details given). About 29 wells were completed last week (details given).

In Okmulgee County, Okla., the Boock-Sand Field had a producer. The Schuler, George, & Zeigler Co. #1, test, in Sec. 23-14N-14E, was completed for 60 bop hour.

In Carter County, in the Healdton Field, the Corsicana Petroleum Co. #3, Smalley lease, in Sec. 10-4S-3W, struck 50 bopd at 1,134'. The Magnolia Pipe Line Co. is running about 5,500 bopd to Texas. The Ardmore Refining Co. is handling about 1,000 bopd.

In Tulsa County, in the Wicey Field, near Bixby, Roth & Shaffer Co. #5, Posey farm, in Sec. 8-17N-13E, was completed for 75 bopd at 1,732-1,740'. The Aiken Oil Co. #7, Buck allotment, in Sec. 3-16N-13E, was completed similarly.

In Okmulgee County, Okla., in the Bald Hill Field, the Victor Oil Co. #3, Grayson farm, in Sec. 34-15N-14E, was completed for 75 bopd at 1,490-1,494'. At Mounds, the Wright Drilling Co. #2, Pickett farm, completed a 50 bopd well at 1,840-1,869', in Sec. 8-16N-11E.

p. 12, 14. East Texas and Louisiana, by M.L. Vaugh. In Red River Parish, La., the Crichton Field is the most important in the so-called Caddo District of East Texas and Louisiana. Last week five wells were completed for 4,550 bopd. All wells drilled to date have been producers. The daily production in the Crichton area is now about 6,752 bopd, with drilling on both sides of the river to Shreveport. In DeSoto Parish, La., in the Pelican Field to the south, extending into the northern part of Sabine Parish, a number of deep tests have been completed at 3,000 to 3,500 feet, resulting in small pumpers. (Details given).

Other fields being drilled are Caddo, Black Bayou, Mooringsport, Monterey, Vivian, Harts Ferry, and Jeems Bayou, La. (Details given).

Wealthy women from Chicago, New York, and Detroit have organized the Federal Oil Co. of America, and are capitalized at $500,000. They hold leases on several thousand acres in Northwestern Louisiana, including tracts in the proven fields of Caddo, DeSoto, and Red River Parishes. The President is Mrs. H.H. Honore, Jr., of Chicago, a sister of Mrs. Potter Palmer; vice-president, Mrs. W. Severin, head of the Women's Republican Club of Illinois; treasurer, Mrs. Emeline T. Rundell, former secretary to Mrs. McCormick of Chicago; secretary, Mrs. Edwin G. Earle of Chicago; first assistant secretary and treasurer, Mrs. Elizabeth Doyle of Shreveport, La. The Directors are the above and Miss Margaret Brown of Chicago, Dr. E.N. Cogswell of New York City, and Mrs. Genevieve Meeker of Atlanta, Ga.

p. 14. Operations at Thrall, Texas, by P.L. McGreal. About 44 main wells are now producing in the Thrall Field, Williamson County, Texas, with total production averaging about 5,850 bopd. The Texas Co. is running 3,100 bopd from 21 wells, the Magnolia Petroleum Co. 2,000 bopd from 15 wells, and Bowers & Witherspoon Co. 750 bopd from 8 wells. About 28,990 barrels are in wooden and earthen storage. About 30 wells were dry holes around Thrall, drilled from 900 to 1,890 feet (all listed). The Granger Petroleum Co. of Taylor, Tex., has been incorporated for $15,000, with Miss Jess Johnson of Taylor as president. She has been actively leasing around Thrall and will drill 6 miles north of town. About 12 wells are drilling in Bastrop County, and several are drilling in Milam County, without shows (details given).

p. 18. North Texas by H. W. Whitney. In the Burkburnett Field of Wichita County, Texas, Chenault, Langford & Staley's No. 1 Fee was completed for 150 bopd at 1,762'. In the Electra Field, the Producers Oil Co. No. 30 Bickley lease

was good for 25 bopd at 1,040-1,060'.

In Coleman County, Texas, Robertson & Son have a gas show at 1,100-1,200' on the Overhall farm, west of the Babbington well. A new location is being made on the Brown farm east of the Overhall farm.

Many wildcats are being drilled in North Texas, in Knox County, near Goree; in Brown County; in Concho County, near Millers View; Runnels County; Tom Green County; Throckmorton County; Shackelford County, near Moran; Childress County, near Childress; Haskell County, near Stamford; Palo Pinto County, near Strawn; and in Eastland County, near Graford and Eastland (details given for each area).

p. 18 Prairie Oil & Gas Co. Officials in Healdton. Officials of the Prairie Oil & Gas Co. made their first visit to the Healdton Field. There were: J.E. O'Neill, president; W.S. Fitzpatrick, vice-president and attorney; N.K. Moody, vice-president and assistant general manager. Mr. C.R. Stewart of the Magnolia Pipe Line Co. took them through the field. Mr. O'Neill was born in Pennsylvania, within one mile of the Drake well. In 1886 he began as a roustabout, working his way up. Mr. Moody also came from the same locality, making the oil business his life's work. Mr. Fitzpatrick entered the business as an attorney, and devotes much of his time to sales. They believe that the Healdton Field will produce a vast amount of oil.

p. 20-21. Oklahoma Gross Production Tax Law. In Oklahoma City, suit was filed last Monday in the U.S. Court of the Western District of Oklahoma to test the constitutionality of the new gross-production tax law, brought about by the Prairie Oil & Gas Co. The Fifth Legislature of Oklahoma passed the law on March 11, 1915, requiring a 2% levy on gross production of oil in Oklahoma.

p. 21. Hugh King and Miss Caroline Dickey were married at the Holy Family Church in Tulsa on Monday of this week. He is a well-known oil man.

p. 21-22. Healdton Pro-Rated. The Oklahoma Corporation Commission will limit the amount of oil that each well can produce in the Healdton Field, according to potential production. This is based upon the law recently enacted by the current Legislature. The order prohibits the storage of oil in earthen tanks or ponds.

p. 22. Black Panther Oil Co., Barney Thlocco lease, Cushing Field. About 90 heirs of Barney Thlocco are involved in the ownership of a lease in the Cushing Field of Creek County, Okla., which has produced about 1.3 million barrels of oil to date. The Black Panther Oil Co. operates the lease. The heirs claim that Black Panther took more money from the sale of the oil than was allowed, and the case is now in court. There are 16 wells on the property, producing about 7,000 to 8,000 bopd. Dr. Howard Weber of Bartlesville also had a 25% royalty, because he developed the property.

p. 23. Gainesville, Texas, Refinery. The Producers Refining Co. plans to have the first unit of its 10,000 bopd refining plant ready for operation by September. A line will be laid from the Healdton Field, Okla. Cushing producers will take 40% of the $600,000 capital stock. F.H. Thwing, H.M. Evans, George A. Todd, and W.E. McDermott, owners of the Ponca Refining Co. and a Cushing plant, are behind the deal.

p. 24. H. C. Pierce Visits Tulsa. Henry Clay Pierce, head of the Pierce Oil Corporation of St. Louis, Mo., was in Tulsa and Oklahoma, visiting his refinery at Sand Springs and holdings in the Healdton Field. He was accompanied by D.G. Boissevan, Judge B.F. Burwell, and T.W. Serviss. Mr. Pierce is 70 years old and still very active.

p. 24 Gulf Company's New Process. Dr. McDuff McAfee will use a new catalyst in the new Gulf refinery being built at Port Arthur, Texas. Catalysts have been used to crack oil since 1823, when the process was discovered in France. In 1903, catalysts were first used on a large scale, when nickel could be used to help add hydrogen to fixed oils. By 1911, the nickel process was in common use.

p. 27. Cimarron River Flood and Cushing Field, Okla. In the northern end of the Cushing Field, Creek County, Okla., the recent floods of the Cimarron River have wrecked some rigs. The Samoset Oil Co. is constructing embankments to divert the flow of the river. A derrick of the North End Pool Oil Co. was wrecked and a large stream of gas and water was spraying into the air. Previously this same rig was flooded, and much sand covered the boiler and machinery. Two rigs of the North End Pool Oil Co., two of the Samoset, and one each of the Clover Leaf Oil Co., Mid-River Oil Co., and Channel Oil Co. were wrecked.

p. 28. Jennings-Hallet Gas Line Sold. Bird McGuire and Fred Liscum have purchased the Jennings-Hallett gas line of Armstrong, Ramsey, and others. Heavier mains will be laid in Jennings, Pawnee County, Okla.

Ada Gas Franchise. In Pontotoc County, Okla., the citizens of Ada have granted a gas franchise to Skelly & Sankey to pipe gas into Ada from their wells nearby.

Boynton Has Gas Advantages. In Muskogee County, Okla., the Boynton Field has 100,000,000 cfgpd available. The town is 12 years old, on the Frisco Railroad, midway between Muskogee and Okmulgee. A new oil refinery is to be built, to handle 1,000 to 3,000 bopd.

Muskogee County Area, Discussed by West Virginian. E. T. Crawford, of Charleston, West Virginia, recently discussed how prosperous Oklahoma was, especially in the Muskogee County area. He is with the Merritt Oil & Gas Co. which owns about 800 acres around Boynton, about 16 miles west of Muskogee. In June 1914, this company sank the first oil well in that area, opening up the region. They now operate 7 wells, two of which are gas. About 15,000 bopd are produced from the 5 oil wells, about 60% of which is sold immediately for 40¢ a barrel to the Prairie Oil & Gas Co., ending at Baton Rouge, La. Two other fields have been opened up near Boynton, termed Cole and Harris Fields, and about 10 miles of pipe lines are being constructed to connect with the Boynton Field, thence to Muskogee.

p. 28. White & Sinclair in Mexico. White & Sinclair Co. have recently purchased a property near the Panuco River, near Tampico, Mexico, where they have started a well. Thomas W. White, construction engineer, and A.E. Watts, and John Wheeler will take charge of the operations.

p. 30. Barnett Heirs Case. In 1911, the Government filed a case against William Y. Barnett, claiming that he did not have the rights to an allotment, now worth millions. On Friday last, in U.S. District Court at Muskogee, it was decided that he did own the allotment. His wife, Julia Barnett owned the allotment originally, and she was proven to still be alive after April 1, 1899, when the Indian rolls were opened. Julia died in January 1900, and William inherited the allotment. William died in January 1915 in McIntosh County, Okla., and his heirs had the rights to the royalties. Joe Hutton, more than 100 years old, and his wife Amelia, came with the original Creek Indian removal to Oklahoma, and they knew Mrs. Barnett, and when she died. Mr. Hutton filed his allotment in Okmulgee in October 1899, and he visited Mrs. Barnett then. Later, in January 1900, Mrs. Barnett died, and Mrs. Hutton prepared the body for burial. They both testified in court and the Barnett heirs won the case.

p. 30. Pure Oil Co. Stock Report. A stock letter of Pittsburgh, Pa., stated that no dividend would be issued due to depressed conditions caused by the war. Pure has 2,500,000 barrels of oil stored in Oklahoma, with a daily production of 11,000 bbls. In the Cushing Field of Creek County, a new well was completed in the Tucker sand on the Crow lease for 3,000 bopd, causing more overproduction. About 1,800 shares were traded on the New York Stock Exchange at 14.5 dollars a share, for the week ending June 5, 1915.

p. 30. Advertisements. Chas. N. Gould, Geological Engineer, Fifteen years experience in the Mid-Continent Oil Fields. 1218 Colcord Bldg., Oklahoma City.

Fohs & Gardner, Consulting Oil Geologists, 212-213 Clinton Bldg., Phone 3760, Tulsa, Okla.

p. 30. Oil Field Maps. From Texas to Kansas, from 8 West to Arkansas in Oklahoma, showing all pools and wildcat developments. Tulsa Engineering & Supply Co., Pioneer Bldg., Ground Floor, Phone 3336, Tulsa, Okla.

p. 35-36. Oklahoma. Wells. Completed. June 1, 1915. About 274 wells were completed in May 1915 in Oklahoma. In Washington County, in the Copan, Wann, Dewey, Hogshooter, and Bartlesville Fields, 15 wells were completed, for 270 bopd new production, including 1 gas well for 2 mmcfgpd.

In the Cherokee Shallow Sand District, 23 wells were completed for 540 bopd.

In Pawnee County, Okla., in the (Yale), Jennings, and Cleveland Fields, 9 wells were completed for 210 bopd.

In Osage County, 3 wells were completed for 50 bopd new production.

In Creek County, in the Cushing Field, 117 wells were completed, for 129,675 bopd, including 1 gas well for 5 mmcfgpd

In Tulsa County, in the Glenn, Tulsa, Taneha, and Wicey Fields, and Okmulgee County, Beggs Field, and Rogers County, Inola Field, 19 wells were completed for 1,100 bopd, including 3 gas wells at 25,000,000 cfgpd.

In Okmulgee County, in the Okmulgee and Morris Fields, 3 wells were completed for 20 bopd. In the Hamilton Switch Field, 3 wells were completed for 300 bopd. In the Schulter Field, extending into McIntosh County, 6 wells were completed for 410 bopd, including 1 gas well for 2.5 mmcfgpd. In the Bald Hill and Boock Sand Fields, 15 wells were completed for 535 bopd, including 1 gas well at 18 mmcfgpd.

In Rogers, Wagoner, and Muskogee Counties, 43 wells were completed for 1,900 bopd, including 8 gas wells for 37 mmcfgpd.

In Carter County, in the Healdton and Wildcat Jim Fields, 7 wells were completed for 350 bopd, including 2 gas wells.

In Pontotoc County, 2 gas wells were completed, and added to the gas wells in Carter County, the 4 wells totaled 36 mmcfgpd.

In Stephens County, 2 dry holes were drilled, and in Marshall County, 1 dry hole was drilled.

In Kay County, two wells were drilled, for 50 bopd, including 1 gas well for 20 mmcfgpd.

Five miscellaneous wells were drilled, for 50 bopd, including 2 gas wells for 14 mmcfgpd.

Details are given for each of the 274 wells mentioned above.

p. 36-37. Oklahoma. Wells. Drilling. June 1, 1915. About 719 wells are listed as drilling in Oklahoma on June 1, 1915, for May 1915, of which 221 were in the Cushing Field. Details given for each well. These were mostly offset wells. About 166 wildcats were drilling outside of the main areas, mainly in southern Oklahoma in Comanche, Stephens, Marshall, Adair, Love, Coal, Murray, Oklahoma, Garvin, Grady, Hughes, Jefferson, Seminole, Lincoln, Choctaw, Noble, Pittsburg, Atoka, Garfield, Jackson, Beckman, Pottawatomie, Pushmataha, Bryan, Pontotoc, LeFlore, Johnston, Cotton, and Miscellaneous Counties. Details given for each well.

p. 37. Arkansas, Wells, June 1, 1915. About 13 wells were drilling in Franklin, Polk, Howard, Saline, Benton, Hempstead, Crawford, Independence, Sevier, and Miscellaneous Counties. Details given.

p. 37-38. North Texas, Wells, Completed and Drilling, June 1, 1915. In Wichita County, 4 wells were completed in the Electra Field, for 35 bopd, and 1 well was completed in the Fowlkes Station Field, for 10 bopd. 9 wells were drilling.

In the Burkburnett Field, 3 wells were completed for 170 bopd. 14 wells were drilling.

In the Petrolia Field, 1 well was completed for 200 bopd. 3 wells were drilling. This is in Clay County.

In Palo Pinto County, 14 wells were completed for 200 bopd. 22 wells were drilling.

About 35 wildcats were drilling in Young, Knox, Montague, Jack, Tom Green, Collingsworth, Cooke, Hardeman, Haskell, Grayson, Childress, Runnels, Concho, Throckmorton, Brown, Limestone, Coleman, and Shackelford Counties. Details given.

p. 38. Northern Louisiana, Wells, June 1, 1915. In May 1915, 38 wells were completed in Northern Louisiana, for 19,340 bopd new production, including 1 gas well at Shreveport. 29 wells were completed in the Crichton Field, 4 in the Abington Field, and one each in the Harts Ferry, Monterey, Hosston, Shreveport, and Marion County, Tex. Fields. 163 wells were drilling in Northern Louisiana, including 5 in Marion County, Texas, and 1 each in Harrison and Cass Counties, Texas. The others are in Louisiana, mostly in the Crichton Field and Abington Field, with others in the Sabine, Mooringsport, Oil City, Jeems Bayou, Harts Ferry, Monterey, Hosston, Lewis, Pine Island, Black Bayou, Blanchard, and miscellaneous Fields. Details given.

p. 38-39. The Thrall Field is listed under Gulf Coast. About 38 wells were completed, for 10,700 bopd, with 33 wells drilling, for May 1915.

p. 40. Pricing of Oil. Crude Oil Market. In Oklahoma and Kansas, oil is 40¢ a barrel except at Healdton where it is 30¢ a barrel. In North Texas, oil is 45¢ a barrel. In Northern Louisiana it is 45¢ a barrel, except for high grade oil about 38° gravity, which is 60¢ a barrel.

About 6,237,386 bbls. of oil in April were run through the pipe lines in Oklahoma and Kansas, or about 209,577 bopd. In North Texas, about 451,983 barrels were run in April 1915. In Northern Louisiana, about 1,085,008 barrels of oil were run through the pipe lines in April 1915.

About 42 million barrels of oil were in storage in Oklahoma and Kansas during April 1915. In North Texas, about 706,877 barrels were in storage in April 1915. In Northern Louisiana, about 893,272 barrels were in storage in April 1915.

(Previous runs and stocks are shown back each month to May 1914).

Vol. 14, No. 2, June 17, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent at the close of last week was 433,000 bopd, with Kansas and Oklahoma outside of Cushing being 110,000 bopd, Cushing 263,000 bopd, Electra District, Texas, 16,000 bopd, and Caddo District, La. and NE Texas, 44,000 bopd.

p. 1. Headquarters of the McMan Pipe Line Co. are to be located in Tulsa, and not in Oklahoma City.

Louisiana's proposed common-carrier pipe-line bill failed to carry in the Legislature.

Conservation of gas is to be prompted by the Oklahoma Corporation Commission. The Commission will tell operators and producers how to conserve gas while producing oil.

In Scott County, Tenn., near Oneida, previous reports were exaggerated. Some oil was found at 945 feet, but this sand was cased off and drilling continues.

In Palo Pinto County, Texas, about 8 miles north of the Strawn Field, a well was completed for 50 bopd at 1,579 feet.

In the Boynton Field, Muskogee County, Okla., a well was completed, flowing at 50 barrels an hour.

In the Cushing Field, Creek County, Okla., in the week ending June 12, about 28 wells were completed at 20,290 bopd new production. Three wells were dry holes and four wells in Sec. 9-18N-7E had much salt water.

p. 4 Personal Mention. Frank Fox, of Indianapolis, Indiana, is in Tulsa. He is drilling a wildcat test south of the Cushing Field.

Julius Fohs, oil geologist of Tulsa, was in Ardmore, examining the Healdton Field for a local oil company.

Sam Wilkinson is the new oil and gas inspector for Nowata County, Okla., having been appointed by Ed Boyle, State Mine Inspector, to succeed L.F. Keys of South Coffeyville.

F.E. Perkins, of the Pure Oil Co., in charge of the Quaker Oil & Gas Co. in Oklahoma, is now in the service of the Okla. Oil Co.

J.R. Smith, president and general manager of the Clover Leaf Oil Co., has moved his headquarters from Oklahoma City to Tulsa.

John Smith of Independence, Kansas and A.M. Landon, active oil men, were

on their way to Henryetta, Okla. Mr. Smith is with the firm of Smith & Swan Co.

G.W. Carney and wife left Tulsa for Sistersville, W. Va., where his mother died. He is with The Texas Oil Co.

J. C. McDowell was visiting the Cushing Field. He is vice-president of the Wichita Natural Gas Co. and the Quapaw Gas Co. He is a resident of Pittsburgh, Pennsylvania.

S. M. Herber, of St. Louis, Mo., was in Tulsa. He has patents on a new and original process of oil distillation, and his patents extend to all countries.

E.R. Atwell, Jr. and C.W. Cahoon, of Dallas, Texas, with the Pierce Fordyce Oil Association, were looking over their properties near Wichita Falls, Texas. Mr. Cahoon is vice-president of the company and will move to St. Louis, Mo.

W. J. Bovaird, of Independence, Kans., formerly from Bradford, Pa., was in the Spanish American War in 1898, and was in the Pennsylvania National Guard.

p. 4, 6. Noted in Passing. The Laurel Oil & Gas Co. has moved its headquarters from Sapulpa to Tulsa.

L.L. Longdon, of Oxford, Ohio, has compiled a list of oil producers and refiners of the United States. There are more than 5,000 names.

The Mountain Oil Co., of Tulsa, has secured considerable acreage in the southeastern part of the Cushing District.

The Wichita Gas Co. has a pumping station near Pemeta, Okla., on the Lete Kalvin allotment in Sec. 16-18N-7E. They furnish gas to Wichita and other Kansas towns.

South of Yahola, Muskogee County, the Prairie Pipe Line Co. has completed a pumping station for oil from the Cole and Leidecker Fields.

In the Cushing Field, Chestnut & Smith Co. will erect a casing-head gasoline plant on the Sam Lucas farm in Sec. 4-18N-7E.

The Pemeta Refining Co. is the name of a new concern. They will erect a refinery at Pemeta, in the north Cushing Field, using the Rittman process.

Titus Beecher has a method of locating water infiltration problems in wells and shutting the water off. It has been tried in Oklahoma with good results.

The Acme Fishing Tool Co. of Parkersburg, W.Va., has decided to locate a branch office in Oilton, Okla. Ed Nolls will be in charge.

Five widows and their fatherless children from Oilton, Okla., have been added to the widow's colony at Sand Springs, Okla., operated by Charles Page. The children are cared for while the mothers are at work.

The site of the new Mayo Building in Tulsa at Fifth and Main Streets, is where oil was struck in shale at 70 feet by drillers looking for water. The oil was black and heavy, and could have been produced at 2 bopd, but was cased off.

p. 6. Recent Deaths. Solomon Funk, died at his home in Mountainburg, Arkansas, on June 4, 1915. He was formerly from Findlay, Ohio. He was born in Beaver County, Pa., in 1842. In the Civil War, he was in the Fourth Pennsylvania Cavalry. His wife, three daughters, and one son survive him.

Arthur E. Wheeler, an Oklahoma oil driller, was visiting his sister Miss Abigail Wheeler, at Eldred, Pa., when he died of heart disease on May 31. He was born in Eldred in 1862. Two brothers and three sisters survive.

Jesse K. Starr, 73 years old, died at his home in Fredonia, N.Y., on June 6, 1915, where he was a life-long resident. He was the son of Joseph Starr, who located in Fredonia more than 100 years ago. The Starrs owned the original natural gas well on Candaway Creek near the Main Street Bridge in Fredonia. In 1821, the gas was piped for illumination of some buildings in town. When General Lafayette toured the United States, he was a guest at the Taylor Hotel in Fredonia, and was impressed by the gas lights in the hotel. Mr. Starr had a grocery business.

p. 8, 10. Oklahoma and Kansas, by R.H. Whitney. The main attraction is the Cushing Field, in Creek County, Okla., where 28 wells were completed this last week. (Details given for each). About 263,000 bopd can now be produced from the field. Some wells are now producing salt water. Some wells are being drilled to the northeast in Sec. 25-19N-7E. Some wells are dry holes. (Details given).

In Muskogee County, in the Boynton Field, the Elmo Oil Co. #3, J. Cherry lease, in Sec. 15-14N-16E, got 50 barrels of oil an hour. No. 1 was 20 bopd, and No. 2 was a dry hole. The Elmo Oil Co. is composed of J.B. Hazlett and T.J. Booth of Independence, Kans.; P.J. Shovelin, of Springfield, Ohio, and E.J. Lambert of Tulsa.

In Carter County, in the Healdton Field, the Magnolia Pipe Line Co. can run 8,000 to 10,000 bopd to Texas. About 1,420,000 barrels are in storage. The Corsicana Petroleum Co. #3, Smalley lease, was completed in the NE-SE-10-4S-3W, for 50 bopd at 1,134-1,140 feet, with total depth of 1,160 feet.

In Muskogee County, in the Fern Mountain Field, which was discovered three months ago, there are 4 oil wells, a few gas wells, and close to 30 dry holes. The Mathewson et al #2, West lease, in C-N Line-NE-SE-Sec. 19-15N-18E, was plugged at 1,320 feet.

In Okmulgee County, at Bald Hill, the Xetloc Oil Co. #3, Fields farm, in Sec. 13-14N-14E, was completed for 40 bopd at 1,078-1,094 feet.

Deepest Well in Oklahoma. At 3,915 feet, the Leschen & Snowden Co. test, in NW-Sec. 16-16N-5E, southwest of Avery, in Lincoln County, was abandoned. The Bartlesville sand was at 3,790 to 3,840 feet. The owners had 11,000 acres under lease, and this cost them $40,000.

The deepest tests before the above were the 101 Ranch Oil Co. test on the Primeaux farm near Ponca City in Kay County, which went to 3,754 feet, presumably in the Mississippi lime; and the C.B. Shaffer Co. test in Sec. 11-17N-5E, southeast of Cushing, Payne County, which was abandoned at 3,765 feet.

In Atoka County, southwest of Lane, in Sec. 23-3S-12E, Charles E. Douglas had a dry hole at 1,700 feet. He will drill two other tests. The formations looked capable of producing oil.

In Okmulgee County, in the Beggs Field, the George et al Co. had a 40 bopd well at 2,100 feet in the C-NW-Sec. 4-15N-11E.

In the Schulter Field, the Ethylene Oil Co. #1, Douglas lease, in Sec. 22-12N-14E, had a small showing of oil at 1,830 feet, but was a dry hole at 2,170 feet.

There were many electrical storms last week, causing fires in various fields, such as the Glenn, Perryman, Kiefer, Healdton, Cushing, and Terlton Fields, in Tulsa, Creek, Carter, and Pawnee Counties, Okla. (Details given).

In Tulsa County, the Cosden Refining Co. is building a 6-inch line from the Bixby Field to the West Tulsa refinery.

In Washington County, the Prairie Pipe Line Co. is laying a pipe line from Ramona to Independence, Kansas. They are also laying 20 miles of 8-inch line from Indian Station (the Cushing supply depot) to Cherokee Station.

In Creek County, J.C. McDowell, president of the Wichita Natural Gas Co. said that this summer they will lay a 16-inch gas line from Drumright to Wichita.

p. 10. New Expanding Plug. G.C. Gilbert, with the Frick-Reid Supply Co. at Cushing, has invented the Gilbert Expanding Plug, and is placing it on the market. It will pack off water at the bottom of a hole, and is an ideal dry-hole plug. Gilbert & Co. of Owensboro, Ky., are marketing the plugs. The plug was designed to handle the peculiar problems of the Cushing Field in Oklahoma.

J.F. York, of Pawhuska, Okla., has been appointed by the Oklahoma Corporation Commission to be the new conservation officer of the Cushing Field. For the past 5 years he has worked for the Federal Government as oil inspector of the Osage Nation.

p. 14, 16. East Texas and Louisiana. by M. L. Vaughn. In Red River Parish La., the Crichton Field is producing 25,660 bopd. The Caddo District outside of Crichton is 15,792 bopd. of light oil and 2,727 bopd of heavy oil. (Details given on many wells in the Crichton Field). Many wells are being drilled in the Abington, Naborton, Campti, Coushatta, Pelican, Caddo, Harts Ferry, Jeems Bayou, Red River, DeSoto, Shreveport, La., and Marion County and Cass County, Texas, fields. (Details given).

p. 16-17. North Texas, by H.W. Whitney. The number of wildcat wells being drilled in this area are so great that it is impossible to keep up with them all. Wildcats are being drilled near Goree, Knox County; Paradise, Wise County, where the Paradise Oil & Gas Co., about a year ago, had some gas at 400, 620, and 860 feet, and oil at 1,870 feet, on the Cook farm; north of Montague, in Montague County; near Desdemona, by a new company formed by F.M. Daniels; near Blue Grove, Clay County, where oil was reported at 110 feet; near Olney, Young County, where lines are being laid from the Archer-Young County Oil & Gas Co.'s wells 7 miles away; near Vernon, Wilbarger County; the Strawn Field, Palo Pinto County; near Graford, where traces of oil were found at 1,710 feet after passing through the Strawn sand at 1,600 feet; near Eastland, in Eastland County; near Gordon; near Ranger; and in the Electra and Burkburnett Fields. (Details given). One of the most important wells was that of Owens & Williams, 8 miles north of the Strawn Field, in Sec. 84, where 50 bopd was found at 1,579-1,580 feet.

A number of years ago when gas was found at Petrolia, Clay County, Texas, the Fort Worth Natural Gas Co. was supplying Fort Worth with artificial gas. Mr. Scott, president of the company, and J. C. Lord took leases on all of the Palo Pinto County lands when their franchise to Fort Worth was about to expire. Then the gas company was reorganized, and Mr. Scott lost the franchise, and the Palo Pinto County lands were not developed.

L.J. Buchanan, of Wichita Falls, Tex., and Miss Vivian Godfrey, of Galveston, Tex., were married at the Central Christian Church in Galveston on June 9. He is a scout for the J.M. Guffey Petroleum Co. in Wichita Falls, Texas.

People in Wichita Falls, Texas, are J. A. Mercer, of Shreveport, La., looking over Palo Pinto County; Hugh Sturm of Ardmore, Okla., working in Wise County; Cyrus Edwards of San Francisco, Cal., with the Resurrection Oil Co., in Knox County; and J.C. Titus, president of the Slim Jim Oil & Gas Co. of Wichita, Kans., who is drilling the well near Graford.

John Owens, of Ardmore, Okla., known as "Dry Hole John", will drill a well 15 miles east of Ardmore, on 7,000 acres picked up by Capt. David Bennett of the Socialist Party and follower of Eugene Debs, and on 5,000 additional acres picked up by Mr. Owens. (This would be in Marshall County southeast of Mannsville, and possibly in parts of Johnston County to the north).

p. 22. Suffragette Oil Producers. A group of women in Chicago have formed an oil company with $500,000 capital, charted at Shreveport, La., near which they have 6,800 acres. The new company is known as the Federal Oil Co., and they will use the money from their profits to promote women suffrage around the country.

At Gainesville, Texas, about 100 men are building the refinery, which is to be supplied with oil from the Healdton Field. The line will cross the Red River near Burneyville, and is being built by the Producers Pipe Line Co., which owns the refinery. The pump station will be in Sec. 3-4S-3W, just north of the Magnolia Pipe Line Co. station. Magnolia is now moving about 5,000 bopd for the Dundee-Samoset Companies.

In Osage County, Okla., Mr. Charles Page has proposed to sublease 100,000 acres of T.N. Barnsdall's sublease of the Indian Territory Illuminating Oil Co. original lease. The profits will be used to maintain an Osage Indian orphanage at Sand Springs, and to erect a hospital at Sand Springs for sick and dependent Osage Indians. Mr. Page would receive no profits. The Osage Nation was favorable.

p. 23. In Carter and Marshall Counties, Okla., near Provence, Durwood, and McMillan, wildcat wells will be started shortly.

Oil Used in Mixing Cement. The Department of Agriculture has issued a new Bulletin 230 entitled "Oil-Mixed Portland Cement Concrete". Oil will damp-proof concrete, if mixed in less than 10 percent of the cement, provided that the water outside is under low pressure. The tensile and compressive strength is not materially lessened.

Mr. Blaise Visits Texas. E. F. Blaise, former president of the Farmers National Bank of Tulsa and an operator in the Okmulgee-Morris District, has returned from a trip to the Strawn Field, in Texas. He said that the Texas-Pacific Coal Co. has about 70,000 acres under lease or own, and 4 wells drilling. Jack Chaffee

and John Hamill are doing the drilling. The area covers parts of Eastland, Erath, Palo Pinto, and Stephens Counties, Texas. Mr. Blaise liked Jack County, where several oil wells were drilled in 1901 to a depth of 95 feet. The discovery was overshadowed by the Spindletop discovery. Recently, a wildcat will be going down in Jack County. The oil is of the same gravity as that at Electra.

p. 24. Prospects of Ada Oil Field. W.B. Skirvin was in Ringling, Okla., and said that prospects were good for oil at Ada, Pontotoc County, Okla. In Sec. 30-4N-6E, the W.R. Ramsey well had 20 mmcfgpd at 1,250 feet, and about 50 bopd from the same sand. Lightning struck the rig, and the rig was destroyed. After the rig is rebuilt, this sand will be redrilled, and probably an oil field will be discovered. Near the center of Sec. 31, a well made 6 mmcfgpd, and another well one-half mile northeast of that well made 12 mmcfgpd. Near the northern line of Sec. 6-3N-6E, a well made 500 mcfgpd. Apparently prospects are better toward the northeast from Sec. 6 to Sec. 30.

p. 24. Increased Price of Gasoline. In Texas, gasoline is retailing at 13 cents a gallon, an increase of one cent, according to E. P. Angus of the Magnolia company.

p. 26. Falls County, Texas. People from Rosebud have formed a company and will drill a well on the John Peavy farm about 8 miles from Marlin, Texas. About 8 wells are now being drilled in Falls County, Texas.

p. 26-27. 31. Healdton Field, Commission Rules. W. D. Humphreys and George A. Henshaw of the Oklahoma Corporation Commission, and Mr. Davis of the U.S. Bureau of Corporations have issued reports on the Healdton Field, regarding conservation, prorationing, and pricing of various grades of oil from 29 to 33 gravity, including analyses of the various oils. House Bill 168, Feb. 11, 1915; Revised Laws of Oklahoma 1910, Section 4307; and House Bill No. 160, Section 4, now apply to the oil and gas fields of Oklahoma. The Healdton Field is the first place where these laws were tested. The Magnolia Petroleum Company was not blamed for reducing the price of Healdton oil because it cost more money to remove the sulphur, and the oil is most suitable for lubricating oil instead of kerosene and gasoline, but there is not as much demand for lubricating oil west of the Mississippi River.

p. 30. Fohs & Gardner. Consulting Oil Geologists. Nos. 212-213 Clinton Bldg., Tulsa, Okla.

Charles N. Gould, Geological Engineer. Fifteen years experience in the Mid-Continent oil fields. 1218 Colcord Bldg., Oklahoma City.

Oil Maps. Tulsa Mapping Co. 503 First National Bldg., Tulsa.

Tulsa Engineering & Supply Co. Oil Field Maps. Ground Floor, Pioneer Bldg., Tulsa, Okla.

p. 30. Wortham, Texas, Leases on 5,000 acres. The Wortham-Mexia Oil & Gas Co. is a new firm, formed by citizens of Wortham and Mexia, Texas, with capital stock of $5,000. They have about 5,000 acres of leases northwest of Wortham. A test was just completed one mile from Wortham, showing some high-grade oil. The next well will be on the H.C. Hackney farm. The directors of the new company are F.D. Wright, Henry Bounds, and A.N. Weaver of Wortham, and Blake Smith and Will Keeling of Mexia.

p. 32. Crude Oil Market. Pricing. Oil in Oklahoma and Kansas was 40¢ a barrel, except at Healdton, where it was 30¢ a barrel.

In North Texas, oil was 45¢ a barrel, except for Corsicana crude which was 40¢ a barrel.

In Northern Louisiana, the price was 60¢ a barrel for 38° gravity and above oil in the Caddo Field, 50¢ a barrel for 34-37° gravity oil, and 45¢ a barrel for Caddo crude.

In Pennsylvania, oil was $1.35 a barrel.

Pipe Line Runs for May 1915. In Kansas and Oklahoma, for May 1915, about 7,210,210 barrels of oil were run. About 54,162,270 barrels were in storage.

In North Texas, about 453,450 barrels of oil were run for May 1915. About 856,673 barrels were in storage.

In the Caddo District of Northern Louisiana, for May 1915, about 1,289,849 barrels of oil were run. About 1,123,661 barrels were in storage.

Vol. 14, No. 3, June 24, 1915. p. 1. Mid-Continent Production. The apparent estimated production of oil in the Mid-Continent at the close of last week was 417,500 bopd, with Kansas and Oklahoma outside of Cushing being 110,000 bopd; Cushing 250,000 bopd; Electra District, Texas, 15,500 bopd; and the Caddo District of Northern Louisiana and East Texas at 42,000 bopd.

p. 1. The Grand Trunk Railroad is now using fuel oil in place of coal.

The war is now costing Great Britain $15,000,000 a day. British taxpayers are complaining.

p. 3. The Papua Oil Fields. In Papua, British New Guinea, a geologist named Wade has found many seeps along the south coast for 150 miles, along a path 8 to 15 miles wide, covering about 1,500 square miles.

p. 3-4. Personal Mention. F.M. Selby, head of the Selby Oil & Gas Co. was in Tulsa. His home is at Marietta, Ohio.

Dickson Q. Brown, president of the Okla Oil Co., the producing branch of the Tidewater Pipe Line Co., was in Tulsa from the East.

H.V. Foster, and John H. Brennan, of Bartlesville, president and attorney of the Indian Territory Illuminating Oil Co., are in Washington, D.C.

John Dyson, of Fort Worth, Texas, was in Tulsa. He drilled the first well in the Cleveland Field, Pawnee County, Oklahoma.

Henry Leschen of St. Louis, Mo., and William Leschen, of Tulsa, were in Ponca City looking after the interests of the Laclede Oil & Gas Co.. Henry is president of the various Leschen interests.

M.M. Travis and wife are spending the summer in New York. He is president of the Mid-Co. Petroleum Co.

W.L. Russell, of Russell & Skelly of Lima, Ohio, is visiting in Tulsa. He has production in the Healdton Field.

W.B. Pine, of Okmulgee, was in Tulsa. He is one of the organizers of the Okmulgee-Morris Oil Producers Association.

C.B. Amyx, of Chanute, Kansas, was in Tulsa. He has submitted a proposal to the citizens of Taylor, Texas, for the construction of a refinery, to take care of the oil from the Thrall Field.

F.L. Maire, of Lima, Ohio, of the firm of Roth, Argue & Maire, is in Tulsa. He owns the Maire Hotel in Bartlesville, and has interests in Oklahoma fields, and the Trenton Rock Field in Ohio.

p. 4, 6. Noted in Passing. Owing to high prices of zinc due to war, a number of oil men are taking up mining in the Miami and Joplin Districts. Cleanups are being made at more than $100 a ton of rock.

Lew Van Vleck and Joe Haskell, son of former Governor C.N. Haskell, left for Peru, Bolivia, and Argentina for 4 months, for the senior Haskell and his associates.

p. 6. Recent Deaths. M.J. Moore, 66 years old, died on June 12 at Olean, New York, at the home of his sister Mrs. Mary E. Smith. He had heart trouble. He worked for the July Oil Co. at Bolivar, N.Y. Surviving are two sons and two daughters. One son is Elmer Moore, of Sapulpa, Okla.

p. 8,9,10. Regulations Governing Future Osage Leases. On March 16, 1916, the rules for leasing in the Osage Reservation will go into effect. Only one company can lease 4,800 acres, and no more. About 67 main companies have about $45,000,000 worth of property that will be affected. (Details given). Oil royalties will be one-fifth instead of one-eighth, and gas royalties will be one-sixth. Under the Foster Lease, the land was divided into blocks one-half mile wide and 3 miles long, but under the new rules, the leases will be resurveyed into the regular Township-Range-Section method.

The original blanket lease of Edwin B. Foster covered 1.5 million acres, the entire Osage Reservation, in 1896, and was to expire in 1906. Royalties were one-tenth for oil; and $50 a year per each gas well being used. Two years after the original grant, Mr. Foster transferred rights to the Indian Territory Illuminating Oil Co. The new company subleased to many companies, retaining one-sixth royalty for oil, and all of the gas rights, but paid for the costs of the gas wells. In October 1897, the first well was drilled in the Osage Nation, just after the Cudahy Oil Co. completed the Nellie Johnstone at Bartlesville in August 1897. The nearest pipe line was that of the Prairie Oil & Gas Co. at Caney, Kansas, more than 25 miles away. Up to Jan. 1, 1903, about 30 wells were completed in Osage County, 11 of which were dry, and two were gas.

In 1904, the railroad and pipe line were extended from Caney to Bartlesville, Washington County, Okla. At the end of 1904, 391 wells were completed, of which 97 were dry. In 1906, there were 862 producing wells in Osage County. About 680,000 acres were taken by sublessees to 1906. By 1905, a bitter fight started against the renewal of the Foster lease. In 1906, President Roosevelt stepped in and renewed the leases for 10 years for land that had been developed or had been considered as productive property, covering the 680,000 acres in the eastern part of the county. The Osage royalty was increased from one-tenth to one-eighth, on oil.

In 1915, a new Osage Tribal Council was formed, and they did not want to renew the lease, desiring the return of the land to the Osage Nation. The U.S. Secretary of the Interior confirmed the ruling. In the past 19 years, more than $4,000,000 have been paid to the Osage Indians in royalties, or about $750 for each person on the rolls. They also received $505,000 on 110,000 acres not under the Foster lease. There are 2,230 Osages on the rolls, about 2,000 of which live on the reservation. The Osages also have leases on grazing rights in the western 800,000 acres of the reservation at 10¢ an acre per year, and these rights are renewed each year. An enrollment in the Osage Tribe is worth $27,500 in cash. This makes the Osage Indians, per capita, the richest race in the world.

On June 17, 1915, the official resolution was adopted by the Tribal Council and published in Washington, D.C. The lease of the Indian Territory Illuminating Oil Co. will expire on March 16, 1916, and the company will be eliminated as an intermediary in leasing. No company can lease more than 4,800 acres, for a 5 year period. The U.S. Government has the first right to purchase all of the oil. Leases will be made in 40-acre units, and a well has to be drilled within 1 year, or a rental penalty of $1.00 an acre per year will have to be paid. Gas leases will remain with the present owners and the royalty will be one-sixth to the Osages. Oil royalties will be one-sixth on wells less than 100 barrels, and one-fifth on wells more than 100 barrels. Previous owners of 70,000 acres of leases of producing property will be given first option to renew those leases, in addition to 165,000 acres of non-producing properties nearby. All other land will be open to the highest bidder for leases. Congress was asked to extend the trust period of the Osage Nation which under existing law will expire on April 8, 1931.

p. 10, 12. Oklahoma and Kansas, by R.H. Whitney. In Creek County, in the Cushing Field, 19 wells are listed as completed this week. (Details given). Production is beginning to fall off. New wells are now being drilled in T.19N.-R.7E. About 245,000 bopd is now being produced; much below the 260,000 bopd high. About 39,250,000 barrels are in storage.

In Muskogee County, in the Cole Field, the Dalsa Oil Co. #4 Peters in Sec. 11-14N-15E was completed at 1,558 feet for 200 bopd.

In Carter County, in the Healdton Field, the 1911 Oil & Gas Co. #6 Underwood in Sec. 32-3S-3W was completed for 35 bopd.

In Tulsa County, in the Mounds Field, Ice et al Co. #1 in Sec. 5-16N-11E was completed at 1,811-1,835 feet for 75 bopd.

In Creek County, in the area north of Kellyville, Beard et al Co. #3 Keifer in Sec. 26-18N-10E was completed at 1,912-1,925 feet for 10 bopd.

In Lincoln County, southwest of Avery, is the deepest hole in Oklahoma, complete at 3,915 feet in Sec. 16-16N-5E, by Leschen & Snowden Co. It was a dry hole, except for a showing of 2.5 barrels at 3,419 feet, and some gas at 3,425 feet. (Details given). The Layton sand was at 2,310 to 2,335 feet. The Jones sand was at 2,785 to 2,800 feet. At 3,375 feet there was a trace of oil. A black shale was at 3,880 to 3,915 feet.

In Pawnee County, two miles west of Ralston, the New England Oil & Gas Co. test in Sec. 4-23N-5E, at 3,130 to 3,213 feet, had gas, and at 3,213 to 3,217 feet an oil sand was struck and the well filled with oil.

At Jennings, the Republic Oil & Pipe Line Co. in Sec. 21-20N-7E had a showing of 25 bopd at 2,021 feet, probably in the Cleveland sand, and they are now going for the Bartlesville.

In Creek County, 5 miles northwest of Depew, Frank Fox and the Gypsy Oil Co. completed a wildcat gas well in Sec. 16-16N-7E for 25 mmcfgpd from the Layton sand at 1,859 to 1,876 feet. The gas is being sold to the Creek County Gas Co. Another well will be started to the west.

In Okmulgee County, west of Beggs, the George et al Co. in Sec. 35-15N-11E have a showing at 40 bopd. About a year ago, Russell Brothers & Skelly completed a small well in the Beggs neighborhood. Many dry holes have been drilled in the area.

p. 12. Fires. On Tuesday and Wednesday, a number of fires were started by lightning in the Cushing Field and near Sapulpa, in Creek County. (Details given). Tiger Creek near Drumright also caught fire.

p. 12, 14. East Texas and Louisiana, by M.L. Vaughn. Many gushers are being completed for 100 to 500 bopd in the Crichton Field or southern district of northwestern Louisiana, with stepouts being drilled 6 miles away. The production is about 24,316 bopd this week. In the northern district or Caddo District, the production was about 15,318 bopd of light oil and 2,857 bopd of heavy oil, or 18,175 bopd. (Details given). Many tests were being completed or drilled in the Monterey Field, Abington Field, Ferry Lake Field, Hosston Field, Harts Island, Mooringsport, Shreveport, and adjacent Fields in Bossier, Red River, Caddo, and DeSoto Parishes, and in Cass and Marion Counties, Texas. (Details given).

The U.S. Government has allowed lessees to drill in the bed of the Red River, if they do not interfere with navigation. The State of Louisiana does not have jurisdiction.

p. 14, 16. North Texas by H.W. Whitney. There is considerable drilling in many counties of North Texas, and there would have to be a phenomenal well far in advance of proven territory before anyone would take notice. Most of the wildcatting is near Vernon, in Wilbarger County, but many tests are being drilled between Moran and Strawn, and other areas, in Palo Pinto County, Stephens County, Wise County, Knox County, Tom Green, Montague, Grayson, and Eastland Counties. (Details given). In Palo Pinto County, 10 miles from Palo Pinto, the Southwestern Oil & Gas Co. got gas at 525 feet on the southeast corner of the Belding Ranch, about 200 feet from an old gas well drilled several years ago on the F.M. Watson ranch. Hundreds of people have visited the well. About 5.5 miles north of Strawn, Johnson, Owens & Wilson Co. have about 50 bopd at 1,570 feet on the Stuart ranch. Many small wells were completed in the Strawn Field. (Details given). In Wichita County and surrounding area, development continues in the Electra and Burkburnett Fields. (Details given). At Burkburnett, the Corsicana Petroleum Co. #30 Schanaree was completed at 1,680-1,696 feet for 150 bopd. Walter Cline #2 Fred Thom had 30 bopd at 1,695-1,728 feet.

p. 22-23. Opening of Oil Industry in Kansas Recalled by Old-Timer. Oil was known in Kansas before 1867, but there was no attempt to develop the industry. The first well drilled in Kansas was at Paola, but it was abandoned, and no others followed.

In 1893, Guffey & Galey leased several hundred thousand acres in Kansas, and located their office at Neodesha, in Montgomery County. They drilled their first well on Fall River, about 4 miles from Neodesha. W.S. Mowris, of Tulsa,

then of Pennsylvania, was the contractor, and Alexander Murray was the tool dresser and helper. Rig timbers had to be rough hewn, and there were no rig builders in Kansas. The first well was finished in 3 weeks and was a gasser. It was the first gas well in Kansas and it supplied Neodesha and adjoining towns for years.

Thus encouraged, Guffey & Galey contracted for 7 more wells, and Mr. Mowris went ahead with the job. Each well was an oil well, each averaging 25 to 40 bopd, from 700 to 980 feet. The first well drilled at Neodesha in 1893 was cleaned out a year ago, and it is now producing 12 bopd.

Recently Mr. Mowris said that they had no supply houses, no boarding houses, no material, no labor, and no roads, as if they were in the heart of Africa. They cooked their own food, washed their own clothes, and built their own rigs. Drilling was easy. The first well was finished with 4-inch casing, and the well started out at 25 to 40 bopd of 32 gravity oil, found in a shale. They went ahead on the farm of W.M. Mills, of Osawatomie, and completed 7 wells in 1893, all at about the same depth with the same type of production of the same type of oil.

Soon after completion of the wells in the Neodesha Field, they sold their acreage to the Forest Oil Co., a subsidiary. The Forest Oil Co. developed the Neodesha Field and the Thayer Field in Neosho County, a few miles south of Chanute. Between 1893 and 1895, Forest had production up to 500 bopd. Then they transferred their Kansas properties to the Prairie Oil & Gas Co. which was newly organized. Prairie built a refinery at Neodesha, with a 1,000 bopd capacity. It now has a capacity greater than 10,000 bopd. A pipe line was laid to Thayer when the refinery was constructed, and this was the first pipe line in Kansas, and was the beginning of the first pipe line system of the Standard Oil Co. in Kansas. Now the Prairie Pipe Line Co. owns 20,000 miles of main trunk lines, and 30,000 miles of laterals and feed lines. After Spindletop in Texas in 1901, operators began to return to Kansas, and they developed the Humboldt and Chanute areas, and later Independence, later coming to Bartlesville, Okla., in 1904. The government was shy about leasing Cherokee Land, but Senator M.S. Quay of Pennsylvania and others helped to secure leases in Washington County, Okla., in what are now the Weber and Canary Fields, and the Cherokee Shallow Sand Fields in Nowata County. The Prairie was allowed to extend their lines into those fields.

In 1905 when the Glenn Field came in, Prairie was not allowed to extend their lines southward for 4 or 5 years, being blocked by Secretary Hitchcock.

p. 26. Devonian-Roxana Transfer Halted by Department. The Interior Department has held up the sale of the Devonian Oil Co. property in the Cushing Field to the Roxana Petroleum Co., for $1,950,000 because the Secretary of the Interior must have an affidavit from each stockholder of the Roxana-Royal Dutch-Shell combination. There are 29,000 stockholders in the combine.

p. 28-29. Gas-Light, Heat and Power. Cushing to Have Gas System. The Home Gas Co. of Cushing, Okla., was organized to pipe Cushing for light and heat.

Big Gas Field Developed near Coffeyville, Kansas. The Ludowici Oil & Gas Co. brought in a gas well yesterday on the Mike Straub farm northeast of town, in Labette County. The company is developing a large gas field near Coffeyville. Karnes & Pilster have drilled 11 wells north of town, and all were producers except for one.

Decision Favors Oklahoma Natural Gas Co. The Supreme Court of Oklahoma ruled that the Oklahoma Natural Gas Co. did not have to obey a statute forcing them to be a common carrier or a common purchaser of gas. Two and a half years ago, the Oklahoma Legislature passed the Carr Bill, requiring all natural-gas lines to become either common purchasers or common carriers. Immediately following the passage of this bill, the Oklahoma Natural Gas Co. obtained an injunction against the State, and their appeal was finally upheld.

Kansas Natural Gas Co. Rates Depend On Missouri Rates. The Kansas Natural Gas Co. supplies gas to 40 towns in Kansas and 10 in Missouri, including Kansas City, St. Joseph, and Joplin. About 70% of the gas is marketed in Missouri. If Missouri grants an increase, then there will be a similar increase in Kansas,

if Kansas approves. John M. Landon, receiver and general manager of the Kansas Natural Gas Co., said that the company did not desire an increase in rates in Kansas unless the rates are increased first in Missouri.

Gasser Struck West of Nowata. N.S. Brown, drilling for the Caldwell Oil & Gas Co., completed one of the biggest gas wells drilled in the past 5 years in Nowata County, Okla., about 6 miles southwest of Nowata, on the Zanzen farm. The well gauged at 8,600,000 cfgpd and was completed in the Burgess sand at 1,185 feet. The Bartlesville sand was at 886 feet, and the Hogshooter sand was at 1,085 feet. The Caldwell Co. is from Titusville, Pa.

Five-Million-Foot Gasser in Muskogee County. A 5 mmcfgpd well was brought in Monday night by Harry Oliver in the Robinson Field in the SE-SW of the Commercial Bank Lease in Sec. 18-15N-18E. The gas was found at 1,186-1,197 feet. This is directly north of the Persian Oil Co. big well, and it was the second one drilled in the Robinson Field. The Oliver-McClain et al Co. drilled the well.

Sapulpa, Better Gas Rates. The Central Fuel & Light Co. has asked the Oklahoma Corporation Commission to raise the gas rates for Sapulpa, Creek County, Oklahoma.

Gainesville-Dallas Gas Line. The Lone Star Gas Co. is constructing the 16-inch gas line from Gainesville to Dallas, Texas. Gas from the Petrolia Field to Bowie to Gainesville will be used in Dallas by the Dallas Gas Co. Denton will also be supplied. The line will be 58 miles long, and will be the second line to Dallas.

Mexia Field, Texas, Not Consolidated. The various gas companies operating in the Mexia Field, Texas, decided not to consolidate, resulting in variable rates to various towns such as Mexia and Corsicana, due to variable operating costs.

p. 29. Opinions Clash on Oil's Origin. A Mr. Kijner at a meeting at Moscow University read a paper supporting the cosmic theory of formation of hydrocarbons. He pointed to the experiments of the French chemist Forkignon who obtained hydrocarbons by treating cast iron with hydrogens at 700 to 900°C. Similar processes must have taken place when our planet cooled down. German investigators point to animal fats as the probable source for hydrocarbons, in sedimentary rocks. Both theories are in need of more research.

p. 31. Magnolia Pipe Line Tariffs Filed. The Magnolia Pipe Line Co. has filed a list of tariffs with the Interstate Commerce Commission, covering oil from the Healdton Field to Fort Worth, Texas, and areas in between. The rates vary from 5¢ to 17¢ a barrel.

Vol. 14, No. 4, July 1, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent at the close of last week was 414,500 bopd, with Kansas and Oklahoma outside of Cushing being 110,000 bopd, Cushing Field 245,000 bopd, Electra District, Texas, 15,500 barrels a day, and Caddo District or northwestern Louisiana and northeast Texas, 44,000 bopd.

p. 2. Immense Waste of Cushing Gas. A.J. Diescher, general manager of the Quapaw Gas Co., estimated that the wasted gas in the Cushing Field amounts to $20,000,000. About 500,000,000 cfgpd is being wasted. Only 50,000,000 cfgpd is being used. Almost 90% of the gas in Oklahoma is wasted.

p. 4. Personal Mention. L. Feist, president of the Savoy Oil Co., successor to Manuel Hirsch, has arrived in Tulsa from New York City.

J.O. Banks, of Westheimer & Daube Co. of Ardmore, was in Tulsa, looking after oil interests of the firm.

John H. McCormick, of Johnsonburg, Pa., is now a resident of Ardmore, Okla. He will work at the Ardmore refinery.

Charles N. Sherman of Tulsa is in Bradford, Pa., visiting his father who is the coroner of McKean County, Pa.

J.T. Richards has arrived in Tulsa from Troy, N.Y., where he graduated in engineering from the Rensselaer Polytechnic Institute. He will join his father, A.A. Richards, in the oil business in Tulsa.

Noel Barnsdall, of Bartlesville, was in Tulsa. He is a member of the Barnsdall family of Titusville, Pa. whose oil activities date back to the opening of the industry by Colonel Drake.

Arthur G. Reed, who has been in Tulsa for a year, is now head of the land department of the Lone Star Gas Co., with headquarters in Fort Worth, Texas.

Donald M. Cahill, of Coffeyville, Kansas, and Miss Carrier Belle Tavenner were married at Parkersburg, W. Va. She is the daughter of Horace M. Tavenner, manager of the Canadian Oil Co. refinery at Petrolia, Ontario. They will live in Coffeyville.

p. 4,6. Noted in Passing. According to a U.S. Government report, there are more than 13,000 oil-burning farm tractors west of the Mississippi River.

The American Oil Co. has been chartered at Independence, Kansas, to develop territory in Chautauqua County, Kansas.

Near Brenham, Texas, a local oil company has made a strike at 1,080 feet. They have leases on 4,000 acres.

The Shell Marketing Co. has been formed to handle distribution of oil products of the company.

In the vicinity of Simpson, Marshall County, Okla., Owens and others of Ardmore are preparing to drill a deep test. They have leased 7,000 acres.

The Niotaze Sunflower Refinery has been shut down at Niotaze, Kansas.

The Ada, Okla., Commercial Club has asked the Government to send an inspector to help conserve gas in the Ada Field. The production is now about 75 mmcfgpd.

In the Cushing Field, a Pemeta special report says that the Quaker Oil Co. has purchased an 1862 Civil War cannon, to be used to puncture oil tanks struck by lightning. The cannon was bought at Philadelphia.

Oil is now being shipped from New York to Alexandria, Egypt, to be used by the British at Suez and in submarines in the Dardanelles.

In Carter County, Okla., 10 miles northeast of Healdton, oil has been struck at 1,645 feet, and a new field opened. The initial production was 400 bopd. The Gypsy Oil Co. and others have leased 5,000 acres in the area.

p. 6. Recent Deaths W.F. Cowric, age 58, died of sunstroke at Electra, Texas. He was a driller from back East and had been in North Texas for 3 years. One son, Charles, survives. Interment was at Electra.

John W. Phillips, age 65, died June 25 at McClintockville, Pa., at the home of his son W.F. Phillips. He was born in Westmoreland Co., Pa., in 1850. In 1858, his mother and father, William Phillips, moved to Venango Co., Pa., where his father engaged in the oil business on the Tarr farm in the 1860's. John was the owner of a chain of drug stores and also engaged in farming, and was a county commissioner for 2 years. Two sons and two daughters survive, one of the latter being Mrs. D.W. Moore of Bartlesville, Oklahoma.

p. 8. Summary of Field Operations for June 1915. In Oklahoma for June 1915, there were 276 completions for 114,370 bopd new production, with 18 gas wells and 39 dry holes, and 803 new wells being started. Cushing had 104,770 bopd.

In Kansas, there were 28 completions for 130 bopd new production including 17 gas wells and 4 dry holes, and 78 new wells being started.

In North Texas, 15 wells were completed for 630 bopd new production, with 2 gas wells and 4 dry holes, and 80 new wells being started.

In Northeastern Texas and Northwestern Louisiana, or Caddo District, 56 wells were completed in 18 fields, for 13,350 bopd new production, including 1 gas well and 14 dry holes, with 153 new wells being started. The Crichton Field was the most active with 29 completions for 11,935 bopd new production and 58 new wells being started.

(Details given for each district or field).

p. 10,12,14. Oklahoma and Kansas, by R.H. Whitney. In Creek County, in the Cushing Field, about 21 wells were completed for 18,900 bopd new production this past week. (Details given). On Saturday, the output from the Bartlesville sand was estimated at 240,000 bopd.

In Carter County the Healdton Field continues to be developed. The present

potential production of the field is estimated at 50,000 bopd. (Details given).

In Creek County, at Kellyville, 4 miles southwest of Sapulpa, a number of good wells are being developed. More than 2 years ago, Dr. Scott began drilling south of there, finding gas. After several more tests, he found oil in the Dutcher sand in Secs. 1 and 2-16N-10E. Pioneer work is now going on in 17N and 18N-10E. (Details given). Wright et al No. 1 got 35 bopd in Sec. 23-17N-10E. The Great Western Petroleum Co. got 15 bopd in Sec. 24-17N-10E.

Southwest of Keystone, in Sec. 1-19N-9E, Charles Page has been drilling for some time, and had an oil show at 2,358-2,374 feet. He will go deeper.

Near Olive, the Producers Oil Co. had a gas well some time ago, and there is activity in that area, in 18N-8E.

Northeast of Sapulpa in Sec. 8-18N-11E about 7 oil wells were completed: Rogers Drilling Co. #2, and #3, D. Morrison farm, for 25 bopd each; Henry Honecker Co. #1, and #3, D. Morrison farm, for 20 and 25 bopd; Kemp et al Co. #1, and #3, for 25 bopd each; Eastern Oil Co. #1, H. Morrison farm, for 25 bopd. In Sec. 16-18N-11E, Quaker Oil & Gas Co. #1, Weaver farm, got 75 bopd. In Sec. 18-18N-11E, Stout et al #4 got 25 bopd. In Sec. 15-18N-11E, Hill et al Co. #2 is 25 bopd. In Sec. 14-18N-11E, Zeigler & Co. have 10 bopd.

Southwest of Sapulpa, in Sec. 15-17N-11E, the Little Dog Petroleum Co. #2, Butler farm, was completed for 10 bopd.

In Tulsa County, in the Wicey Field, 3 wells were completed at 2,100 feet: Aiken Oil Co. #7, W.A. Funk farm, Sec. 4-16N-13E, for 50 bopd; Scioto Oil Co. #10, Barnes, for 50 bopd; and the Scioto Oil Co. & Gypsy Oil Co. #2, Smith, Sec. 3-16N-13E, for 35 bopd.

In the Day Field of Tulsa County, 2 producers were completed. The Parish & Exchange National Bank of Tulsa #2, Avery, in Sec. 31-20N-14E, got 150 bopd; and Avery & Jones Co. in Sec. 36-20N-13E got 100 bopd in their third test.

In the Owasso Field, the Riley et al Co. well on the Grommer farm in Sec. 19-21N-14E got 25 bopd.

In Pawnee County, at Ralston, in Sec. 4-23N-5E, 2 miles west of town, the New England Oil & Gas Co. got 25 bopd at 3,200-3,204 feet.

At Jennings, in Sec. 21-20N-7E, the Republic Oil & Pipe Line Co. test had 25 bopd at 2,021 feet in the Cleveland sand, and is being drilled deeper. They are now at 2,400 feet.

In Muskogee County, just west of the Harris Field, in Sec. 1-14N-15E, the Three Friends Oil Co. got 35 bopd at 1,375 feet.

p. 14. Steel Storage in Oklahoma. Approximately 1,285 steel tanks of 55,000 barrel capacity have been built in Oklahoma, and about 905 of 35,000 to 37,500 barrel capacity have been built. The steel costs about $11,250 per large tank, and the construction cost is about $2,750 per tank, not counting hauling and grading. About $23,262,000 has been spent on the tanks, not counting hauling and grading. About 63 companies are listed who have these tanks. Prairie Oil & Gas Co. has 188 of the large tanks and 873 of the smaller ones. The Texas Co. has 176 of the large tanks, and other companies are Gulf with 127, McMan 110, Carter 108, Producers 86, B.B. Jones 70, C.B. Shaffer 50, Quaker 50, Gunsburg & Forman 42, with many smaller companies with less than 32. Most of these are in the Cushing Field.

p. 16, 18. East Texas and Louisiana by M.L. Vaughn. In the Crichton Field, La., 4 producing wells were completed the past week for 3,250 bopd new production. The daily average production for this field is 26,755 bopd, termed the southern district. The Caddo or northern district was 18,168 bopd, and this includes most of the other fields and northeast Texas. (Details given).

p. 18-19. North Texas, by H.W. Whitney. In Palo Pinto County, Texas, in the Strawn Field, many wells are being drilled along a 40 mile trend. A new location is on the bend of the Brazos River 30 miles northeast of the production near Strawn, where some shallow oil had been found at 250 feet. Oil seeps also occur on the banks of the Brazos. (Details given). The producing sand in the Strawn field is at 750 to 1,500 feet, depending upon the structure.

In Wichita County, in the Burkburnett Field, the Corsicana Petroleum Co. #30 Schanarre farm got 170 bopd at 1,725 feet, and when deepened to 1,759 feet they got 200 bopd.

In the Electra Field, The Producers Oil Co. #85 Waggoner Ranch got 10 bopd from 1,975-1,985 feet.

In Clay County, in the Petrolia Field, the Henrietta Oil & Gas Co. #5 Fee had gas at 1,645 feet.

p. 20. In the Thrall Field of Williamson County, Texas, drilling continues. Many wells are dry holes. (Details given). The Corsicana Petroleum Co. #18 on the east side of the Stiles lease, 2,600 feet east of the west line of the farm, was making 440 bopd, even though it was reported at 2,000 bopd.

p. 20. J.A. Hall, age 38, an oil contractor, died in Tulsa on June 27. He was buried at Bartlesville, Okla.

p. 23. Orders for Large Map. The Tulsa Engineering and Supply Co. prepared a map of the Oklahoma oil fields for the Indian Agency at Muskogee. the map is 16 by 44 feet. They also printed a 7 x 7-foot map of Joplin, Mo.

p. 23. Publication. The Oil Scouts, by James C. Tennant. The Derrick Pub. Co., Oil City, Pa. For sale by The Oil & Gas Journal, Tulsa, Okla. Sketches, portraits, and the work of the intrepid oil scouts. Price $1.00; mail $1.10.

p. 24. Cannot Sell State Leases. The Oklahoma Attorney General has ruled that all leases on State land cannot be transferred, but must be surrendered back to the State. If an operator cannot carry out his contract for his State lease, he cannot sell it to another person, but must give it back.

p. 26-27. Gas Conservation Order Discussed. Of the many regulations on gas conservation in Oklahoma, the Corporation Commission stated that any well producing 2,000,000 cfgpd or less is considered non-commercial.

p. 28. Gas-Light, Heat and Power. In June 1915, 70 mmcfgpd of new gas was discovered in Oklahoma and 14.5 mmcfgpd was found in Kansas. Creek County outside of Cushing had 31 mm, Cushing 2mm, Osage 2mm, Cherokee Shallow Sand 5 mm, Cherokee Deep Sand 4.5 mm, Southwest Oklahoma 5.5 mm, and Miscellaneous 20 mm cubic feet of gas per day.

About 20 mmcfgpd was found by Frank Fox et al Co. in Sec. 16-16N-7E in Creek County. The Creek County Gas Co. is using this to supply Cushing.

About 10 mmcfgpd was found by Smith et al Co. #1 in Sec. 1-13-13E, in the Morris Field of Okmulgee County.

About 5 mmcfgpd was found by Ross et al Co. in Sec. 1-15N-16E in Wagoner County, southwest of Clarksville.

About 5 mmcfgpd was found by Ardizzone & Ossenbeck in Sec. 21-19N-15E, in northern Wagoner County.

In Pontotoc County, in the Ada Field, 3 wells were completed. The McThwaite Oil & Gas Co. #7 got 2 mmcfgpd in Sec. 31-4N-6E. Skelly & Sankey Co. completed #3 and #4 on the Ford & Harris tract, for 0.5 and 5 mmcfgpd respectively.

Other smaller wells are discussed in other districts. (Details given).

p. 30. Removal of Refinery Plant. S.S. Osborn of Chanute, Kans., will begin work on an oil refinery at Thrall, Texas. He bought the refinery at Petrolia a year ago, and he is having this plant dismantled and he will ship it to Thrall. The new refinery will have a 1,000 bopd capacity.

p. 31. Wells More Than A Mile Deep. The deepest well in the world is in Upper Silesia, Germany, in a coal field, and is 7,350 feet deep.

A well in Pennsylvania, 4 miles NW of McDonald, about 15 miles west of Pittsburgh, is at 7,174 feet deep and may go deeper. Rock salt was found at 6,830 to 7,100 feet, of Salina age. At 6,775 feet the temperature was 145°F.

At Derrick City, near Bradford, McKean Co., Pa., there is a well 5,820 feet deep, which is probably the second deepest in the United States.

In West Virginia, on Slaughter Creek, Kanawha Co., there is a well 5,595 feet deep.

Near West Elizabeth, Pa., there is a well 5,575 feet deep, and near Gaines, Pa., a well now being drilled is at 5,500 feet.

p. 32. Crude Oil Market. The price of crude oil in the Mid-Continent at present is 40¢ a barrel in Kansas and Oklahoma, except for 30¢ at Healdton, Okla. In North Texas, crude is 40-45¢ a barrel, and in Northern Louisiana, it is 45¢ for crude below 35° gravity, and 50-60¢ for crude above 35-38° gravity.

Pipe Line Runs for May 1915. In Kansas and Oklahoma, about 7,210,210 barrels of oil or 232,597 bopd were run through the pipe lines. About 54,162,270 barrels were in storage.

In North Texas, about 453,450 barrels were run, and about 856,678 barrels were in storage.

In Northern Louisiana, about 1,289,849 barrels were run, and about 1,123,661 barrels were in storage.

Vol. 14, No. 5, July 8, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent in early July was 386,500 bopd, with Kansas and Oklahoma outside of Cushing being 110,000 bopd, Cushing 218,000 bopd, Electra District 15,500 bopd, and Caddo District, La., 43,000 bopd.

p. 1. Arkansas River Navigation. One of the most important projects in the Southwest is the one for opening the Arkansas River for navigation to Tulsa, Okla. Organizations are pushing the project along in a systematic manner, to deepen the channel and increase the flow of water.

p.1. Five of the principal nations now at war are using about 600,000 motor vehicles.

Harry F. Sinclair, of Tulsa, is being boomed for the position of National Republican Committeeman from Oklahoma. He already excels as an oil and baseball magnate.

p. 1. Weekly Review of the Fields. In Oklahoma, in the Cushing Field of Creek County, there were 17 completions, including 2 dry holes and 1 gas well, with 9,255 bopd new oil.

In North Texas, test-drilling is most active in Jack, Erath, Palo Pinto, and southern Clay Counties.

In Northern Louisiana and NE Texas, the leading production is in the Crichton Field, La., with 9 completions and 13,035 bopd. In Marion County, Texas, one well was completed at 600 bopd.

p. 2. Waste of Gas at Collinsville. At Collinsville, Tulsa County, the Commercial Club contracted with the Henry Gas Co. to furnish gas at 5¢ a thousand cubic feet for factories. Then Collinsville offered factory sites for free and unlimited gas at 5¢ a thousand for 5 years. Glass plants, smelters, and other industries took advantage, using about 100,000,000 cfgpd. The Henry Gas Co. was getting its gas from the Hogshooter Field, in Washington County, to also supply Bartlesville. The gas is being depleted rapidly, and the Collinsville gas plant is now for sale at 60% of its value, because it is costing more to drill new wells, and the production is less in the new wells. This is dry gas.

p. 3. Oil Production for First Six Months 1915. From January to June, 1915, about 145,000,000 barrels of oil was produced in the United States. The leading area was Oklahoma-Kansas with 58,000,000 barrels. Northern Texas was 3,500,000 barrels, and Northwestern Louisiana was 7,600,000 barrels. California was 44,700,000 barrels, and the Appalachian area 11,300,000 barrels.

There were 2,764 completions west of the Mississippi, not counting Wyoming and California., with 1,888 oil wells, 319 gas wells, and 557 dry holes.

p. 3-4. Personal Mention. T.B. Slick, owner of the Slick Oil Co., was married on Monday of last week at Springfield, Mo., to Miss Bernice Frates, of that city.

Mr. and Mrs. Frank Haskell have departed for Titusville, Pa., for a month. He is the head of the Oklahoma end of the Okla. Oil Co. in Tulsa.

R.S. Litchfield, President of the First National Bank of Independence, Kansas, and E.W. Sinclair, vice-president of the Exchange National Bank of Tulsa, have become stockholders and directors of the State National Bank of Oklahoma City.

p. 4,6. Noted in Passing. Northeast of Ardmore, Okla., on the Marshall County line, the Awirco Oil Co. will drill a test well.

In the Ada Field, Okla., the McMan Oil Co. will begin operations north of the Rex gas well.

The Oklahoma Natural Gas Co. will lay a gas line from the Cushing Field to Guthrie, Okla. The line will extend from Drumright, through Ripley, Perkins, and Coyle. This will give Guthrie two gas lines.

Fohs & Gardner will dissolve their partnership on July 1, 1915. F. Julius Fohs will retain the old offices at 212-213 Clinton Bldg., Tulsa, and James H. Gardner will be at 1010 Daniels Bldg., Tulsa, Okla.

The Germans are using a flame-thrower in the war. Benzine and kerosene, under 75 psi pressure, is shot out 12 to 15 feet, burning through wire, etc.

At five miles east of Georgetown, Texas, the Georgetown Oil & Gas Co. #1, Weilman lease, struck gas at 150 feet. Several hundred leases have been taken in that area.

Near Hominy, Okla., Grover Conrad was hurt while trying to cap a gas well owned by White & Sinclair. The well's capacity was 25 mmcfgpd, at 900 psi pressure.

Chester Grow, of Kansas City, Mo., writes about a new gas field in Platte County, Mo., about 15 miles northwest of Kansas City. Three or four wells have been drilled, each with 500 m to 1 mmcfgpd, at 500 feet, with 145 psi pressure.

p. 6. Recent Deaths. W.L. Patterson, age 31, a former machinist for the Oklahoma Gas Engine Co., died of heart disease last Thursday in a rooming house in Oklahoma City.

W.C. Coffey, of Bridgeport, Ill., was killed in a gas explosion on the Manuel lease of Slick Oil Co. in Sec. 7-18N-7E, on June 29, 1915. His body was shipped to Bridgeport Friday.

John H. Yust, age 39, died of tuberculosis on July 1, 1915, at San Antonio, Texas. He was a traffic manager for the Gulf Pipe Line Co. of Okla., and for the past year he was manager of the Cosden Refining Co. For 9 years he was a resident of Tulsa, Okla. He had been in San Antonio since last Winter. He is survived by a widow and two children. Interment was at Beaumont, Texas.

Frank Moffitt, age 35, died in an oil-field injury at Parsley, Okla., on July 3, 1915. He was with Moffitt & Gathing Co. His wife died some time ago. Three daughters, the eldest 12, survive. His parents live at Drumright, where he formerly lived.

p. 8, 10. Oklahoma and Kansas by R.H. Whitney. In Creek County, in the Cushing Field, there is a rapid decline in production. About 214,000 bopd was the production on Saturday. Dry holes and salt water are now becoming noticeable. There are still infill producers, but the older wells are falling off. (Details given on many wells). The McMan Oil Co. is the largest producer with 26,950 bopd, followed by the Prairie Oil & Gas Co. with 24,500 bopd. (A list is given of the 38 main producers and their production as of Saturday July 3, 1915). About 39,658,300 barrels are in storage. (A list of 27 companies is given showing their storage). About 21 wells were completed last week, (Details of each given).

Elsewhere in Oklahoma, drilling continues in the northeastern fields, at a slower pace. In Tulsa County, in the Perryman Field, Chase & Croft Co. #1, McIntosh lease, in Sec. 9-19N-14E, have 45 bopd at 1,300-1,314'.

In Creek County, in the Kellyville Field, Kelly et al Co. #5, Brummett lease, in Sec. 35-18N-10E, have 25 bopd in the Red Fork sand at 1,906-1,920'. The Leether Oil Co. #1, Gouge lease, in Sec. 27-18N-10E has 1 mmcfgpd at 1,580-1,592'.

In Tulsa County, in the Wicey Field, south of Bixby, about two years ago, the Annex Oil Co. had some gusher wells in the 1,600-foot sand, and last year they developed some good wells in the 2,000-foot sand. The company was composed of Manuel Hirsch (deceased), Dennis Hastings (deceased), C.E. Strouvelle, and others. The Petroleum Co., of M.H. Mosier, recently purchased the Annex Co. for $225,000. About 1,700 acres were involved, with 12 wells and 900 bopd production.

In the 6 month period of January-June 1915, the oil industry was relatively inactive in Kansas and Oklahoma, due to the war. About 2,034 wells were completed, including 301 gas wells, and 334 dry holes, with 715,239 bopd new production. In the first 6 months of 1914, there were 7,035 completions; 447 gas wells; and 1,090 dry holes; with 429,769 bopd new production. Most of the production was in the Cushing Field, with the increase due to Bartlesville and Tucker sand production in the north end of the Cushing Field.

Some new pools were opened during the past 6 months, and some extensions were made to pools opened up the past year. In Pawnee County, at Ralston, in late June 1915, a wildcat well was completed for 25 bopd at 3,200'. In Payne County, northwest of Cushing, a similar well was completed.

In Muskogee County, northwest of Muskogee in 15N-18-19E, the Fern Mountain Field was opened, with 4 oil wells, some gas wells, and 30 dry holes.

During the first 6 months of 1915, in Oklahoma, there were 1,744 wells completed, with 173 gas wells, and 297 dry holes, and 712,848 bopd new production, distributed as follows:

District	Completions	Dry Holes	Gas	Production BOPD
Cherokee Deep Sand	118	21	26	1,684
Cherokee Shallow Sand	194	10	3	4,423
Osage	76	15	2	7,820
Cleveland	13	5	0	350
Cushing	549	7	9	661,930
Creek	651	178	77	29,871
Kay County	9	1	2	390
SW Oklahoma	110	41	21	6,305
Miscellaneous	24	19	3	75
	1,744	297	173	712,848

p. 12. North-Central Texas, by H.W. Whitney. During the first 6 months of 1915, 137 wells were completed, including 35 dry holes and 5 gas wells, with 3,990 bopd new production. This area is mostly in Wichita and Clay Counties, including the Iowa Park, Electra, Petrolia, Fowlkes Station, and Burkburnett Fields. The Strawn Field was opened in Palo Pinto County, for 850 bopd. In Jack County, near Jacksboro, there is much activity. More than 40 wells, producing from 90 to 115 feet in this field, have stimulated interest. A $100,000 refinery is being built. The Strawn Field is the most active in this area. (Details given). The Palo Pinto Oil & Gas Co. of Mineral Wells has been chartered with $30,000 stock. The officers are W.M. Cook, president; F.D. Woodruff, secretary-treasurer; B.F. Robbins, Frank Deal, and Dr. J.G. Kirby, directors. They have about 2,000 acres near Perrin, Texas, and will drill there shortly.

The Central Texas Gas Co. has been chartered for $150,000. They will do developmental work in the Bangs Field, having purchased the holdings of the Neodesha Oil & Gas Co. near Brownwood, Brown County, Texas. The Central officers are H.C. Weible, president, of Coffeyville, Kans.; Charles F. Hart, vice-president, of Bangs, Tex.; and Brooks Smith, secretary-treasurer of Brownwood, Tex.

A number of people are looking at oil possibilities around Dallas and Temple, Texas. The Teas Field is falling off. Henry M. Wallace, of Detroit, Michigan, is behind the Temple movement.

p. 14, 16. The Thrall Field, in Williamson County, Texas, had 4 completions last week, one gas, two oil, and one dry. About six companies are drilling most of the wells. (Details given).

p. 16-17. East Texas and Louisiana, by M.L. Vaughn. In the past 6 months, 219 wells were completed, with 11 gas wells, and 42 dry holes, and production of 85,980 bopd new production, in 16 fields, as shown:

Fields	Completions	Gas	Dry Holes	Production BOPD (new)
DeSoto	27	4	8	2,995
Crichton-Red River	112	5	9	75,965
Sabine	7	0	5	55
Shreveport	2	1	1	0
Mooringsport	1	0	1	0
Oil City	7	0	1	341
Abington	9	0	3	2,230
Jeems Bayou	10	0	2	1,055
Harts Ferry	9	0	0	1,809
Monterey	8	0	4	720
Hosston	6	0	2	300
Lewis	10	0	2	275
Cross Lake	2	1	0	10
Bossier	1	0	1	0
Northeast Texas	7	0	2	225
Miscellaneous	1	0	1	0
	219	11	42	85,980

The Crichton Pool was opened in January 1915 in the Red River Parish area, and this continues to be the major field of northwestern Louisiana. On July 3, 1915, Crichton and adjacent southern pools were producing 24,629 bopd, and Caddo or northern pools were producing 18,731 bopd, or 43,360 bopd total production. About 72 rigs were drilling in the Crichton Field. (Details are given for various wells in the different fields).

The Vivian Oil Co. has gone into voluntary liquidation. A majority stockholder is B.G. Dawes of Marietta, Ohio.

Five new companies were formed this past week. Southern Oil & Gas Co., of Winnfield, with $30,000 capital, with J.A. Colvin, president; Dr. P.T. Alexander, vice-president; Dr. A.W. Radescich, secretary; and B.W. Stovall, treasurer.

Ogilvie Mutual Oil Co., of Shreveport, with $30,000 capital, with E.A. Shaw, president; W.W. Newcomb, vice-president; and R.F. Brabston, secretary-treasurer.

Bossier Gas Co., of Shreveport, with $8,000 capital, with S.W. Tullos, president; John D. Hughes, vice-president; and W.W. Newcomb, secretary-treasurer.

Black Lake Oil & Gas Co., of Shreveport, with $30,000 capital, with Dr. W. K. Sutherland, president; W.L. Carter, vice-president; and J.H. Boss, secretary-treasurer.

Enterprise Oil & Gas Co., of Vivian, with $30,000 capital, with Dr. C.K. Ray, president; R.W. Giles, vice-president; and S. Shallcross, secretary-treasurer.

p. 18. Advertisement. The Bartlesville National Bank, Okla., resources, $1,500,000. Officers and Directors: Frank Phillips, pres.; H.J. Holm, vice-president; L.E. Phillips, cashier; F.J. Spies, Jr., Asst. Cashier; J.L. Overlees, Frank M. Breene, J.G. Phillips.

p. 28. Gas-Light, Heat and Power. Gas near Willow, Oklahoma. The Oklahoma-Tennessee Oil & Gas Co., which has leases on 4,000 acres near Willow, in Greer County, Okla., struck a good flow of gas at 550 and 735 feet. Operations will begin on a new well 3 miles east of Willow, by a company composed of Mangum and Granite citizens. This makes a proven gas field of more than 10 miles long.

Gas Waste in Healdton Field. G.W. Russell, manager of the Ardmore City Gas Co., said that there is a vast waste of gas in the Healdton Field. In Sec. 5-4S-3W, the pressure has been reduced from 320 to 60 psi. The Apple-Franklin well in Sec. 15 was making 15 to 20 mmcfgpd, but was allowed to remain open for a period of two weeks. J.F. Lawrence said that many wells deliberately were drilled for oil, allowing all of the gas to escape. Wells that were making 30 to 35 mmcfgpd are now making 1 to 5 mmcfgpd, all in less than one year. He estimated that the

production at Healdton is from 100 to 250 mmcfgpd, but that only about one-hundredth of this is being sold. Roy M. Johnson said that his Crystal Oil Co. well #3 in Sec. 5 came in at 33 mmcfgpd, a little more than a year ago, but is now 2 mmcfgpd and it has been disconnected from the Ardmore pipe line. Gasoline at the refinery is 6¢, and the retailer makes more than 100% profit.

Vol. 14, No. 6, July 15, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent at the close of last week was 363,500 bopd, with Kansas and Oklahoma being 110,000 bopd, outside of Cushing, and Cushing at 190,000 bopd, North Texas 15,500 bopd, and Caddo or NW La.-NE Tex. 48,000 bopd.

In Oklahoma, the Cushing Field had 16 completions during the week ending July 10, 1915, with 12,525 bopd new production.

In Louisiana, the Crichton Field had 6 completions for 12,000 bopd new oil. One well was 8,000 bopd.

p. 2. Petroleum Fuel Preferred. The United Fruit Co. used fuel oil to burn in the ship Metapan, going from Port Limon to New York. The trip was so successful that the company has ordered that all 36 of their steamers will be converted. Petroleum is more efficient and labor-saving than coal, and is more economical, and this is becoming universally recognized.

p. 3. Why Figures Do Not Agree. There are different estimates of production in the Cushing Field. If a daily gauge of each well is taken, the figure is fairly accurate. If tankage and pipe line runs are used, another figure is obtained. The figures given by the Oil & Gas Journal and the Oil City Derrick are accepted by the U.S. Geological Survey and statistical bureaus as being the most accurate obtainable.

p. 3-4. Personal Mention. Mr. and Mrs. John Ringling, of Chicago, made a trip in a private car on the Santa Fe Railroad to Ardmore, Okla. last week. He has increased his holdings in the Healdton Field. Mrs. Ringling has also made arrangements to drill on land owned by her in the same field.

p. 4,6. Noted in Passing. On July 8, 1915, John D. Rockefeller, of the Standard Oil Co., observed his 76th birthday with members of his family, at his estate in the Pocantico Hills near Tarrytown, New York.

Oil has been discovered on the Stewart Ranch, five miles NW of Strawn, Tex., at 1,600 feet. A boom is on.

A gas line 25 miles long is being removed from the Ramona Field, Washington County, to Claremore, Rogers County. The line was laid 25 years ago by the Caney Gas Co. Gas in the Ramona Field became exhausted some time ago, and other uses will be found for the pipe.

Gas in commercial quantities has been struck at 830 feet at Baileyville in Milam County, Texas. In nearby Falls County, the Rosebud-Baileyville Gas 7 Oil Co. will drill 3 wells near Rosebud.

p. 8, 10. Oklahoma and Kansas, by R.H. Whitney. With the decrease in production in the Cushing Field, operators are now beginning to look elsewhere in Oklahoma. Cushing is still about 190,000 bopd. Healdton was gauged at 80,000 bopd, but with decreased flow, this is probably 40,000 bopd. About 195 wells were being drilled at Cushing. (Details given on some completions).

In Muskogee County, in the Cole Field, the Dalsa Oil Co. #4 Cole farm in Sec. 11-14N-15E has an 800 bopd well. The Dalsa Oil Co. #4 Davis in Sec. 11-14N-15E started out at 200 bopd.

In Okmulgee County, in the Boock Sand Field, George, Zeigler & Shuler completed #2 in Sec. 23-14N-14E for 300 bopd.

In Marshall County, three miles north of Woodville, in Sec. 7-7S-7E, the Greenwood et al Co. has been drilling for about a year. It is reported that they may have struck oil and gas at 1,100 feet. A number of gas wells have been drilled in this area. In Sec. 1-8S-5E, Waskon & Thorn have a 2 mmcfgpd well at 570 feet. A number of tests are being drilled.

In Pontotoc County around Ada, thousands of acres are being leased in all directions since the Rex well was drilled. The Rex Refining Co. test on the

Leader farm in the C-SE-Sec. 30-4N-6E had 7 mmcfgpd at 1,000 feet, and then caught on fire. A new rig was built and the well was completed a few feet deeper, with an additional showing of 5 bopd of 22° gravity oil. The McMan Oil Co. and the Corsicana Petroleum Co. are the two largest companies in the area. Acreage is about $25 an acre close-in, and $5 an acre four to five miles away.

About 2 years ago, oil was found near Allen at 700 feet, but the developmental wells were small, and there were many dry holes. Gradually, the development shifted toward Ada, where the McThwaite Oil & Gas Co. brought in a good gas well. At present, there are 9 gas wells in the Ada Field, with total production of about 35,000,000 cfgpd. The Rex well is probably good for 20 mmcfgpd, whereas the others are 3 to 5 mmcfgpd. Skelly & Sankey Co. and the McThwaite Oil & Gas Co. are supplying Ada with the gas.

The McMan-Corsicana joint companies are starting two wells. One is on the Willie Latta farm in the C-S line-SW¼-Sec. 20-4N-6E, and the other is in the SE-Sec. 8-4N-5E on the James Masberry allotment. Skelly & Sankey have two wells, in the SE-Sec. 25-4N-5E, and in the SE-NE-SE-Sec. 36-4N-5E. Francis and Ada parties are drilling at 900 feet in the NE-Sec. 34-5N-7E on the F. A. Fagan farm, where they think that they have the Allen sand which produces at 700 feet in the Allen Field. They also have completed a test on the Oliver farm in the SE-Sec. 36-5N-6E. The Winona Oil Co., composed of Katy Railroad employees, is at 2,000 feet in Sec. 29-6N-6E. The Gladys Belle Oil Co. is idle at 1,102 feet in the NW-SE-Sec. 22-4N-6E, on the E. Perry farm. The Tidewater Oil Co. is in Sec. 35-5N-6E. The Buckhorn Oil Co. is in Sec. 16-4N-5E, at 400 feet. The Rex Refining Co. has another location in Sec. 30-4N-6E.

In Creek County, in the Cushing Field, 18 wells were completed. (Details given). One of the most interesting is the C.B. Shaffer #2 Offut in the SE-SW Sec. 33-19N-7E, for 2,500 bopd at 2,508-2,601 feet, extending the field to the north.

In Pawnee County, near Jennings, the Republic Oil & Pipe Line Co. #1 in Sec. 20-21N-7E reached the Bartlesville sand at 2,810 feet, striking salt water at 2,825 feet. They had a show at 2,500 feet, but will probably plug back to 2,021 feet where they had 15 bopd in the Cleveland sand.

In Osage County, the Barnsdall Oil Co. is pulling casing from some of their wells. Rumor has it that they will pull casing from 1,000 wells. The Barnsdall people claim that they are not pulling that many, and that their lease does not expire until March 1916, when they will make a major decision.

p. 10. Bartlesville Man Killed. Don O. Query was killed in an accident near Oilton on Sunday. He fell from a walking beam. He was buried in Bartlesville.

p. 12, 14. East Texas and Louisiana, by M.L. Vaugh. In the Crichton Field, La., several large wells were completed in "Gusher Bend" of the Red River, pushing the production of the NW La.-NE Tex. area past 50,000 bopd. The Lenzburg-Crichton Oil Co. well on the Richardson tract in "Gusher Bend: of the Red River, in Sec. 24-13-11, came in at 2,500 bopd, then increased to 10,000 bopd, and now has settled back to 8,000 bopd. It is one of the largest wells completed in northwestern Louisiana. Several others came in at 3,500 bopd. (Details given). The average daily production for NW La. - NE Tex. was 47,827 bopd on July 10. During the week there were 11 completions, and two dry holes, and 14,705 bopd new production, and 136 rigs working. In the Crichton Field, there were 6 completions for 12,070 bopd new production, and 81 wells drilling. This area is now one of the busiest in the United States, outside of Cushing, Okla. (Details are given on many wells in the other fields). Wildcat work is now underway in most of the northern half of Louisiana. Most of the money is outside capital. Mr. F. Humphries has been scouting northeastern Louisiana, and it is believed that he is being backed by Pittsburgh, Pa. interests. Many tests are being drilled in Winn, Tensas, LaSalle, Caliborne, Richland, Ouachita, Bienville, Catahoula, and Sabine Parishes. (Details given). Tests are continuing in Marion and Sabine Counties, Texas. In Sabine Parish, La., oil has been found at 3,500 feet, but the wells are small and too expensive to develop. The Gulf and Standard companies

pulled out of the Sabine area several weeks ago.

p. 14. Thrall Pool, Texas. Eight companies have 89 producing wells in the Thrall Pool, Williamson County, Texas. The Taylor Oil & Gas Co. has the most with 23, from which it is getting 1,280 bopd. The Corsicana Petroleum Co. has 20 wells on the Stiles lease, with 2,600 bopd. The Pure Oil Co. has 5 wells on the Fuchs lease for 1,000 bopd. The First Thrall Oil Co. has 16 wells, 13 on the Fuchs lease and 3 on the Gotz lease, for 440 bopd, of which 10 are on compressed air. The Bowers Oil Co. has 10 wells on the Fuchs lease, for 870 bopd on compressed air. The Thrall-Independent Oil Co. has 6 wells on the William Diebel lease, for 70 bopd. The Caldwell Oil Co. has 6 wells on the William Diebel lease for 160 bopd. The Home-Independent Oil Co. has 3 wells for 45 bopd. About 5,635 bopd is being shipped out. The Magnolia Pipe Line Co. is taking about 1,810 bopd and the Bowers Oil Co. is taking about 950 bopd, and The Texas Co. is taking about 2,875 bopd. About 22,420 barrels are in storage. The companies are paying about 45¢ a barrel for the oil. No new extensions have been discovered beyond the limits of the field. S.C. Osborn, of Chanute, Kansas, has closed a deal with the Thrall Booster Club led by L.W. Fuchs, to build a refinery at Thrall. (Details given on many wells).

p. 16-17. North-Central Texas by H.W. Whitney. In Wilbarger County, 12 miles southeast of Vernon, a wildcat test came in at 2 mmcfgpd at 600 feet on the Waggoner Brothers Ranch on Paradise Creek, by the Producers Oil Co. This is the first test in this area, and the company has a lease on 10,000 acres. In 1913 and 1914, several tests were made north of Vernon, with gas at 1,400 and at 2,000 feet. The Childress Oil & Gas Co. drilled the 1,400-foot test, and the McMan Oil Co. drilled the 2,000-foot test, opening up interest in the area. The new well is on the north side of a ridge, near the Pease River.

In Shackelford County, the Moran Pool is still being developed. (Details given on many wells).

In Palo Pinto County, the Strawn Field is being actively drilled. (Details given on many wells). Many people are staying in Mineral Wells.

Many tests are being drilled in Clay, Wichita, Knox, Limestone, Tom Green, Wise, Montague, Denton, and Jack Counties. (Details given).

Visitors to Mineral Wells are, Walter L. Smith of Spies Petroleum Co., Ltd., London; Morris Frazer, Producers Oil Co.; W.P. Stiles, Shreveport, La.; L.C. Hivick, C.E. Sykes, R.P. Poland, and Hugh Sturm of Ardmore, Okla.; George F. Wyvell, Claremore, Okla.; T.W. Zeigler, Corsicana Petroleum Co.; and C.E. Menzie of the National Supply Co.

p. 19. Second Well at Oneida, Tennessee. In Scott County, Tenn., at Oneida, the Whitcomb Oil & Gas Co. #1 Hendren was completed for 100 bopd of 36° gravity oil of paraffin base at 950 feet in a 400-foot thick limestone, in the upper 190 feet of the limestone. The well was completed on July 14, 1915, and it is 900 feet northeast of the Turney #1, which was the first well drilled. A third well was drilled on the West farm, 2,000 feet northwest of the Turney well, and it was dry at 2,000 feet. It went through the 400-foot lime which was 90 feet lower than the producers. The Cumberland Pipe Line Co. will lay about 15 miles of pipe to the field. There are 6 other wells starting.

p. 24. Gas Company Reorganized. The Fenton Gas Co. of Tulsa, Okla. has reorganized and has increased its stock to $150,000. The officers are: F.J. Ossenbeck, president; Joseph Ardizzone, vice-president; and M.I. Deuel. Secretary-Treasurer. They purchased the interests of F.E. Fenton and others. They have 90 mmcfgpd production from 18 wells on 1,170 acres north and south of Catoosa, in Rogers County. They have about 6,800 acres in T16-17N, R16-17E; T19-20N, R14-15E, and T20N-R14E. They have a 20 bopd well east of the Day Pool in Sec. 28-20N-14E, Tulsa County, with production in the 700-foot sand. The Kansas Natural Gas Co. has a 12-inch line to their Catoosa Gas Field.

p.24 Slick Oil Sale. Tom Slick is waiting for approval of the sale of his holdings to new investors for a new company called Slick Oil Co. by the

Secretary of the Interior. The sale is for $2,500,000. The stock will be held by John Milliken of St. Louis, one-half; Messrs. Guffey, Pitcairn, and Gillespie, of Pittsburgh, Pa., one-fourth; and the Oklahoma Oil Co. of the Tidewater Oil Co., one-fourth. This involves several thousand acres of department leases and several thousand acres of commercial leases.

p. 24. Gasoline-burning Motors. There were 1,666,984 automobiles and 44,355 trucks in the United States in January 1915, according to the Department of Agriculture. About $12,270,036 was raised in revenue for registration.

p. 25. New Pipe Line Running Oil. The Crown Petroleum Co., a subsidiary of the Muskogee Refining Co., has a pipe line to the Boynton Pool in Muskogee County. About 3,000 barrels of oil were pumped Saturday from the Bradstreet properties. The line will be extended to others areas in western Muskogee County.

p. 26. Osage Oil for U.S. Government. Cato Sells, Indian Commissioner, announced that the U.S. Government has made a contract with the Osage Indians for 56,000 barrels of oil to be used by the U.S. Navy in case of war.

p. 26. Original Kansas Oil Well. The first oil well on record that was drilled in Oklahoma or Kansas was begun on May 30, 1893 on the T.J. Norman farm on the Verdigris River in Montgomery County, Kansas, according to the records of the Prairie Oil & Gas Co. of Independence, Kansas. The lease was owned by Major W.M. Mills of Paola, Kansas. The Field is the Independence Field. Major Mills had drilled some gas wells around Paola, and was supplying some nearby towns. He believed that a great supply of gas could be found around Independence and he leased the Norman farm. In August 1893, he struck oil at 830 feet, and the well flowed 35 bopd. On Oct. 4, 1893, George Perry, of Joplin but now of Tulsa, shot the well with 30 quarts of nitroglycerine. In 1904, the well was cleaned out, and yielded 7 to 15 bopd. Recently it was cleaned and it yields 10 bopd.

The second well was drilled 60 days after the first, by Ed Bennett, and was completed in Sept. 1893, for 30 bopd. Bennett drilled more than 20 wells in the Neodesha Pool, for the Forest Oil Co.. The Standard Oil Co. refinery was built later at Neodesha, Kansas.

p. 27. Big Oil Sale Approved. The Interior Department approved of the sale of the Devonian Oil Co. properties in Oklahoma to the Roxana Petroleum Co. for $1,900,000. Roxana is a Shell subsidiary.

p. 28. Gas - Light, Heat and Power. Mayes County Gas Property Sold. The Grand River Gas Co., composed of Claremore and Muskogee capital, has closed a deal to purchase the Pryor and Chouteau gas properties of Mayes County, Okla., for about $100,000. They have plans to extend lines to Salina and Locust Grove.

p. 28. Gas Situation in North Texas. Cato Sells, Indian Commissioner, said that the U.S. Bureau of Mines will send an expert to examine departmental lands in Stephens and Carter Counties, Okla., to make investigations to allow Lone Star Gas Co. to purchase gas for Dallas, Fort Worth, and North Texas, in case of a shortage of gas in the area.

p. 30. New Healdton Oil Company. In Ardmore, Carter County, Okla., a new oil company has been formed, with capital of $50,000. The members are Wirt Franklin, D.C. Fitzgerald, P.C. Dings, C.L. Anderson, L.H. Love, Roy M. Johnson, Edward Galt, B.A. Simpson, and N.B. Feagin.

p. 35-37. Oklahoma, Wells, July 1, 1915. About 276 wells were completed in Oklahoma for the month of June 1915. About 18 of these were gas wells, with 67 mmcfgpd new production. About 114,370 bopd new production was found. (Details given for each well). The various fields are Copan, Wann, Dewey, Bartlesville, Bird Creek, Owasso, Cherokee Shallow Sand, Osage, Cleveland, Cushing, Tulsa, Taneha, Glenn, Wicey, Kellyville, Okmulgee, Morris, Hamilton Switch, Schulter, McIntosh, Bald Hill, Boock Sand, Rogers, Wagoner, Muskogee, Carter, Marshall, Atoka, Pontotoc, Jefferson, and Miscellaneous Counties. (Details given under each). About 803 new wells were being started or drilled. About 181 wells were wildcats.

Arkansas. Wells. July 1, 1915. About 13 wells were drilling in Arkansas in June 1915, in Franklin, Polk, Howard, Sevier, Independence, Crawford, Benton, Hempstead, Saline, and Miscellaneous Counties.

p. 38. Wells, North Texas, July 1, 1915. In June 1915, in North Texas, about 15 wells were completed including two gas and four dry, for 630 bopd new production. About 80 new rigs were working. (Details given).

p. 38. Wells, N. Louisiana and NE Texas, July 1, 1915. In June 1915, about 56 wells were completed, including 1 gas well and 14 dry holes, for 13,350 bopd, in 18 fields. About 153 wells were drilling or started. (Details given).

p. 39. Thrall Field, Texas, July 1, 1915, Wells. About 46 wells were completed, with 26 dry holes, and 8,310 bopd new production, during June 1915. (Details given on each well).

p. 39. Strange Eruption of Earth. In the July number of Popular Mechanics, it is stated that a well near Sinton, Texas, struck gas at 3,200 feet. The casing shot out of the hole, and the well blew wild for 3 weeks. A hole 75 feet in diameter formed, presumably to 3,200 feet, and the machinery disappeared into the pit. The hole filled to within 100 feet of the surface with boiling water.

Vol. 14, No. 7, July 22, 1915, p. 1. Mid-Continent Production. The apparent estimated production in the Mid-Continent at the close of last week was 355,000 bopd, with Kansas and Oklahoma outside of Cushing being 110,000 bopd, Cushing 180,000 bopd, Electra, Tex., 15,000 bopd, and Caddo District or NE Tex.-NW La., 50,000 bopd.

p. 1. Compressed air is now being used in Oklahoma to produce oil. Hot air also may be used to some extent.

p. 2. The Kansas Natural Gas Co. was allowed to raise their rates 20¢ a thousand. They had been operating at a loss for the past 7 years. They supply 450,000 customers in Kansas and Missouri.

p. 2. First Oil For Honduras. On June 19, 1915, the American tanker Panuco arrived at Ceiba, Honduras, with 20,000 barrels of oil, to be used by the Vaccaro Brothers & Co. Railroad and associated industries, to replace coal. This oil came from Tampico, Mexico, and it is the first oil to be used in Honduras.

p. 3. Osage Details. The Interior Department has kept sublessees busy recording details of each well drilled in Osage County, Okla. They have to be finished within 10 days or before August 1, 1915. The Location, number, initial production, settled production, gravity, date of completion, depth, cost, etc. of each well has to be recorded.

p. 3. Monument to First Oil Well in Ohio (1861). In Washington County, Ohio, on the Quinn Stoneman farm, a monument will be erected to commemorate the drilling of the first well in Ohio in 1861. J.B. Levy, of Tulsa, Okla., is behind the project. It took 5 men for 3 months to drill the well, and Mr. W.W. Gadd, aged 81, is still alive. The well was abandoned in 1906. The Derrick's Handbook of Oil states that this is the first oil well in Ohio.

p. 3-4. Personal Mention. P.T. Moore, oil writer, has come to Tulsa to live, and he will supply field literature from the real center of Oklahoma's oil industry.

Walter Hennig, of St. Louis, Mo., owner of the American Refinery at Okmulgee, Okla., visited last week.

The Milliken Refining Co. of Vinita, Okla., handles 7,500 bopd. The officers are G.S. Forcier, vice-president; C.L. Painter, Secretary; and A.D. Smith, refinery manager. They were in Tulsa last week.

p. 4,6. Noted in Passing. E.C. Ryan, of Tulsa, president of the Republic Oil & Pipe Line Co., has sold his interests to W.M. Whittenden of Chicago. This company is drilling an important well at Jennings, Pawnee County, and they are now at 2,805 feet.

p. 6. Recent Deaths. J. Martin Amsler, age 56, died on July 17, 1915, at Drumright, Okla. He was in the oil business in Washington County, Pa., for 20 years, before coming to Oklahoma. Five years ago, he moved to Bridgeport, Ill., and then to Oklahoma. He is survived by a wife, 3 sons, and 3 daughters.

William Johnstone, age 57, died at his home in Bartlesville, Okla., on July 14, 1915. He was a banker and oil-producer, and merchant. He leaves a wife, one son, and three daughters.

p. 8. Advertisement. Exchange National Bank of Tulsa, Okla. Officers: P.J. White, pres.; D.F. Connolly, vice-pres.; H.F. Sinclair, vice-pres.; E.W. Sinclair, vice-pres.; O.H. Leonard, vice-pres.; I.F. Crow, vice-pres.; A.T. Allison, cashier. Directors: P.J. White, J.H. Evans, R.M. McFarlin, R.S. Litchfield, E.W. Sinclair, John Markham, Jr., J.A. Hull, D.F. Connolly, H.F. Sinclair, Thomas White, O.H. Leonard, J.A. Chapman, and Homer M. Preston. Capital and surplus $400,000. The first deposits on Feb. 9, 1910 were $404,674. The present deposits are $5,272.719.

Advertisement. Central National Bank of Tulsa. Officers: J.E. Crosbie, pres.; Jno. O. Mitchell, vice-pres.; J.M. Berry, active vice-pres.; F.W. Bryant, active vice-pres.; H.P. Anderson, vice-pres.; W.O. Buck, cashier; F.L. Dunn, asst. cashier; and C.H. Sweet, asst. cashier. Directors: J.E. Crosbie, H.P. Anderson, J.M. Berry, F.W. Bryant, Jno. O. Mitchell, W.F. Ewing, E.R. Kemp, B.F. Colley, M. Moran, J.F. Black, H.C. Tyrrell, A.E. Duran, W.O. Buck, and J.E. Wade. Capital $150,000. Surplus, $155,000. Assets, $3,500,000.

p. 8, 10. Oklahoma and Kansas, by R.H. Whitney. Creek County, Okla. In the Cushing Field, there is a decline in production. Eleven wells were completed in the past week for 3,950 bopd, the lowest production in more than a year. On last Saturday, the northern extension was producing 108,070 bopd, the southern pool, 50,730 bopd, and the old pool, 31,200 bopd, for a total of 190,000 bopd. (Details given on wells). The first 4 or 5 feet of the deep sand was prolific, but the next 7 to 8 feet produced much salt water. Producers are now asking 5¢ a barrel more for their oil. About 40,000,000 barrels are now in storage.

In Carter County, the Healdton Pool is picking up. The potential production is about 80,000 bopd, but the actual production is closer to 40,000 bopd. The Magnolia Pipe Line Co. is moving about 20,000 bopd. One of the best wells in the state is that of Watchorn et al in Sec. 6-4S-3W, which is still making 5,500 bopd after several months. Most of the completed wells are less than 1,200 feet deep. (Details given).

In Hughes County, 5 miles NW of Holdenville, in the NE-Sec. 4-7N-8E, the Penn-West Oil Co. #1 Kernel farm got 16,000,000 cfgpd at 3,034 feet, with a spray of oil. This has caused a lot of excitement. The hole partly caved in, and is now making only 5,000,000 cfgpd. There were other shows in the well, with gas at 840 feet; oil at 1,220; oil and gas at 1,850 feet; 5,000,000 cfgpd at 2,450 feet; and 6 distinct sands, between 2,450 and 2,720 feet. The present pay is only two feet into the sand at 3,034-3,036 feet.

In Marshall County, near Woodville, in Sec. 7-7S-7E, Greenwood et al have reported shows at 1,035 feet, of gas and oil.

In Okfuskee County, near Paden, in Sec. 8-12N-7E, the Prairie Oil & Gas Co. well will be completed. A.D. Morton of Bartlesville has a one-third interest.

In Comanche County, in the Lawton Field, the Short Grass Oil Co. in Sec. 25-2N-11W has oil at 735-775 feet, on the Hall farm. The well is one-half mile west of the Rocky Mountain Oil & Gas Co. well completed some months ago. There have been a number of oil and gas wells completed in this field.

In Pittsburg County, several mils northeast of McAlester, the Gladys Belle Oil Co. #1 in Sec. 1-6N-15E, had 3 mmcfgpd at 3,020 feet.

In Kay County, the Duluth-Oklahoma Oil & Gas Co. #1 in the NW-SE-Sec. 32-29N-1E has about 100 bopd at 3,287 feet, in 15 feet of sand. This is south of the old Buehl & Jones #1 Swenson well which had 100 bopd in a lime at 3,454 feet.

E.W. Marland et al are drilling a wildcat in Sec. 4-28N-4E, northeast of the Newkirk Field, and had a show of 4 mmcfgpd at 2,150 feet.

In Latimer County, in mountainous country, J.P. Flanagan and S.S. Owen have leased an immense acreage and will drill a test in Sec. 30, T3N -R21E.

p. 10. Correlation of Oil Sands. F. Julius Fohs, of Tulsa, has issued a revised correlation of the oil sands of the main fields of Oklahoma. It is the initial attempt to show the relation of sands of the Okmulgee District to those farther north. The depth and thickness of sands in 160 townships are shown. Particular attention has been paid to the Bartlesville, Layton, Muskogee, Boock, Mounds, and Tucker sands. A limited number of copies of the advance print have been sent out, and a few are available on request. Permission has been granted to the Tulsa Mapping Co. to use it in a new development map of Oklahoma. Mr. Fohs makes acknowledgement to geologists and operators who gave him assistance.

p. 14. East Texas and Louisiana by M.L. Vaughn. For the week ending July 17, 1915, there were 15 completions, with one dry hole, with 4,105 bopd new production. The average daily production was 50,438 bopd. About 149 rigs were drilling or being erected.

Several new companies were formed: Bird Brothers Oil Co., of Shreveport, La. with $50,000 of stock, incorporated by R.E. Allison, John Bird, and R.A. Slatterly.

Square Deal Oil Co. of Shreveport, with $40,000 capital, incorporated by Will A. Kerley, Ralph Kohn, and J.C. Abel.

p. 12, 14. Thrall Pool, Texas. Most of the wells are being cleaned of paraffin. The field has been fairly well defined, and the major eight companies are recovering their money. Much of the excitement has died down. The Texas Bureau of Geology is preparing a map of the field, under supervision of Dr. W.B. Phillips and Dr. Udden. Blue prints will be made for free distribution.

p. 16. North Central Texas, by H.W. Whitney. Wildcatting is spread out in many counties. Previous tests have been less than 1,000 feet, but now the oil people know that they have to drill deeper than 1,200 feet. Most of the activity has been in the Strawn Field of Palo Pinto County, and the Vernon area of Wilbarger County, with some wells in the Burkburnett Field of Wichita County. Many tests are going down in Knox, Bell, Tom Green, and Jack Counties. (Details given on wells).

p. 20. Oneida area, Tennessee. In Scott County, Tennessee, near Oneida, oil has been discovered in the Oneida sand. The first well was drilled by Charles W. Whitcomb on the Toomey farm in the Oneida sand at 945-965 feet, for 50 bopd. The second was the Whitcomb Oil & Gas Co. on the Hendren farm, east of the first, with about 50 bopd at 946 feet. This is about 5 miles northwest of Oneida.

The discovery well was located by New York parties, by using a new instrument. F. Lynn Brown of Tulsa, Okla., has a large acreage northwest of the Toomey well. He is an old-timer, being in the oil business since the opening of the old Bradford Field in Pennsylvania.

p. 23. Caddo Lake or Ferry Lake Leases, La.. The U.S. Government has entered the controversy over the ownership of Caddo Lake in Louisiana and Texas. They claim that the lake belongs to the U.S. Government, citing the mean high water mark of 1839. This involves more than 12,000 acres of producing properties.

p. 24. Production Breaks Record. In 1914, the U.S. oil production was 290,312,535 barrels, at an average price of 80¢ a barrel. California was the leading producer.

p. 28-29. Osage County, Gas. The new regulations in the Osage Nation for royalties on gas is that the Osage Nation will receive one-sixth royalty. The previous rules were that the operators paid $100 to $300 per well per year, and this will still obtain in the area of the Five Civilized Tribes, but not in the Osage Nation. Also, the Government would like to limit the acreage that an operator could have to 9,000 acres.

The Oklahoma Natural Gas Company is the largest producer and distributor of gas in Oklahoma. It supplies Tulsa, Sapulpa, Chandler, Oklahoma City, Shawnee, Guthrie,

El Reno, Muskogee, Nowata, Claremore, Vinita, and other smaller towns, serving about 300,000 people. For ten years, this company has been reliable and has maintained suitable pressures. The operators are experienced in conservation, drilling, pipe lines, economics, regulations, laws, and management. The company has 113,000 acres under lease in the Osage Nation. This gas has been developed in a systematic manner, without waste. The same is true of acreage that they own belonging to the Five Civilized Tribes. If wells are shut down and pressures lost, of if systematic drilling is curtailed because of acreage restrictions, or if the price is out of range for recovery of profits, due to Government restrictions, the gas industry could be chaotic. About a dozen gas companies operate in Oklahoma, and they need stability in order to survive. If adjacent wells are flared while looking for oil, or if a fire is started nearby, or if reservoirs are interconnected, a company could lose a reliable source of gas. If the gas companies have to buy from one another, the price will go up. Many cities are now worrying about a guaranteed supply of gas for the winter. The Commercial Clubs are now beginning to pay attention to the consequences of regulations.

Vol. 14, No. 8, July 29, 1914, p. 1. Mid-Continent Production. The apparent estimated oil production of the Mid-Continent at the close of last week was 367,000 bopd, with Kansas and Oklahoma outside of Cushing being 110,000 bopd, Cushing 187,000 bopd, Electra District, Tex., 15,000 bopd, and Caddo District, La., 55,000 bopd, which includes the Crichton Field. The Cushing Field is falling off, but one of the largest wells was completed at 10,848 bopd on the Fixico allotment on the northern end. This is one of the largest wells completed in Oklahoma.

p. 1. John J. Carter has retired from business, but the Carter Oil Co. still goes marching on.

p. 1. Holdenville is a new oil town.

p. 1. Gasoline dealers in Oklahoma, as now regulated, must sell at uniform prices. Competition by price cuts is out of order.

p. 1. In Kansas, the "Blue Sky" law was enacted to prevent the sale of fake stock in fake companies. This now may become a national law.

p. 2. British Navy to Use Oil. Hereafter the British Navy will use oil, according to Sir Marcus Samuel of the Shell Oil Combine in London. In the present war, oil has fixed itself solidly in the favor of navy men of all nations. Oil is cheap, requires less labor to handle, and gives a long range to a ship before fueling again, and takes up less space than coal.

p. 2. Northwestern Pipe Line Formed. The Northwestern Pipe Line Co. has been incorporated at Dover, Delaware, for $3,000,000, by Allen E. Moore and John J. Jensen, of Brooklyn, N.Y., and George F. Abbott, of New York City. They intend to build a line from the Cushing Field, Okla., to Coffeyville, Kansas.

p. 2. Gasoline Prices To Be Uniform. Citizens of Poteau, Okla., complained that they are paying 16¢ a gallon for gasoline. At Sapulpa it is 20¢. In Tulsa it is 10¢ a gallon. In other places it is 11¢ and 12¢. The Corporation Commission ruled that gasoline will be uniform in Oklahoma.

p. 3-4. Personal Mention. Vance E. Rowe, of Tulsa, a popular Gulf Pipe Line man, visited Nowata this week.

A.T. McGhee, of the Crystal Oil Co., Ardmore, Okla., was in Tulsa.

General Hugh Scott, of the U.S. Army, has oil holdings near Muskogee, Okla.

Miss Velma L. Allen, of Taylor, Tex., and L.L. Dingman, of San Antonio, Tex., were united in marriage at Oklahoma City, Okla., on Monday. He is the Secretary-Treasurer of the Fuchs Oil Co. of Taylor, Tex. She is the daughter of G.A. Allen of southern Texas.

A.F. Corwin, of Pittsburgh, Pa., is the new president of the Carter Oil Co. A. Clarke Bedford is treasurer and assistant secretary. They were elected in Titusville, Pa. They have been in Tulsa for a few days.

William B. Phillips, director of the Texas Bureau of Economic Geology,

will become president of the Colorado School of Mines at Golden, Colo., on Sept. 1.

Freeman W. Marshall, a superintendent of the Bartlesville Gas & Oil Co., has resigned, and will now be superintendent for the Quapaw Gas Co. in Washington, Nowata, Rogers, and Craig Counties.

Andrew Benson of the State Line Oil Co. of Independence, Kansas, was in Tulsa. He came to the Mid-Continent about 15 years ago from Bradford, Pa. He was accompanied by W.J. Bovaird, also of Independence.

A. Edmond Robitvaille, of Montreal, Canada, manager of the New Ontario Oil & Gas Co., is at Hotel Tulsa. The oil business in Canada is stagnant because of the war, and he expects to live in Tulsa and enter the oil business there.

p. 4, 6. Noted in Passing. The American Process Oil Co., a British interest, has recently purchased the refineries of the Cleveland Petroleum Refining Co. at Cleveland, Okla., and East St. Louis, III.

The DuBois Oil Co. will drill a test 6 miles west of Ardmore, Okla. The company has 1,000 acres under lease and will drill to 3,000 feet.

At Oilton, Okla., 150 teams are to start work on the Tulsa-Sapulpa-Oilton Railroad, promoted by former Governor C.N. Haskell. Sapulpa people have put up $100,000.

J.P. Flanagan, of Tulsa, is drilling a well for gas near Stigler, Okla. He has a gas franchise for Stigler, and he has many leases in that area.

p. 6. Recent Deaths. A.F. Moseley, died of typhoid fever at Electra, Tex., on July 21, 1915. He was with the Magnolia Petroleum Co. Burial was at Chickasha, Okla.

John R. Ewing, age 42, died in Tulsa on June 24, 1915. He was associated with Robert Galbreath and J.D. Porter in the oil business in Tulsa. He leaves a wife, mother, and brother.

Spire Berry, a producer from Tulsa, age 30, died of appendicitis in Tulsa last Monday. He lived in Tulsa for a number of years.

p. 8, 10. Oklahoma and Kansas, by R.H. Whitney. With declining production in the Cushing Field, there is more interest in wildcatting, especially near Blackwell, Vera, Paden, and Holdenville.

In Kay County, north of Blackwell, in Sec. 32-29N-1E, the Spencer Oil Co. #1 Alberti farm, got 750 bopd of 33.8 gravity oil and 4 mmcfgpd at 3,360-3,385', in what some think is the Bartlesville sand. This is three quarters of a mile southwest of the Buehl & Jones #1 Swenson well in Sec. 32-29N-1E which was drilled about a year ago and came in at 100 bopd. That well is now 70 bopd. Buehl and Jones drilled 10 wells farther north and found nothing. About 1½ miles southwest of the Spencer well, the Duluth-Oklahoma Oil Co. #1 Wolfe farm got 12 mmcfgpd with 1,510 psi pressure, and this well may be drilled deeper. The same parties own Spencer and Duluth. The oil is being shipped from Middleton to the Lesh Refinery at Arkansas City, Kansas.

In Okfuskee County, the Paden well is now being completed by the Prairie Oil & Gas Co. #1 Rogers farm in Sec. 8-12N-7E. The Paden Oil Co. took a one-half interest in the well last November. At 2,793 feet, a sand was struck that yielded 5 bopd and 500 mcfgpd. Prices were $125 to $150 an acre. Two weeks ago an 80-acre tract one mile away brought $20,000, at $250 an acre. About 10 miles away, acreage is $5 an acre. The oil is supposed to be from the Skinner sand.

In Washington County, at Vera, the New York & Oklahoma Oil Co. of A. D. Morton has 50 bopd at 1,257 feet in Sec. 31-23N-14E. This is 5 miles northwest of the Collinsville Pool of Rogers County. Three months ago, the first gas well was found, and now this is the first oil well found near Vera. The gas has been developed at 1,300 feet. Just northwest of the Morton well, the Henry Oil & Gas Co. completed a test on Monday, for 750 mcfgpd at 1,300 feet.

In Creek County, in the Cushing Field, the Mid-Co. Petroleum Co. #10 Benoche Fixico well in Sec. 17-18N-7E was gauged at 10,848 bopd on Monday, after drilling 164 feet into the deep sand. About 192 wells are now being drilled in the Cushing field, but many are dry holes. About 187,000 bopd was the latest estimated production of the field. The Fixico is in the C-S line of a 72 acre tract,

near the Slick Oil Co. #6 Manuel well which came in at 2,500 bopd a few weeks ago. The Slick well now has water, and is only a fair well. Two months ago, the Mid-Co. #6 Fixico came in at 6,000 bopd just west of No. 10, but is now down to 2,000 bopd. Most wells follow this pattern, and that is why the Cushing Field is falling off. Mostly, inside drilling is now taking place, and many marginal dry holes are being drilled. About 39 wells were completed the past week. (Details of each is given).

p. 10, 12. The Thrall Pool, Texas, had some completions this last week. The Pure Oil Co. #6 Fuchs brought in 2,000 bopd at 860 feet. About 7 small wells were also completed. (Details given). Many wells are drilling. (Details given).

p. 12, 14. North-Central Texas, by H.W. Whitney. Nothing of great importance has been found this week in north-central Texas. A few wells were completed in the Strawn Field, and wildcatting continues in Knox, Tom Green, Palo Pinto, Wilbarger, Limestone, Wichita, Clay, and some adjacent Counties. (Details given).

p. 14. East Texas and Louisiana, by M.L. Vaughn. The production in this area, commonly called the Caddo District, is 55,443 bopd. The Crichton Pool and the DeSoto Parish area to the south was 37,227 bopd, and the northern area was 18,216 bopd. Benedum & Trees Oil Co. #6 Richardson completed a well in the "Gusher Bend" area of the Crichton Field in Sec. 24-13-11 of Red River Co. for 3,000 bopd. Several other smaller wells were completed. (Details given). Much wildcatting is taking place in northern Louisiana and East Texas. (Details given). The Monroe Oil & Gas Co. is at 2,300 feet near Monroe, La.

p. 16-17. Carter Oil Co. Reorganization. At Titusville, pa., Col. John J. Carter has resigned as president of the Carter Oil Co. He will go to the Standard Oil Co. of New Jersey as an expert. His son, L.B. Carter, will be his assistant. He will retain offices in Titusville, Pa. The new officers of Carter are: A.F. Corwin, Pittsburgh, Pa., superintendent of the South Penn Oil Co., pres.; F.C. Harrington, Sisterville, W. Va. superintendent for Carter in W. Va. and Ohio, vice-pres.; J. Edgar Pew, Tulsa, Okla., superintendent for Oklahoma, second vice-pres.; C.B. Ware, of Titusville, Pa., chief accountant, Treasurer and asst.-Sec. to be in New York City; A. Clarke Bedford, of New York City, Secretary and asst. Treasurer. Directors are A.F. Corwin, F.C. Harrington, J.E. Pew, A. Clarke Bedford, and John Worthington. Mr. Worthington is from New York City.

The officers of the company will be removed to Sistersville, W.Va. James Cluly, former private secretary for Colonel Carter, will go there as chief accountant. George Eckbert, treasurer for the company for the past 20 years, will retire on a pension.

p. 22 Slick Oil Co. Deal. On Friday, the Interior Department approved the sale of the property of Thomas B. Slick in the Cushing Field to the new Slick Oil Co., now owned by the Okla Oil Co. (one-fourth), John T. Milliken (one-half), and E.B. Gillespie, J.F. Guffey, R. Pitcairn, Jr., and C.F. Farren, all of Pittsburgh, Pa.

p. 23. Patents Recently Granted. Of 12 patents recently granted concerning the oil business, two were in Oklahoma. M.B. Whisenant of Hollis, Okla., invented a machine for raising and lowering well pipe (#1,137,101). Alex Ames, of Alluwe, Okla., invented a means for preventing the accumulation of gas within oil wells (#1,139,745).

In Texas, H.R. Hughes of Houston invented a well reamer; assigned to the Sharp-Hughes Tool Co. (#1,139,529).

p. 26-27. Colonel John J. Carter Retires As Head of Big Oil Company. On July 20, 1915, Col. John J. Carter retired as president of the Carter Oil Co. He first began by drilling a well near Pleasantville near Titusville, Pa., in 1868.

He was born in Ireland on June 16, 1842. When still a child, his parents moved to Portageville, Wyoming County, N.Y. In 1861 he joined the Union side in the Civil War, serving until July 30, 1865, becoming a cavalry captain in 1863. He fought in many battles and was wounded twice. For valor at Antietam he was

awarded the Congressional Medal of Honor. After the war he had a furniture business in Titusville, Pa. He became interested in oil in 1868, and drilled a small well near Pleasantville, Pa. When the Bradford, Pa., field was opened, he drilled his first well in that field in 1877, on Foster Brook, afterwards known as Derrick City. He had 2,000 acres in the field and drilled 400 wells, all of which were producers except two. In the Fall of 1892 he drilled the Sistersville Field, of W. Va. He invested $1,000,000 in property in the field.

In the summer of 1893, he organized the Carter Oil Co., under the laws of West Virginia. Just prior to the organization, the Standard Oil Co. of New Jersey bought 60% of the company. The company expanded into Ohio, and became very successful. In 1895, he sold the balance of his interest to Standard.

In 1896, he became the owner of the majority of the stock in the Producers Oil Co., Ltd. In 1901, the Producers paid him his interest back. He remained an active manager of Carter, however, and worked for the Standard, in such places as Japan in 1908, California later, Peru in 1913, and then Argentina. Some of the land in Peru had old oil wells operated by the Incas long before Cortez invaded that country. The Peruvian acreage covered about 483,000 acres, and he had about 450 wells to operate with 2,500 bopd, which was previously developed by the London & Pacific Oil Co., Ltd., of London.

He had other interests in Titusville and other parts of Pennsylvania. Twice he was a delegate to the Republican National Conventions. He founded a school at Sistersville, W.Va. for young people going into the oil business, and the course covered 4 years.

Mr. Carter will act as an expert in the development and economic production of oil for the Standard Oil Co. of New Jersey after his retirement.

p. 29. Royal Oil & Gas Co., Ada, Okla. On July 23, 1915, the Royal Oil & Gas Co. of Illinois will begin drilling a test in Sec. 17-4N-6E, north of Ada, Pontotoc County, Oklahoma.

p. 30. Niotaze, Kans., Refinery Not Profitable. Miss Henrietta Kasman of Buffalo, N.Y., organized the Sunflower Refining Co., and built a plant at Niotaze, Kansas when the oil business was booming in Kansas. She and her friends invested nearly $300,000 in the plant. After about 2 years, the plant went into receivership, and in the past three years, the plant has changed hands 3 or 4 times.

Vol. 14, No. 9, August 5, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent at the close of last week was 358,000 bopd, with Kansas and Oklahoma outside of Cushing being 110,000 bopd, Cushing 180,000 bopd, Electra, Tex. 15,000 bopd, and Caddo District, La. and E. Texas, 53,000 bopd.

p. 1. According to a Berlin dispatch, German submarines have sunk 229 English vessels, 30 hostiles ships, and 33 neutral ships. Six neutral ships were sunk by mistake. All the others had contraband.

p. 1. The Prairie Oil & Gas Co. has raised the price of crude 10¢ a barrel, from 40¢ to 50¢. This is the first good news since Feb. 15, 1915.

p. 4. Personal Mention. Dickson Q. Brown, president of the Okla Oil Co. and vice-president of the Tidewater Oil Co., visited Tulsa from New York.

Robert Markham is in charge of field operations near Oilton, Okla., for his brother John H. Markham, Jr.

R.M. McFarlin of the McMan Oil Co. has returned from Holdenville where he has important interests. The company will do considerable drilling in the new field.

J.V. McDonald has returned to Tulsa from Holdenville, where he found considerable excitement over the famous Holdenville discovery well.

p. 6. Noted in Passing. The Mid-Continent Refining Co. of Tulsa has taken over the operation of the Uncle Sam Oil Co. refinery in Tulsa. The capacity of the refinery is 500 bopd.

The Caney River Gas Co. is building a $100,000 casing-head gasoline plant near Haskell, Oklahoma.

J.T. Jackson and business associates, including R.E. Urquhart of Memphis, Tenn., have been leasing large tracts of land in Marshall County, Okla. Their first test will be 2,000 feet deep.

The Cosden Co. and The Petroleum Co. have each taken a quarter interest in the Dalsa Oil Co. properties in the Boynton Field of Muskogee County, Okla. The Cosden 6-inch oil line will probably be extended from Bixby to the Cole Pool to the Boynton Field.

M.G. Guthrie was driving an automobile with nitro-glycerine along an oil field road near Ardmore, Okla. Officers in search of liquor shot at him, and he accelerated full speed and got away from them. Guthrie still lives.

p. 6. Recent Deaths. James Byrne, age 48, died on Aug. 2, 1915, at his home in Tulsa. He was a drilling contractor. His wife and one son survive.

p. 8, 10. Summaries of Field Operations for July 1915. In Oklahoma, 263 wells were completed for 76,420 bopd new production, including 44 dry holes and 13 gas wells. About 764 new wells were started. 116 wells were completed in the Cushing Field for 67,470 bopd new production, with 12 dry holes and 1 gas well, and 192 new wells drilling.

In Kansas, about 57 wells were completed including 12 dry holes and 33 gas wells, with 225 bopd new production, and 89 new wells being started.

In Arkansas, 13 wells were being drilled.

In North-Central Texas, 13 wells were completed for 200 bopd new production, including 5 dry holes, with 78 new wells being started. Four wells were gas.

In NE Texas and Louisiana, about 44 wells were completed for 29,916 bopd, with 6 dry holes, and 135 new wells drilling. Of the 16 listed fields, the majority of the production came from the Crichton Field.

p. 10, 12. Oklahoma and Kansas, by R.H. Whitney. On Wednesday Morning, the Prairie Oil & Gas Co. advanced the price of oil another 5¢ a barrel, to 55¢. This is an unprecedented rise in quotations for Oklahoma-Kansas oil.

In Okfuskee County, near Paden, The Prairie Oil & Gas Co. well in Sec. 8-12N-7E went to water, at 2,806 feet deep. The company officials said that the sand was like the Layton. This would place the Bartlesville at 3,900 feet. Prairie will start another test in Sec. 12-13N-7E on the Laura Lafayette farm.

In Kay County, northeast of Blackwell, the Spencer Oil Co. test in the NW-SE-32-29N-1E on the Alberti farm is making 700 bopd at 3,385 feet. Buehl & Jones and others are now preparing to drill in the area again. (Details given).

In Creek County, in the Cushing Field, about 17 wells were completed, for about 7,000 bopd new production this past week. (Details given). The Mid-Co. Petroleum Co. #10 Fixico has declined to 4,000 bopd.

In McIntosh County, south of Hoffman, a dry hole was drilled to 2,000 feet by the Duluth-Oklahoma Oil Co. #1 Tommy Wright in Sec. 6-11N-14E. In this same section, Jack Grundish et al of Independence, Kans., has 7 oil wells on the Kanard farm, with 400 bopd. No. 7 is making 220 bopd.

In Muskogee County, in the Cole and Boynton Pools, the Cosden Pipe Line Co., Crown Pipe Line Co., Prairie, Gulf, and Texas companies have pipe lines to these pools. Good wells occur in Secs. 10-11, 14N-15E.

In Hughes County, near Holdenville, the Penn-West Oil Co. in the NE-Sec. 4-7N-8E had some oil and 16 mmcfgpd at 3,034-3,036 feet. There were 12 different oil and gas sands in this well. The well is shut down awaiting a liner.

p. 14. Thrall Field, Texas. About 3,124 bopd is produced from 95 wells in the Thrall Field. About 76,660 barrels are in storage. Many wells are still being drilled. (Details given). Tests are being made in Milam and Bell Counties.

p. 16-18. East Texas and Louisiana by M.L. Vaughn. About 53,403 bopd is the estimated production of this district. The Red River or southern area is the most active, with 35,827 bopd, and the northern area is less active, with 17,576 bopd estimated production. About 13 wells were completed last week, including 8 in the Crichton Field and 1 in NE Texas. About 67 wells were drilling or being erected last week. (Details given).

The Louisiana Oil Refining Co. was first organized on Sept. 11, 1911, and the company operated in NW Louisiana. It is composed of Shreveport citizens, with E.R. Ratcliff as president. Recently, they have increased their capital from $500,000 to $1,000,000.

The Federal Oil & Refining Co. has been organized to build a refinery at Alexandria, La. The president is W.W. Whittington, Jr., the mayor of Alexandria. The vice-president is Joseph B. Tinker, of Chicago, who is also president of the Federal League Oil Co. A director is S. Reid Holland, who is president of the Paint Products Co. of St. Louis, Mo., and who has been in the oil business for more than 30 years. He will build the refinery. Veigh Cockrum is president of the Ginner's Association of Memphis, Tenn., and is also a director of the new company. The new company has been successful in the Crichton Field. The company will also lay gas lines in northern Louisiana.

The city of Shreveport owns the Fair Grounds gas well, and supplies 125 consumers at $1.50 a month, through 5 miles of lines.

p. 18-19. North-Central Texas, by H.W., Whitney. This morning, the Magnolia Petroleum Co. advanced the price of Henrietta, Electra, and Corsicana oil 10¢, to 55¢ a barrel.

There are thus far seven oil and gas-producing counties: Wichita, Clay, Shackelford, Wilbarger, Palo Pinto, Jack, and Archer Counties. Wichita is first in production, centered about Electra. Clay is a large gas producer, centered about Petrolia. Shackelford has both oil and gas, centered about Moran. In Jack County, there are 50 shallow wells 10 miles north of Jacksboro, at 80 to 100 feet deep. Palo Pinto County, centered about Strawn, produces about 1,600 bopd. Much wildcatting is being done in Brown, Concho, Cooke, Denton, Grayson, Hill, Hardeman, Hunt, Kaufman, Throckmorton, Tom Green, and Wise Counties also. (Details given).

p. 28. Gas - Light, Heat and Power. In Kansas, during July 1915, about 68,750,000 cfgpd of new gas was developed. A new pool in Woodson County accounted for 41,500,000 cfgpd.

In Oklahoma, during July 1915, about 58,000,000 cfgpd of new gas was found. The largest well of the month was in the Cushing Field, of Creek County, where the Prairie Oil & Gas Co. #1 Wacoche in Sec. 20-18N-7E got 20,000,000 cfgpd.

In Pittsburgh County, northeast of McAlester, in a new field, the Gladys Belle Oil Co. got 3,000,000 cfgpd in Sec. 1-6N-15E.

In Marshall County, near Woodville, the Waskon-Thorn Oil & Gas Co. completed a well for 2,000,000 cfgpd.

In Osage County, the Union Oil Co. No. 51 in Lot 51, in Sec. 21-25N-12E, got 6,000,000 cfgpd.

In Tulsa County, in the Wicey Pool, the Oklahoma Natural Gas Co. #1 Owens farm in Sec. 10-16N-13E had 10,000,000 cfgpd.

In Creek County, in the Sapulpa Field, the Toxaway Oil Co. #1 Flint farm in Sec. 16-18N-11E had 5,000,000 cfgpd.

In West Tulsa County, in the Bird Creek Field, about 7,000,000 cfgpd was developed.

In Kay County, northeast of Ponca City, about 2,000,000 cfgpd was found.

p. 28. Louisiana Gas Development. An article in the Natural Gas Journal gives a short summary of the history of gas development in Louisiana.

In the Fall of 1904, a railroad man living near Oil City, drilled a water well near his home and hit gas at 90 feet. He piped the gas to his home, and this was the first probably use for gas in Louisiana. In 1905, a well was drilled northwest of Oil City, and this was the real start of the gas industry in Louisiana.

A little later, three wells were completed a few miles southwest of Shreveport, and the gas was piped to Shreveport. Gradually more wells were drilled southeast of Shreveport, and the gas was also piped to Shreveport and other towns. About a year later, a large gas field was discovered near Vivian, and the gas was piped to Texarkana 74 miles away, and to other towns.

The first company to handle gas commercially was the Citizens Oil & Gas Co. of Shreveport. It was later reorganized as the Southwestern Oil & Gas Co.

In 1912, gas was discovered in Shreveport. In October 1913, gas was found in DeSoto Parish, when the Producers Oil Co. brought in one of the largest gas wells in the state on the Sample lease.

The Reserve Gas Co. has lines from the Naborton Field to Oil City, and supplies gas from the DeSoto Field to the Southwestern Gas & Electric Co. and the Arkansas Natural Gas Co. Compressor stations are at Mooringsport, Rodessa, and Oil City, with four lines now running to Shreveport.

The Arkansas Natural Gas Co. has a line from Lewis Station to Little Rock, Ark., with branch lines to Hot Springs, Hope, Prescott, Pine Bluff, Arkadelphia, Benton, Gurdon, and Malvern, with a compressor station at Little Rock.

In 1906, the output was 343,261,000 cfg, and in 1913 it was 26,652,626,000 cfg, with a steady increase each year.

p. 29. The Oil Fields of Peru. The oil fields in Peru are about 50 miles inland from the coast. About 9,000 bopd is produced by British and American companies. The wells are about 2,800 to 3,200 feet deep, and each averages 35 to 75 bopd, of 34° to 38° gravity oil. A refinery handles about 5,000 bopd, and this will be increased to 10,000 bopd. The oil sells for about 80¢ a barrel.

Vol. 14, No. 10, August 12, 1915, p. 1. Mid-Continent Production. The apparent estimated production in the Mid-Continent at the close of last week was 346,000 bopd, with Kansas and Oklahoma outside of Cushing being 120,000 bopd, Cushing 170,000 bopd, N. Texas 14,000 bopd, and NE Texas-NW La. 42,000 bopd. Cushing has fallen off by 10,000 bopd from last week.

On Wednesday morning, the Prairie Oil & Gas Co. advanced the price of oil by 5¢ to 60¢ a barrel.

According to scientists, in a few generations there will be no more oil in the world.

Bugs eat nitroglycerine in Ohio. When flying away they get sick and fall to the ground and explode.

p. 3-4. Personal Mention. M.S. Isherwood, of Tulsa, has resigned his position of president of the Mid-Continent Refining Co. His successor is Frank L. Mulkey, of Oklahoma City.

Joseph H. Rogers, a lease man from Tulsa, has been in Holdenville. Since 1902 he has been in on the early developments of the oil fields of the Southwest.

W.S. Lewis, of Tulsa, a director of the Liberty National Bank of Tulsa, has been getting in on some of the preferred acreage near Holdenville.

Mrs. James A. Chapman and children were in Tulsa from their home in Holdenville. Mr. Chapman is vice-president of the McMan Oil Co.

p. 6. Recent Deaths. Jene Jansens, age 50, died on Aug. 5, 1915, at Kiefer, Okla., of heart disease. The body was sent to Sapulpa for burial. He was a well to do oil man, and was unmarried. He is survived by a brother, a Catholic priest; and also a cousin who is a priest at Pawhuska, Okla.

p. 8, 10. Oklahoma and Kansas, by R.H. Whitney. In Creek County, in the Cushing Field, there has been a decline in production. Some sulphur is in the oil, and much water has been found, and the big wells are falling off. About 150 wells are now drilling or being erected, for infill drilling. The field is fairly well defined, and many dry holes are being drilled. About 170,000 bopd is now the total production, with 3,950 bopd from the Layton sand and Wheeler lime. The bulk of the production is from the Bartlesville and Tucker sands, with about 95,000 bopd from the north end, 49,000 bopd in the middle, and 26,000 bopd on the south end. About 39 companies are handling most of the oil. (Details given on companies and wells). About 42,582,500 barrels are in storage. About 20 wells were completed last week. (Details given).

In Kay County, northeast of Blackwell, the Prairie Oil & Gas Co. is laying a 4-inch line from the Newkirk Field to the new pool in Sec. 32-29N-1E. Many tests are now being drilled in this new area. (Details given).

p. 12. East Texas and Louisiana, by M.L. Vaughn. The southern district around Crichton, Red River Parish, La., is declining, with production down to 25,555 bopd. New production for the past week was 2,025 bopd in this area. About 82 wells were drilling there last week. (Details on many wells given).

In Louisiana for 1914, there was 14,309,435 barrels of oil produced, of which 11,808,469 were from NW Louisiana. This was an increase of 20% for NW Louisiana over 1913. The average price was 90¢ a barrel. In 1914, 445 wells were completed in NW Louisiana, and 566 wells were drilled in the entire state. About 374 were oil wells, 53 gas wells, and 139 were dry holes. In NW Louisiana, the production is from about 1,500 feet of sand and chalk rock of Cretaceous age.

p. 14. The Thrall Field, Texas, had six completions, from 835 to 865 feet deep. Many wells are still being drilled. (Details given).

p. 16. North-Central Texas, by H.W. Whitney. Most of the activity in this area is in Palo Pinto County, around the Strawn Pool. (Details given). New work is to be started near Abilene by Frank Fox of Indianapolis, Indiana, who has about 25,000 acres about 5 miles southeast of town. A new refinery will be built at Petrolia, by C.B. Farquharson and W.T. Manross of Tulsa. It will have a capacity of 1,000 bopd. The first refinery built near here was the Wichita Valley Refining Co. at Iowa Park, which has been in operation for about a year.

p. 24. World's Oil Production, 1914. In 1914, the world's oil production was 400,483,489 barrels, about two-thirds of which came from the United States, or 265,762,535 barrels. From 1857 to 1914, about 5,593,262,936 barrels were produced, about 60% of which came from the United States, or 3,335,457,140 bbls. About 98,000,000 barrels of oil was produced in Oklahoma in 1914, or about one-fourth of the world's oil.

p. 25. Big Persian Gusher. The Anglo-Persian Oil Co. is constructing a 10-inch pipe line from Abadan to a Persian field 140 miles inland. Although 19 wells have been drilled, only one gusher has been completed, because the company cannot handle the large amount of oil from that one well. The other 18 are just above the sand. Each day, about 40,000 barrels of oil are burned, and the fire can be seen for 75 miles. The oil being sent to the Abadan refinery is more than what can be handled, and the excess is sent out on a large number of tankers that move the year around. When the 10-inch line is completed, probably they will be able to handle the oil from the one well, but the refinery will have to be expanded and many more tankers will have to be used, and many more storage tanks will have to be built.

p. 34-37. Detailed Field Operations Aug. 1, 1915. Oklahoma, wells. In Oklahoma for July 1915, 263 wells were completed for 76,420 bopd new production, including 13 gas wells and 44 dry holes. About 764 wells were being drilled or erected. (Details given on each well). Approximately 245 wildcats were being drilled in southern Oklahoma outside of the main areas. In Latimer County, in Sec. 30-3N-21E in the Potato Hills, Owen & Flanagan No. 1 was started. In LeFlore County, in Sec. 10-5N-25E, C.B. Shaffer No. 1 was started. About 21 wells are being drilled in Marshall County.

p. 37-38. Arkansas Wells. About 13 wells were being drilled in Franklin, Polk, Howard, Sevier, Independence, Crawford, Hempstead, Benton, Saline, and miscellaneous counties. (Details given).

North-Central Texas, Wells. About 13 wells were completed in July for 200 bopd new production, with 4 gas wells and 5 dry holes, and 78 wells drilling or being erected, in 21 counties. (Details given).

NE Texas-NW La., Wells. About 44 wells were completed in 16 fields for 29,916 bopd new production, including 1 gas well and 6 dry holes; and 135 wells drilling or being erected. One well was completed in Marion Co., Texas, for 600 bopd, and 6 wells were drilling in Marion County. (Details given).

In the Thrall Field, Texas, about 15 wells were completed, with 8 dry holes, for 3,655 bopd new production. About 10 wells were drilling or shut down.

Vol. 14, No. 11, August 19, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent at the close of last week was 358,000 bopd, with Kansas and Oklahoma outside of Cushing being 125,000 bopd, Cushing 170,000 bopd, N. Texas 14,000 bopd, and NE Texas-NW La. 49,000 bopd.

p. 2. Healdton Field Report. A.L. Walker reports that during the year ending June 30, 1915, about 368,391 barrels of oil were produced in the Healdton Field. There are 1,700,000 barrels in steel storage and 100,000 barrels in earthen storage. At present there are about 20 wells now drilling, and the potential will reach about 100,000 bopd production. The pipe line capacity is 25,000 bopd. Prices ranged from 30¢ to $1.05.

p. 3. Oil City's Great Oil Paper, The Oil City Derrick. Last week, the Oil City Derrick completed its 30th year under the ownership and management of Patrick C. Boyle. Before 1885 the paper was a small oil-country paper, but under his management it became an 8-page paper. With a Mergenthaler typesetting machine, the daily journal grew by making a specialty of oil news. No other daily journal filled this field. Through the Associated Press, the paper kept in touch with world news of the oil business. Also, Mr. Boyle had a corps of special correspondents who reported on the news from the various fields in America, along with bureaus in New York City and Washington, D.C. A Semi-Weekly Derrick was also published. He established and built up The Oil & Gas Journal, which is now recognized as the leading authority on gas and oil, which has an international circulation.

At Oil City, Pa., the Derrick has a well-equipped plant, and can handle binding as well as printing. The Derrick's Handbook of Petroleum is one of the most complete compilations of oil-field data, chronologically arranged.

p. 4. Personal Mention. John Sankey has returned to Ada from Ardmore. He is a drilling contractor affiliated with W.G. Skelly, and previously drilled in the Healdton Field, but lately he is drilling for gas near Ada in Pontotoc County, Oklahoma.

Henry Leschen, of St. Louis, Mo., is head of the various Leschen interests in Oklahoma. While in Tulsa he disposed of his North Pool Oil Co. holdings in the Cushing Field to Colcord et al of Oklahoma City.

Hon. Robert Galbreath of Tulsa is a Democratic National Committeeman from Oklahoma. He is promoting Dallas to be the place for the next National Convention.

W.H. Heydrick, of Wichita Falls, is in Checotah, McIntosh County, Okla., where he has some good gas wells. He is originally from Pennsylvania. He will be doing some wildcatting in southern Oklahoma.

E.S. Eaton, a contractor from West Virginia, has been drilling in the Moran Pool of Shackelford County, Texas for many months. He is now drilling a well near Yale, Okla., for the Corsicana Petroleum Co.

p. 6. Recent Deaths. William Sterling Porter, age 49, died at his home in San Francisco, Cal., on August 9, 1915, of apoplexy. He was vice-president and manager of the Associated Oil Co. of California. In 1910, he and George C. Priestley held options on acreage in Oklahoma, and formed a corporation to sell fuel oil to the Southern Pacific Railroad.

p. 8, 10. Oklahoma and Kansas by R.H. Whitney. In Creek County, there is much interest in the well of the Gypsy Oil Co. #1 Trent in SW-NW-Sec. 9-16N-7E, 4½ miles south of the Cushing Pool, where about 1,000 bopd is being produced from the Layton sand at 1,520-1,540 feet deep. The top of the Layton was at 1,508 feet. The well started out at 50 barrels an hour. This is not the first oil show in the area. Some months ago, Frank Fox et al #1 Chapman farm got 500 bopd, but water came into the hole. The well was abandoned in the Bartlesville sand. A second well was drilled by Mr. Fox in Sec. 16, and he got 12,000,000 cfgpd. He is now drilling a third test. Recently, C.B. Shaffer completed a well for 20,000,000 cfgpd in the same section. Leasing is brisk in this area.

In Hughes County, near Holdenville, the Penn-West Oil Co. test in the NE

Sec. 4-7N-8E was opened Monday, with 16 mmcfgpd and 5 bopd being found at 3,034-3,036 feet.

In Creek County, the Cushing Pool has fallen off to 165,000 to 170,000 bopd, with infill drilling. (Details given on many wells). About 25 wells were completed last week.

In Tulsa County, in the Mohawk Pool 4 miles NE of Tulsa, the Western Oil & Gas Co. #4 Walkingstick in Sec. 21-20N-13E got 100 bopd at 1,031 feet, in a sand that was struck at 1,000 feet, after an initial flow of 200 bopd. The company is composed of A.T. Wolfe, of Coffeyville, Kans., and John Clauss and W.F. Brown of Toledo, Ohio. They purchased 600 acres and the Walkingstick lease from R.W. Kellough of Tulsa for $32,000. They have a new location 1 mile south.

In Washington County, near Vera, the A.D. Morton #1 well is making 115 bopd at 1,257 feet, in Sec. 31-23N-14E. The A.D. Morton #2 was finished this past week for 1.75 mmcfgpd at 1,598 feet.

In McIntosh County, in the Checotah Field, the Green River Oil & Gas Co. will drill #4 in the C-S line-SW-SE-Sec. 30-11N-17E for gas. They have 3 gas wells that supply Eufaula and Checotah with gas; with No. 3 at 14 mmcfgpd, No. 2 at 12 mmcfgpd; and No. 1 at 3.5 mmcfgpd. The gas is handled by the Western Natural Gas Co. The gas occurs in about 90 feet of sand at 2,050 to 2,075 feet deep, with a pressure of 870 psi.

In Pontotoc County, near Francis, the Franda Oil Co. #1 Fagan had a showing of oil at 1,150 feet in Sec. 34-5N-7E several weeks ago. The company is composed of Francis and Ada parties, and they will probably go deeper.

p. 12. Thrall Pool, Texas. About 3,458 bopd was produced from the Thrall Field this past week. Many tests were abandoned. (Details given).

p. 12. East Texas and Louisiana, by M.L. Vaughn. About 49,485 bopd is the average daily production of this area, with 31,867 in the southern part, and 17,618 bopd in the northern part. Many of the fields are being extended. (Details given on the wells of the various fields).

A number of citizens of Pine Bluff, Ark., have organized a new company called Arkla Oil Co., with $31,000 capital. They will operate in northern Louisiana. They will drill 1 mile SE of Coushatta on the Wardlow property in Sec. 19-12-9. This is 5 miles southeast of the proven field.

p. 18. North Central Texas by H.W. Whitney. The price of oil has now gone up to 65¢ a barrel, and there is more activity in northern Texas. The main activity is in the Strawn Field of Palo Pinto County. (Details given). Next are the Electra and Burkburnett Pools in Wichita County. (Details given).

p. 27. Tax Ferret Pittman Still Busy. Charles H. Pittman, of Muskogee and Tulsa, is still trying to get leases taxed like regular property. He lost the last three cases in the Supreme Court of Oklahoma. His last assessment case against the Gypsy Oil Co. for $29,490,279.36 is now in court.

p. 29. Oil City Derrick's History Reviewed for Thirty Years. On Aug. 11, 1885, Mr. P.C. Boyle took over the Oil City Derrick newspaper. The 4-page, 8-column newspaper was enlarged to as many as 112 columns, covering every oil field in the United States, Mexico, and Canada. Its files have a complete daily and statistical history of the oil and gas industry.

Vol. 14, No. 12, August 26, 1915, p. 1. Mid-Continent Production. The apparent estimated production of oil in the Mid-Continent at the close of last week was 362,000 bopd, with Kansas and Oklahoma outside of Cushing being 130,000 bopd, Cushing 165,000 bopd, N. Texas 14,000 bopd, and NE Tex.-NW La. 53,000 bopd.

About 24 wells were completed in the Cushing Field during the week ending Aug. 21, 1915, with about 11,500 bopd new production being discovered.

p. 4,6. Noted in Passing. D.N. Wheeler, of Tulsa, will sink a shaft for oil near Boswell, Choctaw County, Oklahoma.

William Echoltz, T.E. Williams, and W.J. Jarvis, of Muskogee, Okla., have completed a 5 mmcfgpd well near Sapulpa, and will sell the gas to a company that supplies Sapulpa with gas.

p. 8, 10, 12. Oklahoma and Kansas, by R.H. Whitney. With a 90% increase in oil prices, activity in the fields is picking up. The area in Creek County, around Sections 9, 15-16-16N-7E is now named the Fox Pool, after Frank Fox who drilled the first test in Sec. 15-16N-7E. Almost a dozen wells are now located in this area. (Details given).

In Carter County, in the Healdton Pool, about two dozen locations have been made, and 15 wells are drilling. The completed wells are within the known field, at depths ranging from 940 feet to 1,092 feet. (Details given).

In Muskogee County, the Cole and Boynton Fields are producing about 5,000 bopd. Few wells have been completed.

In Washington County, near Vera, Dewey, Wann, and Bartlesville, there is renewed drilling to 1,200 feet or more. (Details given).

In Creek County, the Cushing Field is down to about 165,000 bopd, of which about 25,000 bopd contains sulphur. About 115 rigs are drilling or being erected. About 33 wells were completed this past week. (Details given).

In Kay County, northeast of Blackwell, almost two dozen rigs are being erected. The discovery well of Buehl & Jones #1 Swenson in Sec. 32-29N-1E, completed about a year ago, is still holding at 65 bopd. Its first production was 175 bopd. Since the Spencer Oil Co. well came in in Sec. 32-29N-1E, on the Alberti farm, at 800 bopd at 3,385 feet, there has been much activity. This second well is now producing at 500 bopd. Buehl & Jones drilled 6 dry holes to the north, east, and west of their original well, but did not drill south on the recommendation of a geologist. (Details given on wells). The Spencer well may be drilled deeper. Some think that this is in the Bartlesville sand, and others think that the producing horizon is in a lime. The bed was penetrated only a few feet.

In Hughes County, the Penn-West Oil Co. #1 Kernel farm in the NE-Sec. 4-7N-8E, near Holdenville, got 5,000,000 cfgpd and oil at 3,034-3,036 feet, but has not been drilled deeper, until this week, when it was drilled to 3,038 feet, where some water was struck. Repairs are being made to the boiler.

In Okfuskee County, near Paden, the Prairie Oil & Gas Co. in Sec. 8-12N-7E had 65 bopd at 2,793 to 2,806 feet deep, with twice as much water in the Layton sand, and they will drill deeper for the Bartlesville at 3,900 feet.

p. 14. East Texas and Louisiana, by M.L. Vaughn. About 53,123 bopd was produced from this area during the past week, with 35,012 bopd in the southern area and 18,111 bopd in the northern area. Most of the development is now in the southern area, around the Crichton Pool of Red River Parish. (Details given on many wells).

p. 14. Healdton Field, Okla. About 300 wells have been drilled in the field to date, with 900 locations yet to be drilled. Many operators signed contracts for 2 years to sell their oil at 30¢ a barrel, before the price went up recently.

p. 16. North-Central Texas, by H.W. Whitney. The center of activity is mostly in Palo Pinto, Shackelford, and Erath Counties, but developments continue in the Electra and Burkburnett Pools in Wichita County. (Details given).

J.B. Aiken, of Shreveport, La., president of the United Petroleum & Gas Co. of La., and a large stockholder in the Southwestern Gas Co., visited Mineral Wells, looking over the holdings of his company.

p. 23. A Valuable Book. Law of Oil and Natural Gas, a Handbook of the Statutes of Texas, has been published. The authors are Wilkinson & Richardson, attorneys of Austin, Texas, where copies may be purchased at 325 Littlefield Building. The book is bound and indexed.

p. 23. James Ryan, Death. James or Hostetter Ryan, age 45, died at Sunset, Texas, on Aug. 21, 1915, of malaria. He was an old time pipe line worker, working for E.A. Macpherson of Fort Worth, Texas. He was working on a line for the Lone Star Gas Co. He was buried at Sunset, Texas.

p.23. J.S. Cosden Invades Kansas City. J.S. Cosden of Tulsa has bought a number of gasoline stations in Kansas City, Mo., where gasoline sells for 7 to

9 cents a gallon. Mr. Cosden has refineries at Tulsa, Cushing, and Bigheart, Oklahoma. Mr. Cosden bought 11 stations, one of which cost $9,000, even though it cost $100 to build.

p. 24. How Long Will Oil Continue to be An Available Commodity? Dr. David T. Day of the U.S. Bureau of Mines says that geologists in the United States have calculated that our oil supply will be exhausted in a few generations. The only salvation is to extract oil from vegetable matter. About 8,000,000 people drive automobiles every day in the United States, and with airplanes and ships using oil, the supply cannot last very long. Colonel Drake's well is still yielding one-third of a barrel of oil a day, but we cannot depend upon that type of production to support our demands. New wells come in every day, but these eventually fall off. The United States produces two-thirds of the world's oil, but this cannot continue. In 1870, the world produced 5 million barrels; in 1880, 30 million; in 1890, 75 million; in 1900, 150 million; in 1910, 327 million; and in 1914, 400,000,000 barrels. Scientists say that there are 15 billion barrels of oil that probably can be produced in the United States. This might last 100 years, and then it will be gone. Oil is produced from shale in Scotland, and Dr. Day believes that we can extract oil from our shales in the United States, at a commercial price. This process may produce more oil than obtained by drilling. The most promising research is on making oil from hay.

p. 24. Logs of Various Fields in Oklahoma. F. Julius Fohs, of Tulsa, has recently completed the work on correlation of type logs of the Ponca City, Cushing, Glenn, Bartlesville, Morris, and Boynton Pools, showing the 24 important producing sands of Oklahoma that occur through a vertical range of 5,000 feet.

p. 26-27. Order of Corporation Commission. As of Sept. 1, 1915, natural gas is to be conserved and not wasted. The known gas fields are Bartlesville, Copan, Hogshooter, California Creek, Nowata, Collinsville, Owasso, Alluwe, Chelsea, Tulsa, Muskogee, Glenn, Henryetta, Okmulgee, Morris, Wheeler, Healdton, Ada, Ponca City, Poteau, Holdenville, Bald Hill, Schulter, Osage, Cleveland, Cushing, and Blackwell, and smaller fields. About 80% of the gas has been wasted, and it is estimated that the average waste is about 200,000,000 cfgpd. Many other rules will also apply to the oil and gas industry in Oklahoma. (Details given). A log of each well has to be filed with the Corporation Commission. A vacume pump cannot be placed on a well. Multiple gas horizons cannot be produced together. Plugging has to be verified. Casing cannot be pulled until the well is plugged to the top. Gas production can only be used at 25% of the flow rate of the well. Each month, the gas volume and pressure has to be gauged and filed. Where oil and gas occur together in the same sand, a separating device must be installed. Fresh water shall be protected from pollution. A slush pit must be constructed before a well is started. The Corporation Commission and the Chief Mine Inspector will work together to enforce the rules. All gas sold will be measured by a meter. The Commission may prorate a field. Gas may not be flared. House Bill No. 395 had 28 paragraphs under 10 sections.

p. 29. University of Oklahoma Geology Department. There are 4 professors in the Department of Geology at the University of Oklahoma: Charles H. Taylor, Chairman; M.G. Mehl, R.W. Brown, and A.W. McCoy. They offer a 4 year course in geology and also teach oil geology. There were 47 students in 1914. Dr. Taylor has been in the department since 1909. For the past 3 years, the oil industry has been hiring geologists. Of those from O.U., six work for Roxana, 2 for Gypsy, 2 for Producers, 8 for Quapaw, 2 for E.W. Marland, etc., and at present, 15 students work for oil companies in Oklahoma.

p. 30. New Oklahoma Oil Companies. The Penn Gas Co., of Holdenville, was incorporated for $50,000, by E.C. Dunn, of Holdenville, Okla., and R.H. Smith and A.R. Shuster of Pittsburgh, Pa.

The McIntosh Oil & Gas Co., of Muskogee, was incorporated for $10,000 by John H. Stewart and A.J. Welch of McAlester, and Edward H. Bispham of Muskogee, Oklahoma.

Vol. 14, No. 13, September 2, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent at the close of last week was about 347,000 bopd, with Kansas and Oklahoma outside of Cushing being 130,000 bopd, Cushing 150,000 bopd, N. Texas 14,000 bopd, and NE Tex. - NW La. 53,000 bopd.

Cushing continues to decline, with 19 completions and 4,625 bopd new production last week.

Three wells were completed in the Crichton Pool, La., for 6,700 bopd new production.

p. 3. Tulsa Special Census. In 1907, Tulsa had a population of 7,298; and in 1910, 18,182; and now in 1915, 30,225. The census was taken because of a request by the citizens.

p. 3. Yellville, Arkansas, Mining. Zinc and potash are mined near Yellville, Arkansas. Percy McConnell and William Rosier, of Tulsa, are mining the potash, which runs 8%. Old zinc working are now being mined by E.E. Andrews, Tad Reese, and Claude Tingley, of Tulsa, who have leases on 1,200 acres.

p. 3. Gulf Production Co. The new name of the J.M. Guffey Petroleum Co. of Beaumont, Texas, is the Gulf Production Co. Approval was given at Austin, Texas, for the renaming. The stock has been reduced from 15 million dollars to 2.25 million dollars.

p. 4,6. Noted in Passing. The 1916 Oil Co. has been organized at Ardmore, Okla., with $50,000 capital, by A.W. Staiti, of San Antonio, Tex., president; H.E. Figg, of Houston, Tex., vice-president; and directors, Lee Hager, W.B. Johnson, N.W. McGill, A.W. Staiti, and H.E. Figg.

The Gates Oil Co. in Sec. 15-4S-3W in the Healdton Field, got 25 mmcfgpd in 73 feet of gas sand.

p. 8. Summary of Field Operations for August 1915. In Oklahoma, 285 wells were completed for 48,798 bopd new production, including 14 gas wells and 55 dry holes, with 742 wells drilling or being erected.

Kansas had about 78 wells completed, for 530 bopd new production, including 35 gas wells and 14 dry holes, with 80 wells drilling or being erected.

In Arkansas, about 13 wells were drilling.

In North Texas, about 21 wells were completed for 625 bopd new production, including 7 dry holes, with 97 rigs drilling or being erected.

In NE Texas - NW La., about 53 wells were completed for 23,670 bopd new production, including 10 dry holes, with 98 rigs drilling or being erected.

p. 10, 12. Oklahoma and Kansas by R.H. Whitney. There are many wells in Kay County, in the northeast Blackwell area. (Details given). In the Blackwell Field itself to the south, there are 7 gas-producing sands, with an average rock pressure of 1,575 psi. Some operators are wasting the gas.

The price of oil is now up to 75¢ a barrel, and more drilling has resumed, but it is slow. There are about 200 wildcat tests being drilled in Oklahoma, but many are shut down due to financial troubles caused by the low price of oil for so many months. Many of the older areas are now being drilled. Several wells were completed in Muskogee County, in the Cole and Boynton Pools. (Details given). Cushing has dropped off to 150,000 bopd or less, in Creek County. About 19 wells were completed. (Details given).

In Carter County, east of Berwyn, in Sec. 27-3S-3E, Ardmore operators plugged their test at 1,175 feet. The Healdton Field is still being drilled, but the operators do not want to sell the oil for 30¢ a barrel, now that the price has gone up to 75¢. They want to break their contracts with Magnolia and with the Producers companies, which run for 2 years.

p. 14. In the Thrall Pool, Texas, about 108 wells are producing about 2,152 bopd, and some wells are still being completed. (Details given).

p. 16, 18. North-Central Texas, by H.W. Whitney. The Strawn Pool of Palo Pinto County, and the Electra and Burkburnett Pools of Wichita County are the most active areas. In Jack County, J.D. Avis et al of Wichita Falls has

just completed a 500 bopd refinery. Most of the wells in the field are from one to five barrels each. The Pre-Historic Oil & Gas Co., from Oklahoma, has a 10 bopd well, which is considered one of the best in the field. The Capitol Oil & Gas Co., from Fort Worth, Tex., has 10 producers in the Jack Field.

The Wheel of Fortune Oil & Gas Co. has been organized in Palo Pinto County, with $20,000 capital, by F.M. Fuller, Frank Corn, J.B. Aiken, and W.A. Stephens. The first two are active operators in the Strawn Pool, and the latter are operators around Shreveport, La.

p. 18, 20. East Texas and Louisiana by M.L. Vaughn. Developmental wells continue to be completed in this area, with 55,850 bopd being recorded at the end of last week. (Details given on the various fields).

The Crichton Field had 38,110 bopd. In the last month, about 20,675 bopd new production was found, with 30 completions and 6 dry holes. At the close of last week, about 56 wells were drilling or being erected, in the Crichton Pool.

The Grain Oil & Gas Co. has been organized at Colfax, La., composed of Colfax, Mansura, and Shreveport citizens.

p. 26-28. Oil Men Honor Memory of the Late Edwin L. Drake (portrait). On Aug. 27, 1915, Drake Day was celebrated at Oil City, Pa. Mrs. Laura E. Drake of 122 Decatur St., Cape May, N.J., wrote a letter. She was hurt in a trolley accident and could not attend the ceremonies honoring her late husband. S.J. Smith of Titusville was there, the son of Billy Smith who was the tool dresser for Drake. More than 5,000 persons attended the celebration, including those as old as 88 years old. Major Hawkins of Bradford, Pa., age 85, an early refiner, was there. John Fritz, age 88, of Oil City, was there. C.W. Shaw, who assisted Drake in building his second derrick, was there. Ed Skinner, of Pleasantville, Pa., and brother John Skinner, of Gresham, Nebraska, who had left the oil country in 1867, and who were present when Drake drilled his well in 1859, saw each other for the first time since 1867, when they left the oil business.

A short history of production of oil in the United States is given, mentioning that about 2,500 barrels were produced in 1859, according to guesswork, but not recorded.

Col. Edwin Laurentine Drake completed his well on Aug. 27, 1859, or Watson Flats near Titusville, in Venango County, Pennsylvania. Previously at another ceremony, a monument to Drake was erected in Woodlawn Cemetery in Titusville, Pa., paid for by John D. Rockefeller.

p. 29. John M. Crawford. John M. Crawford, of Parkersburg, W.Va., is president of the Parkersburg Rig & Reel Co., and owns much stock in the Muskogee Refining Co. at Muskogee, Oklahoma. He was visiting his brother, James K. Crawford in Tulsa.

p. 32. Gas - Light, Heat and Power. Kansas Natural Gas Co., Interstate. About 85% of the natural gas used by the Kansas Natural Gas Co. comes from Oklahoma, and 15% comes from Kansas. About 60% is used in Kansas and 40% is used in Missouri.

August Output of Gas, Oklahoma, Kansas. About 97,450,000 cfgpd new gas was discovered in Oklahoma and Kansas during August 1915, of which 58,500,000 cfgpd was in Oklahoma, and 49,950,000 was in Kansas.

In Oklahoma, the Creek Nation led, with 24,500,000 cfgpd, not counting Cushing and not counting a 20 mmcfgpd well by C.B. Shaffer in the Fox Pool south of Cushing in Sec. 16-16N-7E. In the Cushing Pool, the Gypsy Oil Co. #16 Barnett in Sec. 5-17N-7E was completed for 5 mmcfgpd. In the Lost City Field of Tulsa County, Charles Page #2 in Sec. 7-18N-12E got 10 mmcfgpd. Two other wells in Creek County had 5 mmcfgpd each. Near Checotah, the Green River Oil & Gas Co. had 3.5 mmcfgpd in Sec. 25-11N-16E. Green River now has about 40 mmcfgpd available for market near Checotah.

In the Cherokee Deep Sand District, about 6.5 mmcfgpd was developed, with 5 mmcfgpd being credited to Vera, Washington County. The largest well was that of the Tulsa Fuel Co. in Sec. 6-22N-14E, for 3 mmcfgpd.

In the Cherokee Shallow Sand District, about 500,000 cfgpd was developed.

In the Ada Field, of Pontotoc County, about 2 mmcfgpd was found in the McThwaite Oil & Gas Co. #7 in Sec. 31-4N-6E.

p. 33. Control Casing-Head. The Control Casing-Head is a device that allows a well to be instantly shut in during drilling without withdrawing the tools or injuring the drilling line. It is owned and marketed by The Oil Well Improvement Co. of Tulsa, Okla.

p. 33. Tulsa Engineering & Supply Co. As of Aug. 21, 1915, J. Truman Nixon, president, will resign, and turn over the presidency to W.H. Hendren. A. F. Hendren is vice-president, and F.J. Reedy is secretary-treasurer.

p. 33. Manganese in Oklahoma. In a book just issued by the U.S. Geological Survey for 1914, on manganese deposits in the United States, the deposits in Johnston County, Okla., are mentioned, in Sec. 9-2S-8E in a quarry of the Bromide Oolitic Stone Co., which was promoted and owned by Robert Galbreath of Tulsa, and other capitalists of Tulsa. The discovery of manganese was made by Mr. Galbreath, and he submitted specimens to the Bureau of Mines for analysis. The report was gratifying, and Pittsburgh capitalists have been enlisted to develop the deposits shortly. Arkansas is the only southwestern state that produces manganese. (Other deposits are in Coal County, just north of Bromide). (The quarry is in Johnston County, east of Bromide). (A deposit is SW of Bromide).

Vol. 14, No. 14, September 9, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent at the close of last week was about 343,000 bopd, with Kansas and Oklahoma outside of Cushing being 130,000 bopd, Cushing 145,000 bopd, NW La. - NE Tex., 55,000 bopd, and N. Texas, 13,500 bopd.

No new important fields were found, and most drilling is now around the proven fields.

p. 4, 6. Noted in Passing. The O.K. Oil & Gas Co. has been organized at Taylor, Texas. The company will drill near Eagle Lake, Texas.

Fires due to lightning have caused a loss of 1,455,000 barrels of oil in the past 3 months in Oklahoma.

East of Henryetta, Oklahoma, Jack Grundish and others have sold a 160-acre lease with 7 producing wells for $120,000.

Near McAlester, Okla., gas has been struck at 700 feet by the Gypsy Oil Co., for 5 mmcfgpd. The gas will be used in McAlester.

p. 6. Recent Deaths. Glenn Fowler, age 28, died at Drumright, Okla., on Aug. 30, 1915, of an accidental gunshot. He worked for the Pierce Oil Corp., on pipe lines. On Sept. 25, he was to get married to Miss Pearl Culverson, of Mannford, Okla. He was buried in Tulsa, his home town.

p. 8, 10, Oklahoma and Kansas by R.H. Whitney. In Hughes County, south of Wetumka, in T. 8 N., R. 11 E., a dome has been located, and leasers are busy.

In Kay County, in the northeast Blackwell area, the Spencer Oil Co. #1 Alberti, near the W line-NW-SE-Sec 32-29N-1E, was drilled a foot deeper to 3,387 feet, and the well now produces 500 bopd and 4 mmcfgpd from 3,360 to 3,387 feet. About 20 wells are drilling or being erected in this area.

In Carter County, the Roxana Petroleum Co. has purchased the holdings of the Alma Oil Co., Dundee Petroleum Co., and the Samoset Petroleum Co. in the Healdton Field, for $2,000,000. This involves 59 wells on 720 acres with 18,633 bopd production. Development continues in the field. (Details given).

In Tulsa County, at Wekiwa, in Sec. 1-19N-10E, Utterback, Doty, et al #1 Meathers lease have 10 mmcfgpd. Charles Page will use the gas for Sand Springs, just to the west.

In Creek County, the Abraham et al test in Sec. 9-15N-9E, near Bristow, had 3.5 mmcfgpd in the Bartlesville sand. The gas will be used at Bristow.

In Hughes County, near Holdenville, the Penn-West Oil Co. test in Sec. 4-7N-8E had 50 bopd and 100 bwpd at 3,034-3,069 feet, and may be abandoned.

N. Creek County, north of the Cushing Pool, the Prairie Oil & Gas Co.

in Sec. 21-19N-7E, plugged back to 1,951-1,971 feet in the Cleveland sand, where they had about 150 bopd. They will shoot this zone.

In Creek County, in the Fox Pool, the McMan Oil Co. #1 in Sec. 4-16N-7E, got 4 mmcfgpd at 850 feet. About 10 rigs are working in this area.

In Washington County, near Vera, the New York & Oklahoma Oil Co. #2 Hopkins in Sec. 31-23N-14E had 175 bopd at 1,257 feet. A.D. Morton is head of the company. Many other wells are drilling near here. (Details given).

In Tulsa County, in the Mohawk Field, the Western Oil & Gas Co. #5 Johnson In Sec. 21-20N-13E is making 100 bopd at 1,054-1,084 feet. The company has 600 acres in this field, with 500 bopd production. The Northrup-Bell Oil Co. #4 Woodward in Sec. 21-20N-13E has 30 bopd.

In Muskogee County, in the Cole and Boynton Pools, about 50 wells are drilling. About 6,000 bopd is now being produced. C.J. Gallagher #1 Fee in Sec. 18-14N-15E is now making about 500 bopd.

In Creek County, in the Cushing Field, the production is about 145,000 bopd. About 13 wells were completed (details given). About 45,000,000 barrels of oil is stored in the field. No new extensions have been found.

p. 12, 14. East Texas and Louisiana, by M.L. Vaughn. About 55,799 bopd production was in this area last week, with 17,572 bopd in the northern or Caddo region, and 38,227 bopd in the southern or Crichton region. The Crichton Field was the most active, with 14 wells completed for 14,225 bopd new production. (Details given). Other fields such as Abington, Desoto, Caddo, Monterey, Hosston, Mooringsport, Shreveport, and Bossier are discussed. (Details given).

The Spanish Lake Oil & Gas Co. has been organized with $60,000 capital, and they will drill in Natchitoches Parish.

p. 14, 16. North-Central Texas, by H.W. Whitney. Developments continue in this area, especially in the older fields. In Wichita County, about 17 rigs are working. Many of the early wells that were drilled in 1911 are still good producers, but they were completed only to 1,050 to 1,100 feet. In the Electra Field, there are three sands that occur deeper at 1,500, 1,750, and 1,950 feet, and the companies are now drilling for these sands. (Details given). Deeper drilling is taking place in the Burkburnett Pool also.

In Palo Pinto County, there is much activity in the Strawn Pool. (Details given).

In Stephens, Shackelford, and Parker Counties, this is much activity. (Details given).

In Jack County, J.H. Sanderson, president of the Capitol Oil & Gas Co. of Fort Worth, is an active operator.

p. 21. Record of Fields in August. In Oklahoma, in August, 285 wells were completed, for 48,798 bopd new production, including 14 gas wells and 55 dry holes. Cushing fell from 180,000 to 160,000 bopd.

Kansas completed 78 wells, for 530 bopd new production, including 49 dry holes and gas wells combined.

North-Central Texas had 21 completions, for 625 bopd new production, including 7 dry holes and 2 gas wells.

NW Louisiana and East Texas had 53 completions, with 23,670 bopd new production, including 10 dry holes and 3 gas wells.

The price of oil advanced from 40¢ to 75¢ a barrel.

p. 24. Standard Oil Co. of Oklahoma. Willard H. Say, of New York City, sent a telegram to the Oklahoma Secretary of State J.L. Lyon, asking for permission to use the name Standard Oil Co. of Oklahoma for a new company to be chartered in New York City for $5,000,000, to operate in Oklahoma. Secretary Lyon said that a company was formed a few hours before Statehood in 1907 with the name Standard Oil Co. of Oklahoma, by L.E. Patterson, H.H. Rogers, and C.L. Rockefeller, and it is said to have been a practical joke. Former Governor Charles N. Haskell is to become president of the new company. L. E. Patterson is currently the Democratic nominee for Mayor of Oklahoma City. Mr. Haskell

denies that he is connected with the company.

p. 27. Patents Recently Granted. #1,145,125. Tool for drawing casing from wells. J.W. Davis, Coalgate, Oklahoma.

p. 28. Kansas Natural Gas Co. Rates. The company charges 19¢ to 30¢ a thousand cubic feet to its customers. Many hearings have taken place accordingly.

p. 28-29. Caney River Gas Co. The Caney River Gas Co. held its annual meeting. The company bought out the United States Fuel Supply Co. for $300,000. G.T. Braden, now of Tulsa, is president of Caney. Other members are R.H. Bartlett, of Tulsa, R.E. Alexander, of Tulsa, E.P. Whitcomb, Pittsburgh, Pa., W.S. Splane, Oil City, Pa., P.W. Lupher, Columbus, Ohio, and R.W. Hannan, of Pittsburgh, Pa.

p. 29. Gas Well in Healdton Field. The Gates Oil Co. well in Sec. 15-4S-3W gauged at 47,000,000 cfgpd. There are now 4 gas wells of equal capacity in this field, in Carter County, Oklahoma.

p. 29. Fox Pool Gas Well. In the new Fox Pool, north of Depew, in Creek County, Oklahoma, the McMan Oil Co. #1 Enos Mickey lease in Sec. 4-16N-7E got 20 mmcfgpd at 800 feet. No other well nearby has found this much gas at this depth.

p. 31. H.W. Johns-Manville Co. of New York. The company is moving its Milwaukee office to the Chicago office, which will be in charge of the Western Division, although there are offices in St. Louis and Kansas City. The company makes auto accessories, building materials, insulating materials, power-plant products, asbestos, electrical products, and special products. These products are used extensively in the oil business. C.C. Northrup, of Tulsa, is the Mid-Continent representative.

p. 31. Oklahoma Bankers Optimists. W.B. Harrison, of Oklahoma City, said that the Mid-Continent supplied 30% of the oil in the United States and 20% of the oil in the World last year, and about $80,000,000 worth of oil was sold in the Mid-Continent last year.

Vol. 14, No. 15, September 16, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent at the close of last week was 339,500 bopd, with Kansas and Oklahoma outside of Cushing being 130,000 bopd, Cushing 140,000 bopd, N. Texas 13,500 bopd, and NW La.-E. Texas 56,000 bopd.

The week ending September 11, 1915, in the Mid-Continent, witnessed little of importance. Developmental wells continued to be drilled in the known fields.

p. 3. University of Oklahoma. Chemistry of Oil. Dr. S. D. Brooks, of the chemistry department of the University of Oklahoma held a meeting in Tulsa. He wants to establish a Department of Chemistry for Oil Refining at the University.

p. 4. Personal Mention. Lester and Bernard Gillespie, sons of Frank A. Gillespie, of Tulsa, left Sunday night for Lawrence, Kansas, to enter the University of Kansas.

W. E. Thompson, of the Gulf Pipe Line Co., has moved with his family from Kiefer to Tulsa, Oklahoma.

Ernest Price of Hazlett & Price Co., lives in Muskogee, Oklahoma. They have wells in the Boock Sand District.

Henry "Dad" Pringle, an old time Pennsylvania operator, now lives at Mineral Wells, Texas. He has been in North Texas since oil was found there.

Mr. and Mrs. P.H. Flynn of Shreveport, La., are visiting P.H. Shields and family of Tulsa. Mr. Flynn left Tulsa about 20 years ago. He is superintendent of the Brown Oil Co.

A.G. Reed and family have left Tulsa for Fort Worth. He is with the land department of the Lone Star Gas Co.

p.4,6. Noted in Passing. The Wells Oil Process Co., of Jacksboro, Texas,

is refining oil by a new cracking method.

Eight miles southeast of San Antonio, Texas, there is an oil boom. A well was completed for 1,000 bopd at 1,200 feet.

At Pemeta, Oklahoma, the new Ames Refinery handles 1,000 bopd, under the direction of W.M. Parker.

B.B. Jones completed a well for 30,000,000 cfgpd west of Arkansas City, Kansas. There is a boom on, and 8 wells are drilling in this area.

D.J. O'Rourke, with the Gypsy Oil Co. at Cleveland, Oklahoma, for the past 4 years, has returned to Okmulgee.

B.B. Jones is a director of the State National Bank of Oklahoma City. He is now a resident of Oklahoma City.

George Evilsizer and Miss Ida Staples were married in Oklahoma City. They are from Drumright. He is an oil operator, and they will live at Oilton.

The Paden well in Okfusee County has been drilled 10 feet deeper and on Sept. 7 has been completed at 7,000,000 cfgpd.

The Coline Oil Co. of Ardmore declined a million-dollar offer for their holdings in the Healdton Field by the Santa Fe Railroad. Santa Fe wanted the oil for the refinery being built at Gainesville, Texas. Originally, Coline was formed by 12 men who each put up $175.

M.D. Redfield, of Titusville, Pa., was a patient in a hospital in Tulsa. Miss Bertha Stevenson, a nurse, took care of him. Later, they were married at Drumright, Oklahoma, at the home of the bride. Mr. Redfield is a well-known oil operator in the Mid-Continent.

p. 8, 10. Oklahoma and Kansas by R.H. Whitney. On Saturday, the price of oil advanced to 80¢, a 100% jump in 40 days. In Creek County, in the Cushing Field, about 120,000 bopd of marketable oil was produced on Monday, with about 25,000 bopd of cut oil being produced. About 46,000,000 barrels are in storage. Most wells in the field are producing between 25 and 500 bopd. Mostly, infill drilling is taking place. (Details given).

In the Fox Pool, 4 miles south of the Cushing Field, several producers were completed. The Frank Fox #2 Chapman in Sec. 16-16N-7E had 50 bopd in the Layton sand. Frank Fox #2 in Sec. 15-16N-7E got 10 mmcfgpd at 1,850 feet in a deeper sand. The McMan Oil Co. #1 Mickey lease in Sec. 4-16N-7E got 3 mmcfgpd at 1,850 feet. About 12 wells are drilling in this field.

In Kay County, the development northeast of Blackwell continues. (Details given). The E.W. Marland et al test about 17 miles farther east in Sec. 4-28N-4E is at 3,250 feet. In Sec. 26-28N-3E, east of the Arkansas River, Texaco Oil Co. has a 20 bopd well. This is the first producer on the east side of the Arkansas River in Kay County.

In Carter County, in the Healdton Field, the Gates Oil Co. test in Sec. 15-4S-3W was completed for 45,000,000 cfgpd, and the gas is being sold to the Ardmore Gas Co. for 3¢ a thousand. The McMan Oil Co. finished Nos. 12, 14, and 16 on the Richards lease in Sec. 31-3S-3W, for 500, 400, and 500 bopd respectively. In Sec. 5-4S-3W, the Samoset Petroleum Co. #2 McClure had 100 bopd. There is sulphur in the Healdton oil, and that is why it sells cheaper.

In LeFlore County, C.B. Shaffer in Sec. 10-5N-25E, abandoned his test at 3,400 feet. Some gas and oil was found in a 90-foot sand at 2,520 feet.

In Payne County, near Norfolk, about 3 miles north of Cushing, the Leschen Brothers completed a well for 15 mmcfgpd in Sec. 23-18N-5E. The Creek County Gas Co. has purchased the gas for 3¢ a thousand.

In Seminole County, near Konawa, Katy Railroad employees had a showing of heavy oil in their test in Sec. 29-6N-6E.

In Muskogee, Okmulgee, and Tulsa Counties, and other areas, producing wells are still being completed. (Details given).

p. 12, 14. East Texas and Louisiana, by M. L. Vaughn. Drilling continues in the known fields. The Crichton Field of Red River Parish is the most active. (Details given). Abington and DeSoto Fields are next in importance. (Details given). Tests are being made in Ouachita, Lincoln, and Tensas Parishes. (Details given).

The Gusher Bend Oil Co. has been organized at Texarkana, Ark., with $50,000 capital. They will drill in the Crichton Field, of Red River Parish.

p. 14. The Thrall Field, Texas, now has about four active operators. Some wells continue to be drilled. (Details given).

p. 16, 18. North-Central Texas, by H.W. Whitney. In Shackelford County, the Moran Pool is one of the more active areas in north central Texas, followed by Stephens and Jack Counties and Palo Pinto County. (Details given). The Electra and Burkburnett Fields of Wichita County are also active. (Details given).

p. 23. Ancient Use of Petroleum. By Edwin C. Bell, Titusville, Pennsylvania. In 1569, a Spaniard wrote a book entitled "Delas Drojas de las Tuchas". In 1596, this book was translated in English by John Frampton, and the book was printed by E. Allde, by assignee of Bonham Norton, of London, England. The Spanish author was Dr. Monardus of Scuill, Spain. The book is about the West Indies, on herbs, trees, plants, drugs, stones, and oils. The book is 326 pages, with woodcuts, and is about 5.25 x 7 inches. John H. Scheide of Titusville, Pa., owns the book, which was purchased by his father many years ago.

The book gives one of the first written accounts of the production and use of petroleum in the new world. The book is divided into 4 parts, and on p. 103 of the third part is the title "Of A Gumme that is Taken Out From Under the Grounde". In Collao, Peru, the Indians take out a Licour that heals diseases. They dig cisterns and place the bitumen upon timbers in the sun, and collect the oil below, called Licour. The oil is a red color, and is good for colds and wounds, and smells good.

In Pennsylvania, the oil pits on Oil Creek are also old. One old pit was lined with branches, and an old oak tree had grown over it. The tree rings were counted in the over-grown tree and the age was 240 years. The first settlers in this area south of Titusville noticed these pits, and some believe the pits may be 400 to 800 years old.

p. 26. Paden Well, Okfuskee County. C. H. Cameron will retain ownership of the Paden well in Okfuskee County. (Details given). In November, 1914, some oil was found at 2,800 feet. The well was sealed until July 1915. In the last 2 or 3 days, drilling has gone deeper, and at 55 feet in the Skinner sand, about 7 mmcfgpd was found, along with oil. The Paden Oil Co. was organized by Mr. Cameron in 1912, and he was elected the president. The company had about 4,000 acres in the area. The capital was $25,000, and the other members were A.G. Rogers and P.L. Carney. They assigned one-half interest to the Prairie Oil & Gas Co. Later, after the oil sand was first struck, A.D. Morton of Bartlesville purchased much stock, and he wanted to take over the company.

p. 27. Roxana Deal in Healdton Field. The Roxana Oil Co. concluded their deal with Dundee, Samoset, and Alma Oil Companies for $3,000,000 for their Healdton Field properties. (Details given). Dundee had 630 acres and 45 wells, Samoset had 80 acres and 5 wells, and Alma had 60 acres and 9 wells. Roxana has operating rights of the Crystal Oil Co., covering 278 acres and 15 wells. Roxana is a subsidiary of the Shell combine, of London, England. Shell has a contract with the British Government to supply fuel oil for their Navy.

p. 35-38. Detailed Field Operations, September 1, 1915. Oklahoma, p. 35-37.

In Oklahoma, 285 wells were completed, including 14 gas wells and 55 dry holes, for 48,798 bopd new production. In Kansas, 78 wells were completed, including 35 gas wells and 14 dry holes, for 530 bopd new production. In Oklahoma, 742 new wells were started or drilling, and in Kansas 80 new wells were started or drilling, in August. (Details given on each). In Arkansas, 13 wells were drilling. (Details given). In North Texas, 21 wells were completed, for 625 bopd new production, including 2 gas wells and 7 dry holes, and 97 new wells started or being drilled. In NW Louisiana and NE Texas, about 53 wells were completed for 23,670 bopd new production, including 3 gas wells and 10 dry holes, with 98 new wells started or being drilled. (Details given).

In Washington County, Okla., 2 gas wells were completed for 1.5 mmcfgpd. In Tulsa County, in the Bird Creek-Owasso Fields, 3 gas wells were completed for 5 mmcfgpd. In the Cherokee Shallow Sand District, 1 gas well was completed for 500,000 cfgpd. In Creek County, Cushing Field, 1 gas well was completed for 5 mmcfgpd. In Tulsa County, in the Tulsa-Taneha-Glenn-Wicey-Kellyville area, 3 gas wells were completed for 21 mmcfgpd. In the Schulter-McIntosh District, 1 gas well was completed for 3.5 mmcfgpd. In Pontotoc County, 1 gas well was completed for 2 mmcfgpd. In Creek County in the Fox Field, 1 gas well was completed for 20 mmcfgpd. (Details given).

Approximately 260 wildcats are drilling in Oklahoma, in 25 counties outside of the regular fields. (Details given).

In NE Texas, 3 oil wells were completed in Marion County.

In the Thrall Field of Texas, 27 wells were completed, including 10 dry holes, for 2,710 bopd new production, and about 13 rigs were drilling or being erected.

Vol. 14, No. 16, September 23, 1915, p. 1. Mid-Continent Production. The apparent estimated production of the Mid-Continent at the close of last week was 336,500 bopd, with Kansas and Oklahoma outside of Cushing being 135,000 bopd, Cushing 140,000 bopd, N. Texas 14,500 bopd, and NW La.-NE Texas 47,000 bopd.

There has been increased drilling, but no major new pools have been found.

p. 4. Personal Mention. W.A. Van der Gracht, a Roxana geologist, is in the Healdton Field, to purchase the properties of the Coline Oil Co. and the Crystal Oil Co.

Clint Moore, of Bartlesville, married Mrs. Cora B. Leach of Chicago, Ill., at Syracuse, New York, on Sept. 17, 1915. He is in the oil business at Bartlesville.

p. 4, 6. Noted in Passing. The Washita Valley Refining Co. has been formed at Clinton, Oklahoma. A $20,000 refinery is to be built.

During the past 18 months, the number of Mid-Continent refineries have increased from 36 to 68. Some refineries have shut down, now that oil is falling off and the price is going up.

p. 6. Recent Deaths. Homer E. Smith, age 60, died at Burkburnett, Texas, on Sept. 14, 1915. The body was taken to Fort Worth for burial. Relatives at Rochester, N.Y., were notified.

p. 8, 10. Oklahoma and Kansas, by R.H. Whitney. The most active area now in Oklahoma is Muskogee County, in the Cole, Harris, and Boynton Pools. (Details given). About 1,600 acres is in the Boynton Field, 600 acres in Cole, and 40 acres in Harris in Sec. 6-14N-16E. Boynton has a population of about 500. In the Cole Pool, oil is found at 1,600 to 1,630 feet, and gas at 1,425 feet, with one producer at 1,697-1,718 feet.

In the Boynton Field, several sands produce. The McKellop sand is the first at 1,310 feet, the Leideker is next at 1,400 to 1,430 feet, the Upper Muskogee or Fewl sand is next at 1,470 to 1,500 feet, which is the main sand for the large wells, then comes the Lower Muskogee at 1,520 to 1,570 feet, then the McKee sand at 1,620 to 1,640 feet, and a water sand with oil at 1,696 to 1,718 feet. The oil is about 37 gravity from all three fields, and is paraffin-based. It costs about $5,000 to drill and complete a well, beginning with a 10-inch hole to 35 feet. Drillers get $7 a day, tool pushers $6 a day, and teamsters $5 a day. The contracting price is $1 a foot, fuel and water furnished. Gas is used for fuel at $6 a day. A well is completed in 16 days.

Gas wells have been found, ranging from 1 to 10 mmcfgpd, with 450 psi pressure. Some recent oil wells have come in at 80 to 125 barrels per hour. (Details given). About 5 pipe lines are now in the area: Cosden & Co., Gulf Pipe Line Co., Prairie Pipe Line Co., American Refining Co., and Crown Pipe Line Co.

In Pittsburg County, the Gypsy Oil Co. has a gas well at 2,550 feet in Sec. 1-6N-14E, north of McAlester.

The Fern Mountain Field has 4 oil wells, some gas wells, and 35 dry holes, in Muskogee County, near Muskogee. The Persian Oil Co. #3 Lewis was a dry hole at 1,325 feet. Two other previous wells were gassers on this tract. The gas is used at Muskogee.

In Wagoner County, near Tallahassee, Byrd & Ruby in Sec. 19-16N-18E got a showing for 5 bopd in a sand at 593 to 610 feet.

In Tulsa County, near Mohawk, Clauss, Brown & Wolfe #2 in Sec. 21-20N-13E on the Quinn tract completed a well for 150 bopd at 1,000 feet. There is much territory to be tested between Tulsa and Bartlesville, following this play.

The Wicey Field south of Bixby is also being developed, with several good wells that were completed recently. (Details given).

In Okmulgee County, near Morris and Lake Park, several good wells have been completed. (Details given).

In Creek County, the Cushing Field is holding at about 140,000 bopd, with about 100 rigs working. One large well came in at 1,100 bopd, but all of the rest were small wells. (Details given).

p. 12. San Antonio, Texas, Well. The Marr et al #1 Kelso Ranch test, 8 miles south of San Antonio, Texas, is producing about 25 bopd of 14.1° gravity oil. It is a heavy asphalt oil. Two rigs are now drilling there, the Citizens Oil Co. #1, and the Marr et al #2. Two other rigs are being erected: the Fuchs Oil Co. to the east, and C.L. Witherspoon to the south of the discovery well. About 10,000 acres are now under lease in this area. S.W. Pittman is organizing a company to build a pipe line to the Southern Pacific Railroad tracks. Mr. Pittman is from San Antonio.

p. 14, 16. North-Central Texas, by H.W. Whitney. Wildcatting in this area of Texas has not turned up anything of importance this past week. Much of the activity is in Palo Pinto County. (Details given). Developmental wells are still being completed in Wichita County, in the Electra and Burkburnett Fields. (Details given). In Erath and Stephens Counties, some wells are being drilled. (Details given). In Limestone County, in the Mexia Field, some wells are being completed. (Details given).

p. 16, 18. East Texas and Louisiana, by M.L. Vaughn. The most important test in this area this week is a 25,000-bopd well, 2½ miles southwest of Vivian, in the old Caddo Field, in Sec. 3-21-16, brought in by the Gulf Refining Co. on the Duhon-Tohler, formerly Boyter, lease. A 250 bbl. tank was filled in 14 minutes. Pipe lines and tanks are being constructed as fas as possible. The oil is 38° gravity, and the price is now 70¢ a barrel.

The daily average production for the region is 47,423 bopd, with the Southern District or Crichton being 31,145 bopd, and the Northern District or Caddo being 16,278 bopd. Many wells are being drilled in both districts, in the various fields. (Details given).

p. 16, 18. In Arkansas, the Jefferson Oil Co. is drilling a well near White Cliffs, in Sec. 3-6S-8W, Jefferson County. The company is composed of people from Pine Bluff mostly. J.A. Galbraith is president. The well is about 7 miles southeast of Pine Bluff.

The Acme Oil & Gas Co. has been chartered at Hot Springs, Arkansas, with F.A. Stearns, president; S.B. Steele, vice-president; and W.T. Wooten, secretary-treasurer. The directors are F.A. Stearns, S.B. Steele, W.T. Wooten, S.J. Davis, P.T. Vaughn, J.E. Harper, and C.R. Birnbaum.

p. 28. Natural Gas Utilized in 1914. About 591,866,733,000 cubic feet of gas was used in the United States in 1914. Oklahoma produced about 78,167,414,000 cubic feet and consumed about 55,544,105,000 cubic feet. It cost an average of 10.3¢ a thousand to produce, but was sold at an average price of 7.61¢ a thousand in Oklahoma. In Kansas, about 22,627,507,000 cubic feet was produced at 14.76¢ a thousand, and about 45,250,816,000 cubic feet was used at 15.83¢ a

thousand cubic feet. In Texas, about 13,433,639,000 cubic feet was produced and used at 18.38¢ a thousand for production and consumption. In Louisiana and Alabama, about 26,774,695,000 cubic feet of gas was produced and used at 8.32¢ a thousand.

p. 29. Muskogee Gas. In Muskogee County, Oklahoma, within a 5 mile radius of Muskogee, there is 10,000,000 cfgpd available, and within a 10 mile radius there is 30 mmcfgpd, and within a 25 mile radius there is 100 mmcfgpd.

p. 29. F.S. Wilbur, Pioneer in Gas Business. F.S. Wilbur, now of Bartlesville, Oklahoma, was formerly active in the gas business in the Bradford, Pa. Field in 1878. He was with Cowley & Wilbur Co. In 1890 he left for Buffalo, New York, and then later came west. Mr. Wilbur is now laying a line from Augusta, Kansas to Wichita, Kansas.

Vol. 14, No. 17, September 30, 1915, p. 1. Mid-Continent Production. The apparent estimated production in the Mid-Continent at the close of last week was 337,500 bopd, with Kansas and Oklahoma outside of Cushing being 135,000 bopd, Cushing 135,000 bopd, North-Central Texas 14,500 bopd, and NE Texas-NW La. 53,000 bopd.

Drilling has picked up in some of the older fields, but nothing new has been found this past week.

p. 1. Thomas A. Edison has devised a storage battery to drive submarines. This could do away with the use of gasoline in submarines.

p. 2. Geological Report on Loco Gas. The U.S. Geological Survey has published a Bulletin on the Loco Gas Field, about 10 miles northwest of the Healdton Field, in southern Stephens County. Asphalt occurs in the area, and drilling started in 1912. In the Spring of 1913, the first gas well was drilled, about 6 months ahead of the discovery well of the Healdton Field. Six other gas wells were drilled, each with capacities ranging from 6 to 20 mmcfgpd. The wells are shut in. (U.S.G.S. Bull. 621, p. 31-42).

p. 4. Personal Mention. J.F. Hutson, of Shannon, Texas, was in Tulsa. He formerly lived at Pittsburgh, Pa. He is one of the pioneer operators in the Beland Field, Muskogee Co., Oklahoma.

James J. McGraw, president of the First National Bank of Ponca City, Okla., has interest in the well northeast of Blackwell. His brother, Henry McGraw, is assistant general counsel of the Gypsy Oil Co. and the Gulf Pipe Line Co. of Oklahoma.

N.G.M. Luykx, president of the Roxana company, has returned to Tulsa from New York City, after completing the purchase of Healdton properties.

J.B. Foster sold his interest in the W & F Oil Co. to Charles J. Wrightsman. He will still live in Tulsa. He is taking up leases in the Boynton Field.

Perry Lochner, of Pittsburgh, Pa., was in Tulsa. He recently completed the largest well in the Boynton Field, near Muskogee. He is associated with George Neely.

p. 4, 6. Noted in Passing. In Stephens County, Oklahoma, 8 miles southwest of Duncan, oil has been discovered in a well on the Sam Nelson farm, at a depth of 1,700 feet. Gas was found at 1,010 feet.

In Creek County, in the Fox Pool, in Sec. 4-16N-7E, the Savoy Oil Co. #1 gas well drilled by Ed Boyd was finally placed under control. Estimates as high as 100 mmcfgpd have been made for this well.

Isaac T. Gibson, of Coffeyville, Kansas, died of pneumonia last week at Danville, Iowa, while on a visit. He was an agent for the Osage Tribe during President Grant's administration, and it was under his charge that the Osage Indians were removed to Oklahoma, to Osage County. He was a Quaker.

p. 8, 10. Oklahoma and Kansas by R.H. Whitney. In Muskogee County, the Boynton and Cole Pools are the most active in northern Oklahoma. The Cameron

et al well in Sec. 14-14N-16E in the Boynton Pool started flowing at 100 bbls. an hour from the 1,451-foot sand known as the Upper Muskogee sand. This is an offset to the Neely & Lochner well which started off at 125 bbls. per hour. The latter was drilled 20 feet into the sand, and has now settled to 75 bbls. per hour. This has stimulated interest, and about 200 locations have now been made in the area. These two wells are about one-quarter mile northwest of the known production in the Boynton Pool. The Keith Platt Oil Co. test in Sec. 16-14N-16E is producing at 150 bopd. The old Gladys Belle Oil Co. gas well in Sec. 21-14N-16E is still holding at 400 bopd.

In the Cole Pool, the Alexander, Sheedy et al #1 in Sec. 11-14N-15E was shot, and completed for 500 bopd. The No. 3 in this section is 100 bopd. The Dalsa Oil Co. #10 in Sec. 11-14N-15E is 100 bopd. This company is the largest holder of production in both pools, having 3,000 bopd production. This oil is handled by the Cosden Pipe Line Co. which owns one-half interest. Wasson et al #2 in Sec. 18-14N-15E has a 100-bopd well.

In Carter County, in the Healdton Field, many producers are erecting more steel tanks. About 1,500,000 barrels are in storage. Wells are also being drilled deeper, in the belief that there is much more oil to be discovered. About 60,000 bopd is the estimated production. The Roxana and McMan companies control 40,000 bopd alone. Many wells are being drilled. One of the best is that of Hernstadt #7 in Sec. 6-4S-3W, for 1,800 bopd. In the same section is the McMan Oil Co. #15, #17, #18 wells on the Richards lease for 400, 1,200, and 1,300 bopd each respectively. Hapgood et al in Sec. 21-4S-3W had a show of oil in a sand at 2,450 to 2,500 feet. Many other wells are being drilled and completed. (Details given).

In Creek County, in the Cushing Field, the production has fallen off to 135,000 bopd, of which 15,000 bopd is bad oil, with sulphur. About 47,000,000 barrels are now in storage, of which 14,000,000 belongs to the Carter Oil Co., and 12,500,000 belongs to the Prairie Oil & Gas Co. Completions have fallen off. (Details given).

In Payne County, north of Yale, the third producing well has been completed by the Corsicana Petroleum Co. #1 in Sec. 7-19N-6E, for 150 bopd at 2,655 feet in a new sand. The previous two wells produce from the 3,100-foot sand. About a year ago, the Alice Katherine Oil Co. completed a 150 bopd well, and shortly after, the Corsicana Petroleum Co. completed an offset at 50 bopd.

In Okfuskee County, 5 miles northwest of Okfuskee, Cammer et al have a 15-bopd well in Sec. 2-13N-10E, from the 1,400-foot sand. This is the third well to be drilled in this area, with one dry hole and two small producers.

In Pawnee County, near Jennings, the Republic Oil & Pipe Line Co. in Sec. 21-20N-7E has plugged back to the Skinner sand at 2,685-2,692 feet, for 20 bopd. There was a showing in the Cleveland sand at 2,021 feet.

In Kay County, the Kay & Kiowa Co. test #1 Smith in the NE-Sec. 6-28N-1E got 10,000,000 cfgpd at 700 feet, and this has been Braden-headed off.

In Creek County, north of Oilton and south of Jennings, the Prairie Oil & Gas Co. well in Sec. 21-19N-7E is holding at 300 bopd, from the Cleveland sand at 1,951 feet.

The Fox Field in 16N-7E continues to be developed. The Savoy Oil Co. well in Sec. 4-16N-7E, has been Braden-headed after finding 35,000,000 cfgpd. C.B. Shaffer in Sec. 8-16N-7E got 50 bopd. Acreage has been selling for $100 an acre for leases, a mile away from the discovery well in Sec. 9.

Southwest of Sapulpa and near Kellyville, a number of wells have been completed. (Details given).

In Okmulgee and Tulsa Counties, some wells are being completed. (Details given).

p. 10, 12. Explosion at Ardmore Costs 47 Lives. On Monday afternoon, about $500,000 worth of damage was done in Ardmore when a tank car of the Santa Fe Railroad being shipped to the Ardmore Refining Co. exploded. The depot and the Whittington Hotel and many stores and shops were destroyed, and 47 people were killed. The tank car was leaking and a man was sent to stop the leak.

p. 14. The Thrall Field, in Texas, had a few completions and a gas well. (Details given).

p. 14-16. North-Central Texas, by H.W. Whitney. With the recent increases in the price of oil, drilling in some of the older areas is being revived. In the Electra Field, about 13 rigs are drilling, and 9 are being erected this week, and 4 new locations have been staked, and 2 wells have been completed, for 140 bopd new production. (Details given). The Burkburnett Pool, of Wichita County, which was discovered in 1913, is likewise being developed. (Details given). This field is about 5 miles long by 2 miles wide. The Strawn Field of Palo Pinto County is progressing steadily also. (Details given).

The Condor Oil Co. of Dallas has been chartered, with $20,000 stock, by William Thompson, W.C. Thompson, and John W. Kincaid. The company will drill in Palo Pinto County.

p. 16, 18. East Texas and Louisiana, by M.L. Vaughn. Renewed drilling is taking place in the old Caddo Field and surrounding area, such as the Monterey Field. Oil is now selling for 75¢ a barrel in this northern area because the oil has 11.5% gasoline content. In the Crichton Field and southern area, the oil has only 4.5% gasoline content, and sells for 55¢ a barrel.

The total production last week averaged 52,891 bopd, with the northern area being 18,790 bopd, and the southern area 34,101 bopd. In the Crichton Field, about 9 wells were completed this past week for 7,000 bopd new production. (Details given). With the completion of the Gulf Duhon-Tohler well in the Monterey Field last week at 4,300 bopd, the price of acreage has gone up to $200 an acre in the northern area. Many wells are being drilled in most of the known fields. (Details given). One well is being drilled 65 miles south of the Crichton Field, near Colfax, La., by the Natalie Oil & Gas Co.

J. F. Van Cleve, president of the Verbena Oil Co., drove to Dallas last week and made it in one day.

p. 23. Muskogee Gas. The people of Muskogee, Oklahoma, voted for a $300,000 bond issue, to have the Caney River Gas Co. supply gas to Muskogee for a 5 to 10 year period at a price of 3¢ a thousand for industrial purposes. This is the first time that a city in Oklahoma has offered cheap gas to factories, as an inducement to locate in Muskogee. The money will be used to lay a pipe line system to Muskogee.

p. 23. Galey Wedding. Thomas Melton Galey, nephew of John H. Galey, was married on Sept. 22, 1915, in Pittsburgh, Pa., at the Christ Episcopal Church, to Miss Henrietta Craig Dow. They will live in Tulsa, where he has been operating his many wells in Kansas, Oklahoma, and Texas.

p. 23. New Gas Company Formed. The Tulsa Commercial Gas Co. was incorporated last week, with $100,000 capital, by Tulsa residents, J.S. Cosden, E.R. Perry, M.D. Sanford, G.C. Stebbins, and O.E. McClintock. They will bring gas to Tulsa for manufacturing purposes. Cosden, Perry, and Sanford are also connected with the Cosden Refining Co. They will build a 6-inch line from the Catoosa-Owasso area to the Cosden Refinery in West Tulsa.

p. 28. Gas - Light, Heat and Power. Calvin N. Payne, president of the Lone Star Gas Co., believes that gas should be conserved, and not sold at 3¢ a thousand in order to induce a business to an area. After 4 or 5 years, the cheap gas will no longer be available , and the price will have to go up to 15 to 35¢ a thousand, which residents pay. When this happens, the company will go out of business. Much of the gas in the area will also be depleted for the local residents. A smelter uses about 10 mmcfgpd, and a glass plant uses about 4 to 6 mmcfgpd, and the factories employ about 150 to 500 people. When the gas is gone, about 25,000 to 50,000 people are affected. In the Dallas-Fort Worth area, the gas from the North-Central Texas Fields is diminishing, and Lone Star is now trying to get their future gas from the Duncan-Loco area of Stephens County, Oklahoma. At Iola, Kansas, many smelters were located, to process zinc from the Joplin District, but now the gas has played out, and the Iola factories

and smelters have turned to coal for manufacturing and heating, and to electricity for lighting. The glass plants at Coffeyville, Kansas, have experienced the same history. Mr. Payne lives at Titusville, Pa.

p. 29. Loco Gas Field Studied. The U.S. Geological Survey has published a report on the Loco Gas Field of Stephens County, Oklahoma, by Carroll H. Wegemann, as Bulletin 621-C. About 7 gas wells are shut in here. Drilling began here in 1912.

p. 29. Deepest Well in the United States. At 7,181 feet, the well of the Peoples Gas Co. of Pittsburgh, Pa., on the D.G. Geary farm, 5 miles north of McDonald, Washington County, Pa., is the deepest in the United States. They are fishing at present. If they reach 8,000 feet, this will be the deepest well in the world. It has cost a fortune to drill this well.

Vol. 14, No. 18, October 7, 1915, p. 1. Mid-Continent Production. The apparent estimated oil production of the Mid-Continent at the close of last week was 326,000 bopd, with Kansas and Oklahoma outside of Cushing being 135,000 bopd, Cushing 128,000 bopd, Electra District, Tex. 14,500 bopd, and Caddo District, La. 48,500 bopd.

In the week ending October 2, 1915, developmental wells are continuing to be drilled in the known fields.

p. 3-4. Personal Mention. George F. Getty, president of the Minnehoma Oil Co., is in Tulsa, from his home in Los Angeles, Cal. He has production in the Cushing Field.

H.M. McQueen, of Kansas City, Mo., one of the owners of the Diamond Oil & Gas Co., operating in the Healdton Field, was visiting that area last week. He is floating a big trust company, to develop Oklahoma industries.

E.C. Niece, an old time operator in the Mid-Continent, has moved from Independence, Kansas, to Tulsa, Oklahoma.

Charles Cusac, of Drumright, was in Tulsa. He has managed the Gunsburg & Forman properties for 4 years in the Cushing Field.

Semmes W. Parrish, with the Tyrrell Company for many years, has purchased a house in Tulsa.

p. 4. 6. Noted in Passing. There are now 25 submarines being constructed in the United States. Charles M. Schwab will build 16 at $550,000 each.

In Oklahoma, there have been 4 incorporated towns named "Oil City", but only two remain.

p. 8. Summaries of Field Operations for September 1915. In Oklahoma, 292 wells were completed, with 36 gas wells, and 76 dry holes, with 24,525 bopd new production. About 737 rigs were drilling or being erected.

In Kansas, 79 wells were completed, including 47 gas wells and 6 dry holes, with 370 bopd new production. About 77 rigs were drilling or being erected.

In Arkansas, about 13 wells were drilling.

In North Central Texas or Electra District, 20 wells were completed, including 9 dry holes, with 700 bopd new production. About 121 rigs were working. One gas well was completed.

In the Caddo District, La., E. Texas, 37 wells were completed, including 3 dry holes, with 30,350 bopd new production, and 117 rigs working. The Crichton Field accounted for 30 rigs and 25,125 bopd new production.

p. 10, 12. Oklahoma and Kansas, by R.H. Whitney. Developmental wells continue to be drilled. In Payne County, near Norfolk, the Carter Oil Co. paid $3,000,000 for 3,210,000 barrels of oil in storage on the tank farm of the Quaker Oil & Gas Co. This gives Carter 17,500,000 barrels in storage in this area. The oil is from the Cushing Field.

In Muskogee County, some good wells were completed in the Boynton and Cole Pools. (Details given).

In Carter County, in the Healdton Field, about 55 rigs are working. About 60,000 bopd production is in the field. (Details given on wells). The Oklahoma

Star Oil Co. #1 test in the NE-SE-Sec. 16-4S-3W, was completed for 75 bopd at 1,149 feet. Three sands were developed: at 960-999 feet for 20 bopd; at 1,040-1,086 feet at 25 bopd; and at 1,118 to 1,149 feet at 30 bopd. There is enough gas to make the well flow naturally.

In Creek County, the Cushing Pool is still being drilled, but production has fallen off to 128,000 bopd. (Details given). B.B. Jones #14 Long lease in Sec. 9-18N-7E was a gas well at 5 mmcfgpd. The Clover Leaf Oil Co. #1 got 214 feet of deep pay, for 7,000 bopd, and this is the thickest pay sand ever found in the Cushing Field. Some operators believe that there may be a pay sand deeper than the Tucker.

In Kay County, northeast of Blackwell, deep drilling continues. Most people think that the pay sand there is the Bartlesville, although others think that it may be the Tucker, Peru, or Burgess. (Details given on wells). It costs about $18,500 to complete a well in this field.

In Wagoner County, at Stone Bluff, Braden & Gobel in Sec. 5-16N-15E, have a showing of 50 bopd at 1,250 feet. This new discovery is causing excitement.

In McIntosh County, Findlay et al in Sec. 19-10N-14E, found gas, the bottom of the sand being at 1,225 feet, with 1,000,000 cfgpd. The well is now drilling at 1,700 feet. Several geologists found this structure.

p. 12. Ardmore Fire. The Atchison, Topeka & Santa Fe Railroad Co. has assumed complete responsibility for the explosion and fire in Ardmore, Oklahoma, in which $1,000,000 worth of property was lost, and 43 lives lost. A car filled with casing-head gasoline of the Ardmore Refining Co. was leaking. The safety valve of the car was blowing off, and the railroad had been previously notified that the car was leaking gasoline.

p. 16. North-Central Texas, by H.W. Whitney. Developmental drilling continues in this area. The Electra and Burkburnett Pools in Wichita County, the Moran Pool in Shackelford County, and the Strawn Pool in Palo Pinto County are the most active. (Details given).

In 1901, Mr. Adams (George Irving Adams) published U.S.G.S. Bull. 184 on the geology of north-central Texas, with some mentions of oil and gas tests, when there was no production in the area. The stratigraphy of the area was, from bottom to top, the Millsap formation, 1,000 feet of ss. and sh.; Strawn formation about 300 to 900 feet thick, sh., ss.; Canyon formation, 900 feet, ls., sh., ss.; Cisco formation, 800 feet, sh., ss.; and Albany formation, 1,200 feet, ls., sh., ss. Many beds are carbonaceous, and some wells have produced oil and gas shows. At Gordon, gas was found at 371 feet, and at 360 feet. Hydrocarbons have been found at Thurber at 480 feet, near Palo Pinto at 384 feet, and at Trickham at 220 feet. Oil was found at Brownwood at shallow depths. Adams noted that the shallow beds dip westward, and that farther west, oil and gas should occur deeper.

p. 18. East Texas and Louisiana, by M.L. Vaughn. The total production in this area last week was 48,532 bopd, with 17,860 bopd in the northern area, and 30,672 bopd in the southern area. Developmental wells in the known fields continue to be completed. (Details given).

Some rank wildcatting is taking place near Monroe, La., Ruston, La., Nashville, Ark., White Cliffs, Ark., 18 miles NW of Fayette, Miss., and 25 miles NE of Natchez, Miss.

p. 24. Oil Producer Weds. Alfred E. Aaronson and Miss Millicent Lubetkin were married on Oct. 5, 1915, in New York City. He is an official with the Mid-Co. Petroleum Co. in Oklahoma.

p. 24. Gasoline Prices. The Standard Oil Co. of Indiana has raised their price of gasoline at their two stations in Oklahoma: to 17¢ a gallon in Stillwater, and 14¢ a gallon in Ardmore. It is 10.8¢ a gallon in Kansas City.

p.33. Gas in Stephens County, Oklahoma. The U.S. Geological Survey has published Bulletin 621-D on the Duncan Gas Field in Stephens County, Oklahoma, by Carroll H. Wegemann and Ralph W. Howell. They began the work in September 1914. The field is sometimes called the Hope Field, near the post office of

Cruce, about 10 miles northeast of Duncan. The principal sand occurs at 850 feet, and the wells each produce from 3 to 18 mmcfgpd. A pipe line has been laid to Duncan. The anticline extends for several miles in a NW-SE line. Oil has not been found in this area.

p. 33. Oil Pools in Oklahoma. Charles N. Gould, in a recent issue of The Oklahoman, has a map showing 105 named oil pools in Oklahoma. Almost all of the pools are named after nearby towns.

p. 33. Patents Recently Granted. F.B. Jackson, Tulsa, Oklahoma, an apparatus for flowing oil from oil wells. No. 1,151,882.

p. 35. Frank B. Long Married. Frank B. Long, of Tulsa, was married to Miss Esther M. Hanna on Sept. 29, 1915. He is a lease man for Charles Page. They will live in Tulsa.

p. 35. Wanted. To correspond with maiden or widow who has oil lands. Matrimonially inclined. I am 29 years old, weight 130, height 5 feet 6 inches; blue eyes; brown hair. No objection to Indian. Address Box 30, R.F.D. #2, Rupert, Idaho.

Vol. 14, No. 19, October 14, 1915, p. 1. Mid-Continent Production. The apparent estimated production of oil in the Mid-Continent at the close of last week was 325,000 bopd, with Kansas and Oklahoma outside of Cushing being 140,000 bopd, Cushing 125,000 bopd, Electra District, Tex. 14,500 bopd, and Caddo District, La.-Tex., 46,000 bopd.

Developmental wells continue to be drilled in the known fields.

p. 6. Recent Deaths. Isaac Culp, age 71, died at San Paulo, Cal., on Sept. 30, 1915. He was one of the founders of the Union Oil Co. of California. He came from NW Pennsylvania, and was a Titusville Council member from 1892 to 1895. He went to California with Lyman Stewart, the organizer of Union. He is survived by his widow, one son Bert Culp; three brothers, Israel Culp, of Titusville, Pa.; Frank Culp, with the Pure Oil Co. of Philadelphia, Pa.; Charles Culp, of Buffalo, N.Y.; and two sisters, Mrs. Samuel Whipple and Mrs. John Williams, both of Meadville, Pa.

A.C. Stich, age 69, died on Oct. 8, 1915, in Independence, Kansas, where he was buried. He was born in Hanover, Germany, in 1846. In 1857, his parents moved to Kalamazoo, Michigan, where he grew up. He moved to Independence, Kansas, in 1872. He is a former Mayor of Independence, and was president of the Coffeyville Vitrified Brick Company, with 15 plants in Oklahoma and Kansas, and was president of the Citizens National Bank, and had oil and gas interests in the Mid-Continent. He leaves a wife, two brothers, and a sister. His children died years ago, and in their memory, he erected the Carl-Leon Hotel in Independence.

p. 8, 10. Oklahoma and Kansas, by R.H. Whitney. In Muskogee County, in the Boynton Field, the production has increased from 7,000 bopd four weeks ago to 12,000 bopd. Neely & Lochner #2, in Sec. 14-14N-16E got 85 bbls. per hour in the Upper Muskogee sand at 1,491', one location west of their No. 1. East of #1, one location is No. 3, which made 200 bopd in the same sand. The Neely & Lochner #1 is now making 40 bbls per hour. West of #2 is the Bradstreet & Gypsy Oil Co. #4 in Sec. 14-14N-16E, which was completed at 60 bbls. per hour. Also in Sec. 20-14N-16E, Bruner et al Co. got 35 bopd at 1,731 feet. In Sec. 15-14N-16E, Merritt Oil & Gas Co. #8 got 7 mmcfgpd, and in #9 got 125 bopd.

In the Harris Pool, Harris et al in Sec. 6-14N-16E got 35 bopd in their #2 Canada.

In the Cole Pool to the west of Boynton, the Cole Pool Oil Co. #5 Fee in Sec. 11-14N-15E got 350 bopd. In Sec. 18-14N-15E, Thompson et al Co. #2 Rentie have a 250 bopd well. The main pool is in Secs. 10 and 11. In Sec. 11-14N-15E, the Dalsa Oil Co. #2 Sango is 50 bopd, and the #3 Davis is 240 bopd. This company is one of the largest holders in the pool, with about 2,500 bopd production.

All of these pools have many locations yet to be drilled, with as many as 150 in the Boynton Pool.

In Latimer County, in Sec. 30-3N-21E, Owen & Flanagan may abandon their well at 2,046 feet.

In Payne County, northwest of Yale, the New England Oil Co. and Fortuna Oil Co. in NW-13-19N-5E got 20 mmcfgpd in the Peru sand at 2,900 feet.

In Wagoner County, near Stone Bluff, Braden & Gobel in Sec. 5-16N-15E had a good showing at 1,200 feet last week, but failed to produce much more. A deeper test is being drilled.

In Carter County, in the Healdton Field, the Magnolia Pipe Line Co. raised the price of oil to 40¢ a barrel. Drilling has picked up, and about 50 locations have been made. Operators believe that there should be a deeper sand in the field. No well has been drilled to 2,000 feet as yet. Many good wells have been completed this past week. (Details given). The Coline Oil Co. sold 240 acres of production to the Santa Fe Railway for $1,000,000, and the oil will be handled by the Producers Refining Co. of Gainesville, Texas, for Santa Fe. About 14 wells are in the deal, producing about 7,000 bopd. The Corsicana Petroleum Co., the producing arm of the Magnolia Petroleum Co., has also been buying production in the Healdton Field. (Details given).

In Washington County, drilling continues in the Vera Pool, Wann Pool, Dewey Pool, and Bartlesville area. (Details given).

In Osage County, the I.T.I.O. Co. has been drilling for gas, with their #1 in Sec. 36-29N-10E being 2 mmcfgpd; #3 in Sec. 35-29N-10E being 2 mmcfgpd; and their #4 being 4 mmcfgpd. The Barnsdall Oil Co. completed some good oil wells north of Bigheart, for about 50 bopd each in Lots 285, 286, and 287.

In Creek County, in the Cushing Field, the production has declined to 125,000 bopd or less. About 50 locations are left in the field. Mostly small wells are being completed. (Details given).

In the Fox Pool, the McMan Oil Co. in Sec. 16-16N-7E got 300 bopd in the Layton sand.

p. 12. The Commerce Oil & Gas Co., of Tulsa, was incorporated for $50,000, at Oklahoma City, by C.B. Stanton, Sapulpa, Okla.; C.A. Jimerson, Kansas City, Mo.; and R.A. Laughlin, Kansas City, Mo.

p. 12. East Texas and Louisiana, by M.L. Vaughn. The average production of this area last week was about 46,177 bopd, generally termed the Caddo District. The southern area, or Crichton Field, had about 29,357 bopd, and the northern area, or old Caddo area, had about 16,820 bopd. Oil is 80¢ a barrel for the northern area, and 60¢ a barrel for the southern area. Many wells are being drilled in the known fields. (Details given).

The Standard Oil Co. of La. has doubled its 8-inch line from Arkansas to the Baton Rouge refinery. The company has a casing-head gasoline plant at Trees, La. The company is adding 30 tanks, of 55,000 bbl capacity each, to their tank farm at Oxford, La.

J.C. Trees, of Pittsburgh, Pa., president of the Arkansas Natural Gas Co., was in Shreveport.

p. 15-16. In the Thrall Field, about 115 producing wells are making about 2,525 bopd. Drilling continues (details given).

p. 16-17. North-Central Texas, by H.W. Whitney. Most drilling continues in the Strawn Field, Palo Pinto County, the Electra and Burkburnett Fields of Wichita County, and the Moran Pool of Shackelford County. (Details given).

In Wichita County, on the south side of the Wichita River, the Lockridge Pool was developed at about 400 feet, with wells averaging about 4 to 25 bopd. Work is now beginning north of the river. About 2½ miles south of Iowa Park, oil has been found at 820 feet, and developments continue there. (Details given). The Wichita Valley Refinery at Iowa Park was completed about 18 months ago, and it takes the oil from Iowa Park and Lockridge Fields, amounting to about 500 bopd.

p. 17. North Texas Wildcatting. Near Kilgore, Texas, Snowden Brothers have leased 20,000 acres. They have made geological studies of the area. They

will begin drilling in a short time. The Gulf Pipe Line Co. line runs about 6 miles west of the leases, in eastern Smith County, to the Gulf of Mexico.

p. 20, 21, 25. Manhattan Court, Tulsa, Oklahoma. Manhattan Court is an apartment complex at Cincinnati Ave. and 11th Street in Tulsa. It was built and owned by David J. Kelly, of New York City and Tulsa, president of the Manhattan Oil Co. He has been in the oil business for 30 years, and is president of the Lima Oil Co. of Ohio. He owns production in Osage County.

p. 25. Gross Production Tax Valid. The Oklahoma Supreme Court upheld the 2% gross-production tax on oil and gas, ruling that it is a license tax and not a tax upon occupation, business, or property. Federal leases are not subject to the tax, but may be taxed on an ad valorem basis. The tax is not an exemption, but rather a substitution of one method of taxation for another. The law was passed in March 1914, imposing a tax in lieu of all other forms of taxation.

p. 28. Gas - Light, Heat and Power. In September 1915, in Kansas, about 47,230,000 cfgpd was found. In Oklahoma, about 150,050,000 cfgpd was found.

In Carter County, in the Healdton Field, the Gates Oil Co. in Sec. 15-4S-3W got 45,000,000 cfgpd.

In Muskogee County, in the Cole Pool, in Sec. 4-14N-15E, a well was completed for 6 mmcfgpd. In the Boynton Pool, Wilcox et al #1 in Sec. 24-14N-17E got 5.8 mmcfgpd.

In Washington County, in the Vera Field, the Wolverine Oil Co. test on the Crutchfield lease in Sec. 19-23N-13E got 5 mmcfgpd at 2,000 feet. This is a new sand for this field.

In Creek County, south of Mannford, Utterback et al in Sec. 31-19N-9E? got 10 mmcfgpd.

In Kay County, about 15.5 mmcfgpd was developed.

In the Creek Nation, from Creek and Tulsa Counties to McIntosh County, about 66.05 mmcfgpd was developed.

p. 28-29. Mansfield, Louisiana, Gas Possibilities. The U.S. Geological Survey has been studying the gas possibilities of the Mansfield area of northwestern Louisiana. An anticlinal structure in the Eocene Wilcox Formation has been found by G.C. Matson, E.H. Finch, and O.B. Hopkins. The Nacatoch Sand lies about 1,200 feet below the surface, the Woodbine at 2,800, and a lower sand at 3,000 feet. A bulletin will be issued later.

p. 35-39. Detailed Well Reports, October 1, 1915, Oklahoma, Kansas, Arkansas, N. Texas, NW Louisiana. In Oklahoma, for September 1915, 292 wells were completed, including 36 gas wells and 76 dry holes, for 24,525 bopd new production, with 737 rigs working or being erected. In Kansas, 79 wells were completed, including 47 gas wells and 6 dry holes, for 370 bopd new production, with 77 rigs drilling or being erected. In Arkansas, 13 wells were drilling in 10 or more counties. In North Texas, 20 wells were completed, including 1 gas well and 9 dry holes, for 700 bopd new production, and 121 wells drilling or being erected. In the Caddo District or Northwestern La.-NE Tex. area, 37 wells were completed, including 3 dry holes, for 30,350 bopd new production, with 117 wells drilling or being erected. (Details given on all wells). In the Thrall Field, Texas, 18 wells were completed, including 5 dry holes and 1 gas well at 800 mcfgpd, with 1,120 bopd new production, and 18 wells drilling.

In Oklahoma, in Marshall County, 9 wells were completed, 4 of which were gas. (Details given). In LeFlore County, 2 wells were dry. In Jefferson County, 5 wells were dry. In Creek County, south of Bristow, Abraham et al #1 in Sec. 9-15N-9E was completed for 3.5 mmcfgpd. Many wells were being drilled in Comanche, Marshall, Adair, Love, Coal, Oklahoma, Murray, Garvin, Johnston, Cotton, Haskell, Latimer, Grady, Hughes, Jefferson, Seminole, Lincoln, Choctaw, Pittsburg, Atoka, Garfield, Jackson, Beckham, Pottawatomie, Pushmataha, Bryan, Pontotoc, and Miscellaneous Counties. (Details given).

Vol. 14, No. 20, October 21, 1915, p. 1. Mid-Continent Production. The apparent estimated production of oil in the Mid-Continent for the week ending October 16, 1915 was 320,500 bopd, with Kansas and Oklahoma outside of Cushing being 140,000 bopd, Cushing 122,000 bopd, Electra District, Tex. 15,500 bopd, and the Caddo District, La. 43,000 bopd.

Developmental wells in the known field continue to be drilled. In Wagoner County, Oklahoma, the well near Stone Bluff was completed as an oil well. In Palo Pinto County, Texas, near Oran, some shallow oil was found.

p. 2. Motor Liners for Danish Fleet. In 1912, the East Asiatic Company added the Selandia to its fleet. This was the first motor ocean liner to be put into service. This ship has been so successful that the company has ordered 10 more diesel-powered ships to be built. The company had headquarters in Copenhagen, Denmark.

p. 3. To Light Cars With Gas. The passenger cars of the Midland Valley Railroad will be lighted with natural gas. Special tanks are installed beneath each coach, with enough gas to last 8 hours. Five cars are now in service for trial runs. This is the first western railroad to use gas light, now being tried in Oklahoma.

p. 4. Personal Mention. F. H. Thwing, of Kansas City, was in Tulsa. He is president of the Producers Pipe Line Co., and president of the company that is building the refinery at Gainesville, Texas.

W.C. Riddle, of the Oilright Oil & Gas Co. of Oilton, Oklahoma, was in Franklin, Pa., conferring with stockholders. The company will drill a well.

Dr. W.E. Barker, of Chanute, Kansas, who discovered the Barker Pool just north of Chanute, has returned from Chicago.

James Fountain, of Wichita, Kansas, was in Tulsa. He is manager of the White-Wright Oil & Gas Co., which is drilling a well 8 miles southwest of Kingston, in Marshall County, Oklahoma. The company has leases on 1,200 acres.

Frank Burns, formerly with the Producers Gas Co. of Bolivar, N.Y., has moved his family to Okmulgee, Oklahoma. He will enter the oil business with his brother who has been in Okmulgee for the past 2 or 3 years.

Lester Gillespie, son of Frank A. Gillespie of Tulsa, was the star player for the Kansas University football team in the game with Drake University. He made a run of 65 yards for a touchdown. Lester and his brother Bernard are members of the first team at K.U.

Williard R. Rowland, of Pittsburgh, Pa., was in Tulsa. He is a business associate of C.N. Payne. He built the first gas line in the Cushing Field for the Creek County Gas Co.. He is furnishing gas to many towns in Okmulgee County, and is heavily interested in the gas in Stephens County, Oklahoma. He is one of the leading gas men in the United States.

Dorsey Hager, the well known Tulsa geologist, is in Chicago on business.

T.W. White, of White & Sinclair, of Tulsa, is in New York on business.

J.E. Head, prominent oil producer, is in New York City on business.

W.H. Gray, of Houston, Texas, an oil producer in Oklahoma, is in Tulsa.

Thomas Carter, of London, England, has arrived in Ardmore, Oklahoma to represent the foreign interests of the Crystal Oil Co.

J.H. Smith, of Pittsburgh, Pa., was in Tulsa looking over his interests in oil in Oklahoma.

p. 4, 6. Noted in Passing. The station at the junction of the railroad running from Jennings to Oilton, Oklahoma, will hereafter be known as Griggs, in honor of the superintendent of the Oil Belt Railroad.

The Russian Cossacks fired the Galician oil fields before fleeing from the Germans. The destruction was greater than what was first reported.

Wildcatters are now looking for oil in 40 counties in Texas, now that the oil glut is receding.

Charters for suburban electric railroads in Oklahoma and Kansas continue to be granted every week or ten days. The scheme was to connect oil towns from Kansas City, Mo., to Sapulpa, Oklahoma.

p. 6. Recent Deaths. Robert L. Larkin. age 47, died in Tulsa, Oklahoma, on October 15, 1915. For 8 years he was the purchasing agent of the Gulf Pipe Line Co. of Oklahoma, coming from Beaumont, Texas. He leaves a widow and two small sons.

p. 8, 10, 12. Oklahoma and Kansas, by R. H. Whitney. In Creek County, the Cushing Field has fallen off, and the refining companies are paying an extra bonus, because of a shortage of oil. Offers as high as $1.25 a barrel have been made, although oil is selling for about 80¢ a barrel. Fewer wells are being drilled, and most of those are small, with many dry holes. (Details given). Bad oil is being pumped into the Cimarron River. One day last week, the Okla Oil Co. got rid of 900 barrels by this route. Operators are now asking if there is another lower producing sand. Most wells have been relegated to the pumping stage. About 121 rigs are still drilling. The estimated production on the first of the week was 122,000 bopd.

In Okmulgee County, drilling continues in the Okmulgee and Boock Sand Pools. (Details given.).

In Wagoner County, near Stone Bluff, north of Haskell, Braden & Gobel in Sec. 5-16N-15E have about 20 bopd at 1,260 feet. About 1,000 feet of fluid is in the hole, and they are not yet through the sand. This is in wildcat territory, and this has started considerable leasing.

In McIntosh County, in the Bartlett Field, the Okla Oil Co. on property purchased from Jack Grundish in the middle-W line-N½-NE¼-Sec. 6-11N-14E, got 25 bopd at 1,775-1,800 feet.

In Pontotoc County, in the Ada Field, the Rex-Corsicana Petroleum Co. in Sec. 8-4N-6E has 10 mmcfgpd at 1,215 feet. There are at least a dozen gas wells in Sec. 31-4N-6E and vicinity, ranging in depth from 1,100 to 1,800 feet. The wells supply Ada with gas.

In Muskogee County, the Boynton and Cole Pools continue to be developed. (Details given). In western Muskogee County, 1.5 miles NW of Wainwright the Holdren Drilling Co. in Sec. 2-13N-16E has about 50 bopd at 2,040 feet. About 1,000 feet of fluid is in the hole. This is a wildcat venture.

In Creek County, in the Fox Pool, seven wells are producing from the Layton sand at about 1,600 feet. About 1,900 bopd is being produced. About 27 wells are being drilled this week. Four of the producing wells are that of the Gypsy Oil Co., 3 on the Trent farm, and 1 on the Grayson farm, in Sec. 9-16N-7E. The other three are the McMan Oil Co. well on the Shawnee farm in Sec. 16-16N-7E for 500 bopd; the C.B. Shaffer well; and the Frank Fox well. The initial well of the pool was the Gypsy Oil Co. #1 Trent that came in at 750 bopd, and is now producing about 575 bopd. No. 2, south of No. 1, is at 300 bopd. No. 3, one-quarter mile east of No. 1 was producing 400 bopd.

In Carter County, in the Healdton Pool, the estimated production is from 60,000 to 80,000 bopd. There are 61 rigs drilling or being erected, and a few good completions. (Details given). The Crystal Oil Co. in Sec. 16-4S-3W got 10 mmcfgpd from a sand at 1,100-1,200 feet, with some oil. The McMan Oil Co. #19 in Sec. 6-4S-3W came in at 4,000 bopd, and the well is not yet completed.

In Marshall County, at McMillan, the Awirco well in Sec. 25-5S-3E is at 1,420 feet, on contract to go to 1,800 feet. A 10-foot salt water sand was found at 1,400 feet. A.A. Michaels has the contract on the well. He will drill another well in Sec. 16-5S-3E, in Carter County, when this well is finished.

In Osage County, the Boston lease in Sec. 1-21N-7E, consisting of 640 acres, is producing about 5,000 bopd from 45 wells. The Gypsy Oil Co. has the lease, of which 240 acres are productive in the NE quarter and the N-half of the SE quarter. (Details given).

In Pittsburg County, near McAlester, the Gypsy Oil Co. in Sec. 6-6N-14E is at 3,200 feet. They may go to 4,000 feet.

p. 12, 14. North-Central Texas, by H.W. Whitney. In Palo Pinto County, two miles west of Oran, the Peoples Red River Oil Co. test on the T.E. & L. Co. land struck about 2-3 bopd at 95-102 feet. This is about the same sand that produces north of Jacksboro, in Jack County. Operations continue in the Strawn Field.

In Wichita County, the Electra and Burburnett Fields lead all others in drilling activity and completions. (Details given).

Governor Williams of Oklahoma is in Mineral Wells, Texas, the guest of Robert Jordan, a well-known operator.

p. 14, 16. East Texas and Louisiana, by M.L. Vaughn. Drilling continues in the known fields. No new fields have been found. (Details given). Wildcats are being drilled in almost all parishes in the northern part of the state, and 100 miles west of the Louisiana border in NE Texas. About 42,656 bopd was the estimated production last week, with 26,395 bopd in the southern or Crichton Field area, and 16,261 bopd in the northern area around Caddo.

p. 16. The Thrall Pool, in Williamson County, Texas, has settled down to about 2,000 bopd, from 118 wells. A few wells are still being drilled. (Details given).

p. 16. Three Million for Gasoline. In Los Angeles, Cal., about 3 million dollars will be spent on gasoline for 1915. About $8,000 a day is now being spent. About 185 stations and 246 garages are now in Los Angeles.

p. 18. Motor Vehicles Use Gasoline. During the fiscal year ending June 30, 1915, in the United States, 703,527 automobiles were sold, which is a 36% increase over fiscal 1914. Orders for 1915-1916 indicate that one million autos will be sold next fiscal year. By next summer, about 2,750,000 automobiles will be driven in the United States. In 1910, there were 425,140 cars. This years there are 2,075,570, or an increase of 400% in 5 years. The average vehicle uses about 500 gallons of gasoline a year. Thus, 225,000,000 gallons were used in 1910 and about 1,000,000,000 gallons of gasoline were consumed in 1915. With exports and other uses for gasoline in manufacturing, about 2,000,000,000 gallons is used every year from the United States. Our crude output is about 300 million barrels a year, and if we expect to supply more gasoline, we will have to find more oil.

p. 27. Choctaw-Chickasaw Indian Land To Be Sold. About 216,500 acres of surface segregated coal and asphalt lands, including 31,700 acres of unalloted lands of the Chickasaw-Choctaw Indians will be offered for sale in January of 1916. This is in Pittsburg, Haskell, Latimer, and LeFlore Counties, Oklahoma.

p. 29. Natural Gas for McAlester. McAlester commissioners have made a contract with the Gladys-Belle Oil & Gas Co. of Tulsa, to supply the city with gas beginning Oct. 15, 1915. The daily estimate of consumption is 70,000 cfgpd. The rate is 8¢ a thousand cubic feet.

p. 30. Gas Company Moves. The Gas Pipe Line Corporation, of W.H. Johnson, has moved its headquarters from Bartlesville, Oklahoma, to Independence, Kansas.

Vol. 14, No. 21, October 28, 1915, p. 1. Mid-Continent Production. The apparent estimated production of oil in the Mid-Continent at the close of last week, on October 23, 1915, was about 328,500 bopd, with Kansas and Oklahoma outside of Cushing being 150,000 bopd, Cushing 118,000 bopd, Electra District, Texas 15,500 bopd, and Caddo District, La.-NE Tex. 45,000 bopd.

There was pronounced drilling in Oklahoma and Kansas, especially in Carter, Kay, Muskogee, Nowata, and Washington Counties, Oklahoma.

There was a wildcat near Eldorado, Butler County, Kansas, with an excellent completion of oil.

p. 1. After 25 years, the Pure Oil Trust is to be dissolved, and the trust certificates will be retired. This is an indication of our changing times.

p. 2. What Caused Ardmore Explosion? Mr. B.W. Dunn, of the Bureau of Explosives, said that the casing-head gasoline car in Ardmore exploded on Sept. 27, 1915, because someone opened the dome cap, allowing excess vapor to mix with a proper amount of air. The car should have been cooled down with water, and then moved to a safe place, and the excess gasoline removed.

p. 2. Control of Indian Affairs. Grant Foreman, a lawyer from Muskogee, Oklahoma, says that the U.S. Government should allow each Indian to settle his own affairs, and that the Government should get out of the business of running the affairs of each Indian Tribe.

p. 4. Personal Mention. John Bisett, of Bradford, Pa., is the guest of his brother, Charles Bisett, of Tulsa.

C.E. Strouvelle, manager of the Savoy Oil Co., is in New York on business.

O.H. Williams, of the Mutual Oil Co., of Kansas City, was in Tulsa.

J.W. Stark, of Bradford, Pa., was in Wann, looking over his investments.

L.A. Poundstone, of Detroit, Michigan, is in Tulsa. He has oil interests in Oklahoma.

Thomas H. Kennedy, vice-president of the Bradford National Bank of Bradford, Pa., is in Oklahoma looking over his investments in the Okmulgee Field.

J.F. King, of Findlay, Ohio, was in Tulsa. He is one of the owners of the Belmont Oil Co.

F.W. Zorn, of Gibsonburg, Ohio, was in Bartlesville, looking after his oil interests.

Stephen Cullinan, of Bradford, Pa., is in Ardmore, where he will be employed by the Roxana Petroleum Co.

Dean Randolph, a contractor in northern Oklahoma for the past 5 years, visited Healdton, and met his cousin Charles B. Goddard, of the Humble Oil co., whom he had not seen in 15 years.

Joe Bartles, of Dewey, is the father of a baby girl. He has an annual round-up at Dewey each July, and during the past week he has started the first free fair in Washington County, Oklahoma.

E.H. Royer has been appointed superintendent of the Crystal Oil Co., with headquarters in Ardmore.

Jack Grundish, of Independence, Kansas, opened a little pool in McIntosh County, Oklahoma. He recently sold out to the Okla Oil Co.

p. 8, 10, 12. Oklahoma and Kansas, by R.H. Whitney. In Carter County, in the Healdton Field, the price of oil has gone up to 45¢ a barrel. Between 60 and 100 rigs are drilling. The production is about 75,000 barrels a day. Magnolia Pipe Line Co. is doubling its 6-inch line to Fort Worth, making a capacity of 30,000 bopd. The Producers Pipe Line co. finished their 8-inch line to Gainesville, Texas, and can handle 12,000 to 15,000 bopd. The Ardmore Refining Co. and the Thelma Pipe Line Co. at Ringling handle about 1,000 bopd together. About 2,000,000 barrels are in storage. About 500 horse teams are working in the field. About 25 large storage tanks are in the field and about 40 are now under construction. The production is shallow, being found at 1,200 feet or less. Some sands are 250 feet thick. Many good wells have been completed this past week. (Details given).

In Kay County, in the NE Blackwell area, the Gypsy Oil Co., has purchased the holdings of the Spencer Oil Co. in Sec. 32-29N-1E, which is 160 acres of the Alberti lease, for $200,000. The well is making 400 bopd. The second well is down to 3,000 feet. The original well of the pool, drilled 2 years ago, the Buehl & Jones #1 Swenson is holding at 60 bopd.

In Muskogee County, the Boynton, Cole, Harris, and Wainwright Pools are actively being drilled, with some good completions. (Details given).

In Washington County, in the Vera Field, about 600 bopd is being produced. Several good wells have been completed. A.D. Morton and the New York & Oklahoma Oil Co. #4 Hopkins lease, in Sec. 31-23N-14E is making 150 bopd at 1,290 ft. Polhamus et al in Sec. 31-23-N-14E got 50 bopd. Oakes et al #3 Croker lease in Sec. 6-22N-14E have 125 bopd. The Kansas Natural Gas Co. #1 Bryan

lease in Sec. 31-23N-15E got 1.5 mmcfgpd at 1,600 feet.

Other fields in Washington County are beginning to be drilled deeper again, such as Wann, Copan, and Dewey Fields. (Details given).

In Osage County, some drilling continues. (Details given). Foster & Breenan #7 and #8 on Lot 285 completed for 7 mmcfgpd in #7 and 100 bopd in #8.

In Nowata County, south of Coffeyville, some oil has been found at 842 feet, which is a new shallow sand development, in the Bartlesville sand. Two oil prodcuers have been completed. Beasley et al, of Bartlesville, have completed the two wells in Sec. 26-29N-15E, for 22 bopd for both wells, under the name of the Stamm Oil Co., on the Stamm farm. In Sec. 34-29N-15E, Beasley, Keith et al Co. got 1,000,000 cfgpd, on the Stamm farm. In Sec. 29-29N-15E, Beasley et al on the Brown farm have 250,000 cfgpd in the Burgess sand at 1,000 feet. Other wells continue to be drilled. (Details given).

In Rogers County, near Chelsea, wells continue to be completed. (Details given).

In Creek County, in the Cushing Field, the production is 118,000 bopd. Some wells are still being drilled and completed. (Details given).

In Butler County, Kansas, at Eldorado, the Wichita Natural Gas Co. well is being closely watched. It is in Sec. 29-26-5. At 660 feet there was 50-200 bopd oil in a 15-foot sand. There was a small showing of oil at 54 feet, in an 8-foot sand. Leases a mile away are selling for $10 to $25 an acre. The nearest pool is the Augusta Pool, where 30 strings are working. Oil is found there at 2,500 feet.

p. 14. North-Central Texas, by H.W. Whitney. Corsicana crude oil has been advanced in price to 45¢ a barrel. Drilling continues in Palo Pinto County, Shackelford County, and Wichita County. (Details given). The Strawn Field, Moran Field, Electra Field, and Burkburnett Field are the main fields being developed.

p. 14. Died at Texas City, Texas. Terrence J. Sullivan, age 24, died on Oct. 20, 1915, at Texas City, Tex, from drinking bad water. He worked for the Magnolia Pipe Line Co., working in Oklahoma before going to Texas. He was a native of Oil City, Pa. He married Miss Julia Dix, of Sand Springs, Ok. Survivors are his wife and parents, and the following named brothers and sisters, J.S. Sullivan, M.J. Sullivan, Mrs. Harry Gelbman, of Point Richmond, Cal.; C.E. Sullivan, of Cushing District; Mrs. John Hall, Miss Catherine Sullivan and Mary Sullivan, of Oil city, Pa. He was buried in Tulsa, Ok.

p. 15,-16. East Texas and Louisiana, by M.L. Vaughn. About 44,727 bopd was the production last week in this area, with the southern area or Crichton being 28,375 bopd and the northern or Caddo area being 16,352 bopd. About 55 wells were drilling in the Crichton area. Many wells are drilling in the northern area also. (Details given).

p. 20. Cushing Cut-Oil. About 25,000 bopd of cut-oil, or oil with about 2.5% water mixed with oil, occurs in the Cushing Field. The rock pressure is about 1,125 psi, and the oil is 31.7 gravity, and it is almost impossible to separate the oil from the water. Government chemists are working on the problem.

p. 22. Chapman-Barnard Ranch, Osage County. J.A. Chapman and H.R. Barnard of the McMan Oil Co. in Tulsa, have closed a deal for a ranch in Osage County, Oklahoma, comprising 2,500 acres deeded land, and 11,000 acres leased land, and several hundred acres of crops, work horses, several hundred steers, and about 1,000 head of cows. The consideration was $125,000.

p. 27. Palo Pinto County, Texas, Examined. In the Fall of 1914, Carroll H. Wegemann made a geological survey of Palo Pinto County, pointing out certain areas that would be favorable for drilling. The work is not published in U.S.G.S. Bulletin 621-E. The Kyle Mountain Anticline is one of the favorable structures.

p. 31. Resistivity of Earth. The U.S. Bureau of Standards has issued

Scientific Paper No. 258. The Bureau is under the Department of Commerce. The paper deals with electrical currents in the earth. Oil in sand has a high resistivity. Certain ore deposits have low resistivity. The paper deals with a new method of measuring resisitivity in the earth.

Vol. 14, No. 22, November 4, 1915, p. 1. Mid-Continent Production. The apparent estimated oil production of the Mid-Continent at the close of last week on Oct. 30, 1915, was 327,500 bopd, with Kansas and Oklahoma outside of Cushing being 150,000 bopd, Cushing 117,000 bopd, Electra District, Tex. 15,500 bopd, and Caddo District or NE Texas-NW La. 42,000 bopd.

Developmental wells in the known fields are being drilled. A rank wildcat 2 miles north of the Day Pool in Tulsa County has caused considerable excitement. The well had considerable oil.

p. 3. New Wichita Falls Gas Line. Last Monday, the gas in the 8-inch line from the Petrolia Field to Wichita Falls, Texas, was turned on. There were washouts of the line from Oklahoma to Petrolia, which caused delays.

p. 4, 6. Personal Mention. H.M. Miles, of Cleveland, Oklahoma, is visiting his brother, S.E. Miles, of Bradford, Pa. whom he had not seen for 28 years.

D.G. Lacy, with the Stockman's Oil Co. of Fort Worth, Texas, is looking after interests in Carter County, Oklahoma.

H.R. Hinton, of Pittsburgh, Pa., with the Great Southern Oil & Gas Co., was in Tulsa. The company is drilling a deep test in Coal County, Oklahoma.

G.D. Moore and D.W. Williams, formerly of Tulsa, are now in Bartlesville, Oklahoma, now being geologists with the Wichita Oil & Gas Co.

B.M. Athey, president of the Badger Oil Co., was in Ardmore. He operates in the Cushing field.

Thomas Morrisey, superintendent of the W.C. McBride interests in the Cushing Field, was in Tulsa. He hails originally from Vincennes, Indiana.

D.F. McMahon, a brother of John V. McMahon, has moved to Tulsa from Houston. He was with the Producers Oil Co. of Texas.

William Richard Blake, son of Charles J. Blake and wife, of Oil City, Pa., will work at Ramona, Oklahoma, for the Prairie Pipe Line Co. His two elder brothers, James F. and Thomas J. Blake also work for Prairie.

Louis Campbell, of Tulsa, with the Corsicana Petroleum Co., is the father of a 10-pound baby girl.

George H. Craig was in Tulsa. In 1894, he first proposed the idea of laying a pipe line from Kansas to the Gulf Coast.

David Gunsburg died in Buffalo, N.Y., on Saturday. J.e. Crosbie, president of the Central National Bank of Tulsa, attended the funeral. They were old friends and were jointly interested in the refinery at Ardmore, Oklahoma.

C.A. Braley, president of the Chanute Refining Co., was in Tulsa. He is one of the pioneer refiners of the Mid-Continent.

p. 8. Summary of Field Operations for October, 1915. In Oklahoma, 458 wells were completed, including 40 gas wells and 80 dry holes, with 61,227 bopd new production, and 855 rigs drilling or being erected.

In Kansas, 91 wells were completed, including 10 gas wells and 13 dry holes, with 780 bopd new production, and 96 rigs drilling or being erected.

In Arkansas, 15 wells were drilling.

In North-Central Texas, 20 wells were completed, including 6 dry holes, with 385 bopd new production, and 120 rigs drilling or being erected.

In the Caddo District, of Louisiana and NE Texas, 36 wells were completed, including 10 dry holes, for 9,920 bopd new production, with 117 rigs drilling.

In the Thrall Field, Texas, 14 wells were drilled, including 7 dry holes, with 400 bopd new production, and 14 rigs drilling or being erected.

p. 10, 12, 14. Oklahoma and Kansas, by R.H. Whitney. In Carter County, the Healdton Pool is now becoming the most active in Oklahoma. About 50% of the production is being allowed to be used, under the new pro-ration laws, or about 40,000 bopd can actually be sold. The Magnolia Pipe Line Co. is running

about 20,000 bopd to Forth Worth, Texas, and the Producers Refining Co. is running about 10,000 bopd to Gainesville, Texas. About 75 rigs are drilling or are being erected. The lowest producing sand in the pool is at 1,200 feet, and most of the operators are talking about looking for a deeper pay zone. One dry hole was by the Du Ard Oil Co. #10 in Sec. 9-4S-3W, which was plugged at 1,370 feet. Most of the wells are producers.

In the Cushing Pool of Creek County, many refiners are buying production and storage. There seems to be a shortage of oil now, and the price has gone up to $1.10 a barrel.

In Muskogee County, about 12,000 bopd is being produced, mostly from the Boynton and Cole Fields, where a few wells are being completed. (Details given).

In Washington County, the Vera Pool is still being developed in the Bartlesville sand at 1,200 feet. The pool was opened up several months ago by Oakes et al, who got a gas well, and then by A.D. Morton who drilled the first oil well three months ago in Sec. 31-23N-14E. The production is about 500 bopd, and new completions are being extended to the northeast in Sec. 6-22N-14E, and in Sec. 32-23N-14E. A.D. Morton, of the New York & Oklahoma Oil Co., has the best wells. The Three Sams Oil Co., composed of S.J. Polhamus, Mason & Overlees, J.S. Leach, and R.S. Bradley, has good production also. Harold Bucher and Roy Bopst have large royalty interests. These operators are from Bartlesville. The Kansas Natural Gas Co. of Independence, Kansas, also has interests. From Tulsa are the Henry Oil & Gas Co., Oakes et al, and the Producers Oil Co.

In Tulsa County, 2 miles north of the Day Pool, and 4 miles south of Owasso, a new sand was struck at 1,232 feet with an oil show by Kinney & Kingsbury on the Mabel Archer 10 acres in the NW-NW-NE-Sec. 19-20N-14E

In Creek County, in the Fox Pool, about 2,000 bopd is being produced. Good wells continue to be completed. (Details given).

In Osage County, at Chouteau Springs on Lot 283, west of Bartlesville, a new pool may have been opened on the east end of the Lot by the Midland Oil co., with a 50 bopd well.

In Creek County, the Cushing Pool is down to about 117,000 bopd production. Numerous wells are still being completed. (Details given).

The Sapulpa Field is still being drilled, with some good completions. (Details given).

In Okmulgee County, some small wells have been completed in the Bald Hill Field and Boock sand area. (Details given).

p. 16. In the Thrall Field, Texas, about 115 wells are now producing about 2,000 bopd.

p. 18-19. North-Central Texas, by H.W. Whitney. Numerous wells continue to be completed in Palo Pinto, Jack, Wichita, and Clay Counties. (Details given).

p. 19-20. East Texas and Louisiana, by M.L. Vaughn. Good wells continue to be completed in this area, especially in the Crichton Field. (Details given). In Marion County, Texas, several good wells have been completed. New work is starting south of Kilgore, in Rusk County, Texas. (Details given).

The Minden Oil & Gas Co. has been organized at Minden La., in Webster Parish, and they have a well down in the center of town.

In Bienville Parish, the Ringgold-Red River Oil Co. has leased several thousand acres. W.C.B. Allen is president of the company.

The average daily production of the entire district, or Caddo District, is about 41,838 bopd. Last week, 8 wells were completed, including 1 gas well and 1 dry hole, for 6,100 bopd new production.

p. 27. Death of Well-Known Oil Man, David Gunsburg. David Gunsburg, age 52, died at his home in Buffalo, N.Y., on Oct. 29, 1915. He was buried in Buffalo. He had kidney trouble. He wasborn in Germany in 1863, and came to New York City when a child, where he grew up. His early work in oil was at Allentown, N.Y., where he did scouting and leasing. Later he worked at Olean, N.Y., where he met George A. Forman, forming the partnership of Gunsburg &

Forman. About 1906, Mr. Gunsburg acquired some leases in Oklahoma in the Cherokee Shallow Sand District, and they proved profitable. He was one of the pioneers in the Nowata, Alluwee, and Coody's Bluff Fields. He later operated in the Glenn and Bird Creek Fields, and started early in the Cushing Field. He organized the International Refining Co., the Southwestern Petroleum Co., and other companies, and helped to organize the Ardmore Refining Co. Recently, the Carter Oil Co. purchased the storage in the Cushing Field, amounting to 30 tanks of 55,000 barrel capacity each.

Mr. Gunsburg married a sister of Ralph Hochstetter, of Tulsa, and is survived by his wife, four brothers, and father, the latter family residing in Germany. The estate is valued at 5,000,000 to 10,000,000 dollars. The office in Tulsa still continues to conduct business.

p. 28. October's Gas Production in Kansas and Oklahoma. Oklahoma had 175,500,000 cfgpd new production in October 1915, and Kansas had 10,250,000 cfgpd new production.

The Creek District, outside of Cushing had 79,750,000 cfgpd, with one well in the Fox Field being gauged at 35 mmcfgpd, being the Savoy Oil Co. and Gypsy Oil Co. #1, in Sec. 4-16N-7E, in Creek County. In the Wicey Field of Tulsa County, Swoveland et al in Sec. 28-16N-12E had 10,000,000 cfgpd. W.B. Pine #4 in Sec. 30-12N-13E got 7,000,000 cfgpd. Mr. Pine now has 20 mmcfgpd which he is selling. In the Boynton Pool, the Caney River Gas Co. #2 Jefferson in Sec. 4-14N-15E got 10,000,000 cfgpd, in Muskogee County. The Famous Oil Co. #1 in Sec. 5-17N-5E got 7,000,000 cfgpd. The Fortuna Oil Co. in Sec. 23-18N-4E has developed a 5,000,000 cfgpd well in virgin territory, in Payne County.

In Pontotoc County, in the Ada Field, the Rex-Corsicana Co. #1 Masberry in Sec. 8-4N-6E has 10,000,000 cfgpd.

In Osage County, Foster & Brennan #7 in Sec. 30-25N-11E, Lot 285, got 7,000,000 cfgpd.

In the Yale NW Field, in Payne County, the New England Oil & Gas Co. in Sec. 13-19N-5E, has 20,000,000 cfgpd.

In Creek County, in the Cushing Pool, the B.B. Jones #14 S. Long lease in Sec. 9-18N-7E got 5,000,000 cfgpd.

In Kay County, about 10,000,000 cfgpd was developed.

In Cherokee Deep Sand District, about 10 mmcfgpd was developed.

In the Cherokee Shallow Sand District, about 7.25 mmcfgpd was developed.

p. 29. Priestley of Oklahoma. George C. Priestley, formerly from Bartlesville, but now in Philadelphia since a year ago, is assisting in a merger of the Crew-Levick Co. of Philadelphia with the Muir Refining Co. of Warren and Titusville, Pa. Crew-Levick is a distributor of refined products, and Priestley is vice-president and manager of the company, with $5,000,000 capital.

Vol. 14, No. 23, November 11, 1915. p. 1. Mid-Continent Production. The apparent estimated production of oil in the Mid-Continent at the close of last week was 331,000 bopd, with Kansas and Oklahoma outside of Cushing being 155,000 bopd, Cushing 115,000 bopd, Electra District, Texas, 15,000 bopd, and the Caddo District of La. and NE Texas being 46,000 bopd.

p. 3. Fog Dispelled by Oil. Government hydrographers are studying oil on ocean water to dispel fog.

p. 3. How Tulsa Obtained Its Name. Tulsa is a Creek Indian word meaning clan, or secret organization. Creek Indians were formerly divided into 47 towns or communes, such as Tulsa-Lochapoka, Tulsa-Canadian, Tulsa-Little River. The present city of Tulsa was Tulsa-Lochapoka, but the name Lochapoka was later dropped.

p. 4. Personal Mention. F.B. Howland, president of the Kewanee Oil Co., is in Tulsa from Titusville, Pa.

Isaac Shuler, of Bowling Green, Ohio, is in Tulsa looking over his interests.

C.H. Desaulls, of New York, president of the American Spelter Co., has

been visiting his smelter at Sand Springs, Oklahoma.

M.S. Wilson, one of the original operators of the old Muskogee oil field, is being treated for loss of sight at Wichita, Kansas. He may regain his sight.

F.H. Thwing, a refiner of Kansas City, Mo., and T.H. Smith, of Denver, Colorado, were in Ardmore, looking over their interests in the Gainesville Pipe Line Co.

I.N. Knapp, of Ardmore, Pennsylvania, was in Tulsa. He was a pioneer oil man in the Mid-Continent, opening up the Chanute, Kansas field, and installing the first gas plant there. He has headquarters at Houma, La., but says that drilling there is unprofitable, and is returning to Pennyslvania. His son, Arthur Knapp, is drilling at Baku, Russia.

p. 4, 6. Noted in Passing. The drilling of a deep test near Chanute, Kansas, will be watched with interest. It is still not known if oil underlies the Mississippi lime in the Mid-Continent.

The Rexol Oil Co. has oiled the roads for several miles around Ada, Okla., and the people are pleased with the results.

J. Milton Turner, former Minister to Liberia under President Grant, and the first black man in the federal service of the United States, died on November 3, 1915, as a result of injuries received in the Ardmore explosion. He had been living in Ardmore, Oklahoma, for a number of years.

The tax rate on properties in the counties in Oklahoma for 1915 is now 4%.

p. 6. Recent Deaths. Clarence Clark, age 23, was killed on the Horton lease in the Healdton Field on Nov. 3, 1915. His parents live at Meadville, Indiana, where he was buried.

Mrs. W.C. Trent, mother of J.C. Trent, died in Muskogee, Okla., on Nov. 2, 1915. She was 75 years old. The family has lived in Muskogee for many years, and had been prominent in the development of Muskogee. J.C. Trent also developed the Okmulgee Field and the town of Okmulgee.

Mrs. Mary A. Hayes, age 37, died of a fall at home on Nov. 8, 1915, in Tulsa, Oklahoma. She was the wife of Frank C. Hayes of the Toxaway Oil Co. She is survived by her husband and two children. The family has lived in Tulsa since 1908. She was buried at Pittsburgh, Pennsylvania.

p. 8, 10, 12. Oklahoma and Kansas, by R.H. Whitney. In Carter County, Oklahoma, the Healdton Field was the most prominent place that was developed in Oklahoma. About 80,000 to 100,000 bopd can be produced. Many wells continue to come in at 100 to 4,700 bopd each. (Details given). The Kewanee Oil & Gas Co. purchased a 70 acre tract from C.J. Wrightsman for $405,000, including 1,600 bopd production and 160,000 bbls in storage. Kewanee was charted back East in 1875 under the name of Enterprise Transit Co., later changing the name. T.H. Steele will manage the company's holdings. Oil in the field is now up to 55¢ a barrel. The Roxana Petroleum Co. is laying an 8-inch oil line from Sec. 3-4S-3W south to the railroad about 1.5 miles west of Ringling, Jefferson County. The company has about 18,000 bopd production, and 50 tanks of 55,000 barrel capacity each.

In other parts of Oklahoma, the Okla Oil Co., a subsidiary of the Tidewater Pipe Co., has been purchasing producing properties in the cushing Field of Creek County, the Winona Oil Co. holdings of Frank Breene in the Dewey Field of Washington County, the Grundish Oil Co. property in McIntosh County, and the Sabine Oil & Marketing Co. holdings in the Bird Creek Field of Tulsa County. The company began purchasing property about 2 years ago in Washington County.

In Muskogee County, oil has been found at 2,070 feet, which is the deepest pay ever found in the county. Pierson, Forbes, McGranahan et al Co. in Sec. 36-15N-18E found the oil, near the Midland Valley shops.

Northwest of Haskell, Anders & Cory in Sec. 28-16N-15E got 30 bopd at 1,384-1,394 feet.

The Boynton Pool was extended farther west with the completion of the Cameron et al Co. #3 in Sec. 14-14N-16E, with 1,080 bopd at 1,456-1,492 feet. Other good wells were also completed. (Details given).

In Tulsa County, the Mohawk Field was opened more than a year ago by Scott Murdock. Parrish et al #8 Reed in the SW-NW-Sec. 21-20N-13E got 100 bopd at 1,206 feet. Another producing sand was at 1,019 feet.

A new pool was opened up 2 miles north of the Day Pool and 4.5 miles south of the Owasso Pool, by Kinney & Kingsbury #1 Mabel Archer in the 10 acre strip in the NW-NW-NE-Sec. 19-20N-14E, with 40 bopd at 1,218 feet.

In the Wicey Pool, south of Bixby, the Andes Oil & Gas Co. #2 E. Owen lease in Sec. 3-16N-13E got 100 bopd at 2,100 feet. The Prairie Oil & Gas Co. #9 Owens lease in Sec. 3-16N-13E got bopd at 2,100 feet.

In Creek County, the Cushing Pool has about 115,000 bopd production. The spot price is $1.30 a barrel. The Standard Oil Co. of Indiana has purchased 14 large tanks from B.B. Jones and 38 tanks from the Okla Oil Co., for their refinery at Whiting, Indiana. This is the largest refinery of the old Standard system in the United States. The company will use the Prairie Pipe Line for delivery. Standard has been buying Cushing oil for some time from White & Sinclair. Some good wells are still being completed in the Cushing Field. (Details given).

In the Fox Pool, several good wells were completed. (Details given).

In Kay County, the NE Blackwell Pool is still being developed. The Kay & Kiowa Gas Co. (Devonian) in the NW-Sec. 5-28N-1E on the Effie Myers lease, got 35,000,000 cfgpd. Other wells are also drilling. (Details given).

In Butler County, Kansas, people are flocking to Eldorado. Acreage has gone up from $1 to $30 an acre. The hotels are all filled. About four years ago, a big gasser came in, which started the play, but only gas wells were found. The Wichita Natural Gas Co. well in Sec. 29-26-5 got 200 bopd at 660 feet, and it's now at 1,900 feet. A geologist says that this area is on one of the best-looking domes in the Mid-Continent. With the first shallow gas development near Augusta, several years ago, Butler County came into prominence. About 2 years ago, oil was struck on the Frank Varner farm at 2,500 feet by the Wichita Natural Gas Co. Since then, about 6 wells have been completed, for 350 bopd. It is believed that this is the same sand that is being developed in the Blackwell Pool. Some oil has been found in Cowley County, Kansas, in the deep sand. Cowley County is between Butler County and Blackwell, and this entire area may soon be developed. Many companies are now drilling around Eldorado. (Details given). C.B. Shaffer, John A. Bell, W.H. Roeser, Gypsy Oil Co., Carter Oil Co., etc. are all investing in the area.

p. 12. The Thrall Field, in Williamson County, Texas, continues to be drilled. (Details given).

p. 14-15. North-Central Texas, by H.W. Whitney. In Palo Pinto County, developments continue in the Strawn Field and elsewhere. (Details given). One well, the Clark test on the Hess Ranch southwest of Mineral Wells, struck a hard rock below a blue sticky clay. The bailer brought up metal resembling gold, or possibly some type of copper, but it was not pyrite. The well was cased at 450 feet, and is now drilling at 560 feet.

In Wichita County, drilling continues in the Electra Field (39 rigs) and the Burkburnett Field (14 rigs). The Panhandle Refining Co. will start building a refinery in North Wichita Falls. A 4-inch line is being laid to the Burkburnett Field. The refinery will handle about 2,000 bopd. The owners are Roy B. Jones, secretary and manager, from Oklahoma City; O.B. Manross, superintendent, from Kansas City, Mo.; Frank Brown, of Independence, Kansas; and C.B. Farquharson of Tulsa, Oklahoma.

Wildcat wells are drilling in many counties. (Details given).

p. 15-16. East Texas and Louisiana, by M.L. Vaughn. The total production in the Caddo district or E. Texas-NW La. area, was 46,351 bopd in November. Many wells were completed in the various districts. (Details given). Marion County, Texas continues to be drilled. (Details given).

The Prosper Oil & Gas Co. was chartered in Shreveport, Louisiana, by W. H. Booth, president; C. D. Keen, vice-president; and J. P. Evans, secretary-treasurer. They

will drill in Sec. 36-18-16, west of Cross Lake, 11 miles west of Shreveport.

M.L. Benedum, J.C. Trees, and A.B. Dally, Jr., all of Pittsburgh, Pa., have bought 2,260 acres of land from the Rogers Oil & Gas Co. in the heart of the Caddo Field. They have a half interest in the Atlas Oil Co. holdings in the Crichton Field, and they have been steadily acquiring properties in northern Louisiana. They will probably build a refinery. They own the controlling interest in the Arkansas Natural Gas Co.

The recent activity at Coushatta, La., has resulted in a rapid growth of that town. New subdivisions have been added, and the houses are immediately occupied. New stores and enterprises are springing up.

p. 18. Pumper Killed Near Dewey. Fred Olmstead, age 45, died on Nov. 1, 1915, in an accident on the Fannie Knight lease, a mile from Dewey, Okla. He was a widower with 3 children, and came to Oklahoma 2 years ago from Erie County, Pennsylvania.

p. 19-20. Operations in Oneida Pool, Tennessee. Many thousands of acres are being leased around Oneida, in Scott County, Tennessee. Many wells are being drilled, and some are being completed as gas wells. The major reservoir is the Big lime. (Details given).

p. 23. Gillespie Ranch, Wagoner County. Frank A. Gillespie has bought the Dr. Charles E. Dailey ranch of 2,500 acres for $35,000 in Wagoner County, near North Muskogee. He bought the ranch for his two sons, Bernard and Lester. There were 72 changes of title.

p. 26. Arkansas City, Kansas, Wants Own Gas. Arkansas City, Kansas, uses about 1,500,000 cfgpd. The City Commissioners have asked resident A.L. Derby to supply the town, at 10¢ a thousand cubic feet. He said that he would lay an 8-inch line from his holdings in the Augusta Field, and sell his holdings of about 25 mmcfgpd, for $135,000. The Commissioners would then sell the gas.

p. 27. Shell Marketing Co., Oklahoma. Richard Airey, of London, England, general manager of the Shell Marketing Co., is visiting the various districts in Oklahoma. This is the parent and holding company of the Royal-Dutch Shell Co. and the Roxana Petroleum Co. They own properties in most of the fields in the state. It is reported that Roxana will lay a pipe line from the Cushing Field to the Gulf Coast.

p. 27. Canary Field, Washington County. Emma F. Williams, a married Cherokee, has sued her father, James D. Canary for $87,500, for royalty in the Canary Field, from 1904 to 1915. Mr. Canary leased the land in 1904 to the New York Oil & Gas Co., including his daughters land, for one-eighth royalty, but she never received the money.

p. 34-39. Detailed Operations, Fields, Wells, Mid-Continent, Nov. 1, 1915. Oklahoma. In Oklahoma, on November 1, 1915, for October, 485 wells were completed, including 40 gas wells and 80 dry holes, for 61,227 bopd new production, with 855 rigs drilling or being erected. About 40 counties are being drilled.

Kansas. In Kansas, 91 wells were completed, including 10 gas wells and 13 dry holes, for 780 bopd new production, and 96 rigs drilling or being erected.

Arkansas. About 15 wells were drilling in Arkansas.

Texas, North Texas. in North Texas, 20 wells were completed, including 2 gas wells and 6 dry holes, for 385 bopd new production, with 120 wells drilling or being erected in 23 counties.

Louisiana, NW, and Texas, East. About 36 wells were completed, including 10 dry holes, for 9,920 bopd new production, and 117 rigs drilling or being erected.

Details are given for each of the above wells.

Vol. 14, No. 24, November 18, 1915, p. 1. Mid-Continent Production. The apparent estimated production of oil in the Mid-Continent at the close of last week was 328,000 bopd, with Kansas and Oklahoma outside of Cushing being 155,000 bopd, Cushing 112,000 bopd, Electra District, Tex., 16,000 bopd, and Caddo District, La. and NE Texas, 45,000 bopd.

p. 2. Golden Spike is Driven. Mrs. Dana A. Howells, of Jennings, Okla., drove a golden spike into a tie at Oilton last week, connecting the Oil Fields RR. with the Santa Fe RR., opening up the Cushing District to a rail line.

p. 3. Gasoline Consumption, USA. About 2,225,000 automobiles use about 4,450,000 gallons of gasoline each day. Other uses amount to 1,500,000 gallons a day, for a total of about 6 million gallons a day. Gasoline will probably go up to 50¢ a gallon in the East. Scientists are trying to find a substitute for gasoline.

p. 3-4. Personal Mention. H.C. Hawkins, of Sapulpa, Okla., was in Tulsa. He is a grandson of Major A.C. Hawkins, a pioneer oil man of Bradford, Pa.

Isaac Cohn, of New York City, is in Oklahoma. His brother, David Cohn, of Chelsea, is a well-known oil man. They formerly lived at Bradford, Pa.

John J. Larkin and wife, of Bartlesville, were in Tulsa. He is the president of the Eastern Torpedo Co.. They have a new grandson. Dr. O'Hern married their daughter, Hazel Larkin.

Cyrus Lester, of Monticello, Ky., is in Tulsa and will locate here. In 1865, he began in the oil business at Pithole, Pa. He later lived at Bradford, Pa. He is interested in the carbon-black business and in oil.

E.H.R. Green was in Tulsa and Bartlesville. He is the son of Mrs. Hetty Green, one of the wealthiest women in the world. In the party were oil men, L.W. Wells and W.P. Allen, of Terrell, Texas; and J.H. McDowell, W.N. Baker, and W.P. Blankenship, of Dallas, Texas.

p. 4, 6. Noted in Passing. The Oklahoma Natural Gas Co. has a casing-head gasoline plant at Shamrock, Creek County, Oklahoma, which produces 70-80 barrels of gasoline a day.

In the Cushing Field, in Creek County, Oklahoma, north of Pemeta, the Silurian Oil Co. #2 Amy lease came in at 65,000,000 cfgpd in the Bartlesville sand at 1,700 psi pressure. The Wheeler lime had 45,500,000 cfgpd at 200 psi pressure.

Clarence McFadden, age 27, was killed in an oil field accident on Nov. 3, 1915 in Oklahoma. He was buried at Guy's Mills, Pennsylvania on Nov. 7.

Recently, 200 students spent 3 days observing the upturned strata in the Arbuckle Mountains.

Robert J. Glenn, of Titusville, Florida, was in Muskogee, attending a case by his daughter, Elma Glenn, who charged Robert J. Boone of embezzlement. Mr. Glenn is the man after whom the Glenn Pool was named, about 10 years ago this month. The Glenn family owned the land around the discovery well. The Glenns left Oklahoma last July, and they have located in Florida, where they intend to reside hereafter.

p. 6. Recent Deaths. Albert Philp, son of Mrs. M.J. Philp, of Caldwell, Texas, was killed in an oil field accident on Nov. 18, 1915, while working in the Crichton Field, Louisiana. He worked for the S.A. Guy Drilling Co. He was buried at Caldwell, Texas. He is survived by his mother and 6 brothers, T.L. and H.E. Philp, of Shreveport, La., W.J., J.M., and J.P. Philp, of Beaumont, Texas, and S.R. Philp, of Caldwell, Texas.

Oscar G. Benson, age 61, was killed in a gas explosion in the Cushing Field on October 31, 1915. He was a producer and contractor in Pennsylvania, Ohio, Illinois, and Oklahoma. On Dec. 28, 1881, he married Emma C. Blakely at Bradford, Penn., who survives. He had a daughter, Mrs. Frank A. Mitchell, and a son, Oscar Benson, both of Independence, Kansas. Also surviving are 3 brothers, Clinton Benson, of Lafayette, Ind., William L. Benson, of Robinson, Ill., and James Benson, of Waterford, Pa.; and 2 sisters, Mrs. Charles Fenn, of Erie, Pa.,

and Mrs. Ward Lester, of Indianapolis, Indiana.

p. 8, 10. Oklahoma and Kansas, by R.H. Whitney. In Muskogee County, many good completions were made in the past week. A new field, the Taft Field, was discovered. Humphrey & Whiteside struck 6 mmcfgpd at 1,224-1,229 in the NE-19-15N-17E, one-half mile NE of the Midland Valley Station at Taft. The gas will be used as fuel for drilling more wells. The well was located on a dome by one of the best-known geologists in Oklahoma. Leases are $25 an acre.

Another gas well was completed, 4.5 miles SW of Muskogee, and it is the farthest south producing gas well in Muskogee County. Jolly et al Co. in Sec. 17-14N-18E, got 10,000,000 cfgpd at 1,275 feet, with 700 psi pressure. They expect to find oil at 1,700 feet.

The Haskell Field continues to be developed. The Fay Drilling Co. (Anders & Cory) in the NW-Sec. 28-16N-15E, got 15 bopd at 1,384-1,836 feet. Several other wells have been started. (Details given).

The Boynton, Cole, and Harris Fields continue to be developed. (Details given). Boynton produces about 5,000 bopd.

In Creek County, the Cushing and Fox Fields are still being drilled. (Details given). In the Fox Field, C.B. Shaffer in the SW-NW-Sec. 15-16N-7E, north of the Fox well, got 4 mmcfgpd at 1,635-1,670 feet.

In Kay County, drilling continues. Northeast of the Blackwell Field, B.B. Jones #2 Swenson in Sec. 32-29N-1E, got 30 mmcfgpd at 1,970 feet, just north of the Alberti well. Many tests are being drilled in this area. (Details given).

Near Hardy, northeast of the Newkirk Field, E.W. Marland et al in Sec. 4-28N-4E go a dry hole at 3,500 feet. The well was drilled on geological advice.

In Carter County, the Healdton Field continues to be developed. (Details given).

Near the town of Fox, in Sec. 28-2S-3W, the Gypsy Oil Co. got 15 mmcfgpd at 1,820 feet, opening up a new field.

In Tulsa County, the Mohawk and Wicey Fields continue to be developed. (Details given). In Wagoner County, the Stone Bluff Field has producers also.

In Okmulgee County, the Bald Hill, Okmulgee, and Boock-Sand Fields continue to be developed. (Details given).

p. 10. New Map Completed. The Tulsa Engineering & Supply Co. has just completed a map of the fields covering Newkirk, Blackwell, and Ponca City, Kay County, Oklahoma; and Augusta, Winfield, Arkansas City, and Eldorado, Kansas.

p. 12. East Texas and Louisiana, by M.L. Vaughn. About 45,080 bopd is the production of this area this past week, with 16,225 bopd in the northern area, or Caddo and Monterey etc. Fields, and 28,790 bopd in the southern area of Crichton, in Red River Parish, and DeSoto Parish, La. Many wells are being completed in these areas. (Details given).

A few good wells are being completed in Marion County, Texas. (Details given).

The University Oil Co. has been organized at Shreveport, La. The company will drill in Marion County, Texas.

p. 16, 18. North-Central Texas, by H.W. Whitney. Oil is now 95¢ to $1.00 a barrel. In Palo Pinto County, south of Mineral Wells, the Clark well on the Hess Ranch is attracting attention. At 720 feet, gas was struck, and at 740 feet, water was struck, and periodically the gas blows the water over the rig. The rig caught fire, but the fire was finally put out with steam. The well is 5.5 miles southwest of Mineral Wells.

Wells are still being drilled near Santo, Caddo, Cisco, and Strawn. (Details given).

Other counties being drilled are Knox, Hunt, Cooke, Kaufman, Montague, Jones, Limestone, Taylor, and Jack Counties. (Details given).

In Wichita County, the Electra, Iowa Park, Burkburnett, and other Fields are being developed. (Details given).

About 16,075 bopd was produced from the North Texas area in October, or about 498,331 barrels total.

A.H. Woodfin, a geologist from Tampico, Mexico, is drilling a wildcat well in Palo Pinto County, Texas.

Jim Maddox, of Fort Worth, a former police chief, is now in the oil business around Electra and Mineral Wells, Texas.

p. 19-20. Oneida Field, Scott County, Tennessee. The outlook of this field is brighter than what it was 6 months ago when the field was discovered. Old-timers are now interested in the field. (Details given).

p. 28. Gypsy Company's Big Gasser. The Gypsy Oil & Gas Co. test near Fox, in Carter County, Oklahoma, is reported to be making 50,000,000 cfgpd. The well is spraying some oil. It looks like the opening of a new pool in Oklahoma.

p. 29. Gas Scarce in Kansas City. Kansas City gets about 20 to 30 mcfgpd but it is not enough. Some homes were cold. Some new fields in Oklahoma have been connected.

Largest Gasser in Arkansas. Near Fort Smith, Arkansas, the largest gas well in this area was brought in at 25,000,000 cfgpd. The company is composedof Fort Smith business men.

Oklahoma's Biggest Gasser. The well of the Devonian Oil Co. in the Blackwell Field is 50,000,000 cfgpd, and is the biggest gas well in Oklahoma, according to J.F. York of the Oklahoma Corporation Commission.

Cancelled Contract. The Ludowici-Celadon Gas & Oil Co. has cancelled its contract with the city of Coffeyville, Kansas, to supply gas to that city. The supply has diminished and the company cannot supply gas at a cheap cost.

p. 30. Studying Petroleum at Norman. The largest class in Paleontology in the United States is at The University of Oklahoma, because of the interest in oil. A special course in oil was started in the Fall. The attic of Science Hall has been remodeled to provide temporary quarters. A new building is to be added, and most of that will be given over to paleontology.

p. 31. Dallas-Osage Oil Co. Col. E.H.R. Green, of New York; Col. John H. Simpson, and Messrs. E.M. Reardon, and E.J. Gannon, officers of the American National Exchange Bank of Dallas, Texas, formed a party to visit their leases near Copan, of the Dallas-Osage Oil Co. Col. Simpson rode over this country 35 years ago on cattle drives to Kansas City. Mr. Reardon was born in the oil business, and is an old friend of Samuel G. Bayne of the Seaboard National Bank of New York.

Vol. 14, No. 25, November 25, 1915, p. 1. Mid-Continent Production. The apparent estimated production of oil in the Mid-Continent at the close of last week was 327,000 bopd, with Kansas and Oklahoma outside of Cushing being 158,000 bopd, Cushing 108,000 bopd, Electra, Texas, 16,000 bopd, and Caddo District, La. and NE Tex., 45,000 bopd.

p. 1. Uncle Sam has taken 69 sections of California oil land to provide oil for the U.S. Navy. It is a withdrawal scheme for conservation.

p. 3. Fox Field, Carter County. Some time ago, geologists made favorable observations for oil and gas prospects around Fox, Carter County, Oklahoma, about 10 miles north of the Healdton Field. The Mutual Benefit Oil Co. had selected a site for drilling, but the Gypsy Oil Co. had previously obtained title to the land. The Gypsy people then located a site, and the well was started in July 1915. At 1,820 feet a rich gas sand was struck, with some oil. Geology thus deserves a new credit mark.

p. 3. John J. Carter, Retired. Col. John J. Carter, of Titusville, Pa., has retired from the Commercial Bank of that city. His son, Luther B. Carter, will take his place. Col. Carter has a farm near Titusville, and this will occupy his attention. He retired as president of Carter Oil Co. last summer.

p. 3-4. Personal Mention. John M. Clover, of Tulsa, president of the Iron Mountain Oil Co., was in Ardmore.

W.B. Capps, of Tulsa, operating in the shallow Vera Pool, Washington County, has returned from a trip to Nowata and Independence.

Mr. and Mrs. W.E. Stich, of Independence, Kansas, was spending Thanksgiving in Tulsa at the home of their daughter, Mrs. Earl W. Sinclair.

H.N. Cole, president of the Twin State Oil Co., with headquarters in Tulsa, was in Ardmore, looking over the Healdton Field.

T.H. and S.P. Kennedy, of Bradford, Pa., were in Muskogee, looking after their refinery there.

H.W. Whitney, oil reporter for the Oil & Gas Journal and the Oil City Derrick, with headquarters at Mineral Wells, Texas, was in Tulsa, visiting his brother R.W. Whitney, also of The Journal Staff.

Sam Lester, of Cushing, was in Tulsa to meet his father, Cyrus Lester, who has been operating in Kentucky, but expects to settle in Oklahoma.

Mr. and Mrs. R. M. McFarlin and daughter, formerly of Holdenville, will become residents of Tulsa next month. He is head of the McMan Oil co. They have purchased a fine home on South Cheyenne Avenue.

John T. Milliken, of St. Louis, Mo., president of the Milliken Oil Co. and the Milliken Refining Co., was looking over his properties in the Cushing Field, and was inspecting his refinery at Vinita, Oklahoma. This is the first time in two and a half years that he has looked at the properties.

W.H. Milliken, of Bowling Green, Ohio, one of the developers of the Glenn Pool, is visiting old friends in Oklahoma. He enjoys the distinction of being the originator of the bonus system. The first bonus in Oklahoma of which there is any record was paid by Mr. Milliken to Thomas Gilcrease, in 1905, and was $1,000 an acre. The lease was to run 5 years.

Ben M. Gessel will manage the New England Oil & Gas Co. from the Robinson Building in Tulsa. He was formerly connected with the Barnsdall Oil Co. and later the Oklahom State Oil Co., and he will retain his interests in the Anchor Oil Co. and the Western Rope & Cordage Co. The New England company is owned by Boston and New England capitalists.

p. 4, 6. Noted in Passing. The Montgomery Oil & Gas Co., with $70,000 capital, has been organized, to operate in the Red River oil fields of Louisiana.

Dallas, Texas, is now being served with two gas lines of the Lone Star Gas Co. from the Petrolia Field.

In Arkansas, near Kibler, Crawford County, a new gas area has been discovered, with local parties finding 10,000,000 cfgpd at 2,285 feet.

A new town in Oklahoma has sprung up 16 miles north of Bartlesville. It may be named Dallas. It is on Buck Creek.

Wirt is becoming a busy all-night town in the Healdton Field, Oklahoma. About 50 strings of tools are running in the district. There are many hold-ups perpetrated by lawless individuals attracted by the boom town.

C.A. Braley, president of the Chanute Refining Co., and L.L. Marcell, secretary and manager, are in Ardmore, Oklahoma, making a deal for Healdton oil.

Ardmore is greatly interested in the new Gypsy Gas Field. It is dry gas. Meanwhile, Texas cities are also interested.

Robert J. Boone, a Tulsa lawyer, was convicted of embezzlement of $1,800 in a case held at Muskogee last week. The plaintiff was Elma Glenn, daughter of Robert J. Glenn, after whom the Glenn Pool was named. Boone was the attorney for Mr. Glenn, who was legal guardian of Elma Glenn, a minor.

p. 8, 10, 12, 14. Oklahoma and Kansas by R.H. Whitney. In Kay County, the Blackwell Field, especially to the northeast, is being developed. (Details given on many wells). There may be some link through Cowley County, Kansas, to the new Eldorado Field to the north in Butler County, Kansas. (Details given).

A little over a year and a half ago, B.B. Jones and J. Garfield Buehl drilled a well on the Swenson farm in the NE-Sec. 32-29N-1E, getting 175 bopd at 3,454 feet, in what is now thought to be the Peru sand, but others thought was the Bartlesville sand or the Mississippi lime. They drilled 7 dry holes north, east, and west of their well. Much later, the Spencer Oil Co. drilled a

well one-half mile south on the Alberti farm in the NW-SE-Sec. 32-29N-1E, completing an 800 bopd well at 3,385 feet about 4 months ago. This well is now producing about 340 bopd, and the discovery Swenson well is producing about 60 bopd. About 16 wells are now drilling around these wells, mostly to the south. Spencer Oil Co. #2 Alberti was started immediately after #1, but the Gypsy Oil Co. bought the 160 acre tract of the original #1 Alberti, including the #2 Alberti, for $200,000 and continued drilling #2 Alberti. The oil found in the two producing wells is light green and 38.7 gravity. The Prairie Pipe Line Co. is handling the oil from both wells, with a 4-inch line to its Mervine Station. Before Prairie laid its line, the oil from the Swenson well was being sold to the Lesh Refinery at Arkansas City, Kansas, being first piped to Middleton, and then shipped in tank cars to Arkansas City.

Some companies may use rotary tools. The Gypsy Oil Co. will probably be the first. About 4 men have to work on a rotary rig. The prices being offered to drill are about $2.00 a foot, but the contractors want $3.00 a foot, and some want to work by the day. It takes 100 to 120 days to complete a well. Drillers make about $7.00 to $8.00 a day, tool dressers get $5.00 to $6.00 a day, and roustabouts get $75.00 to $100.00 a month. Horse teams get $5.00 a day. Casing crews charge $4.00 to $8.00 a man, with a typical 5-man crew, the variations in price being due to the various sizes of pipe being handled. With gas blowing from the hole, and salt water or wet-hole conditions prevailing, each man will be paid $10.00 a day. A well costs $16,000 for a dry hole and $20,000 completed.

About 85,000,000 cfgpd was the average wasted gas in the field, but this has now been mudded off, and is being saved. To give a person a general idea of the gas sands that occur in the field, the Kay & Kiowa Co. (Devonian) #1 Effie Meyers well in NW-NW-5-28N-1E can be used for the shallow sands. The total gas in the well is about 45,000,000 cfgpd. The sands that were struck are: 692', 8 mmcfgpd, 300 psi; 785', 1 mmcfgpd; 940', 15 mmcfgpd; 1,170', 2 mmcfgpd; 1,350-1,400', 20 mmcfgpd. The deeper sands elsewhere have, at 1,900', 15-25 mmcfgpd; 2,600', 5-35 mmcfgpd; 3,200', 30 mmcfgpd, at 1,260 psi. Most of the pressures range from 200 to 1,200 psi in all of the sands, following a normal gradient.

The Junction Oil Co. was formed by local farmers in Kay County. They are drilling on the Roach farm in the SE-SE-Sec. 30-29N-1E, and are at 1,200 feet.

Many of the wells will go to the Swenson sand, around 3,454 feet.

The Duluth-Oklahoma Oil Co. #1 J.E. Myers in the SE-NE-Sec. 1-28N-1W, about 2 miles southwest of the Alberti well, is fishing at 2,640 feet. They had about 30,000,000 cfgpd that was mudded off, but the gas blew out the upper string in the hole.

At Eldorado, Butler County, Kansas, about 2 months ago, the Wichita Natural Gas Co. #1 Stapleton in the NE-SE-Sec. 29-25S-5E, 2.5 miles northwest of Eldorado, got about 200 bopd at 660 feet in an 8-18-foot sand, and they mudded over the sand and are drilling ahead at 2,100 feet. This was reported several weeks ago. Their #2 well, 150 feet south of #1, has come in at 150 bopd. Nos. 3, 4, and 5 are now drilling, in all directions close to Nos. 1 and 2.

Acreage is leasing for $1.00 to $25.00 an acre, and wells are being started in many directions. B.G. Goble, one of the largest leaseholders in the pool, has made a location 10 miles to the northeast in Sec. 13-24S-5E. A deep sand is expected around 3,000 feet. Eldorado has about 3,500 people, and the town has been crowded for the past two months.

South of the Eldorado development is the Augusta Pool that has opened up several years ago, with many good gas wells being completed from one to seven miles south of town. About 5 wells are producing about 400 bopd collectively at 2,500 feet in the middle of the field, and this is what has attracted the attention of the operators. There are not dry holes in that area. About 25 rigs are drilling along the Santa Fe Railroad line between Augusta and Arkansas City. Numerous gas sands are found in the Augusta Pool from 400 to 1,500 feet deep, with the latter being the main sand. About 100 gas wells have been drilled, and the production is about 40,000,000 cfgpd. About 15 rigs are now drilling. The Wichita Natural Gas Co. is the strongest concern in the field, and they pipe the gas to Topeka and other Kansas towns.

p. 14. Cushing Oil Fire Finally Stopped. The fire of the Mid-Co. Petroleum Co. #8 Fixico lease in Sec. 17-18N-7E was put on Monday Nov. 22, 1915, by placing a gigantic hood over the well. The fire started on Nov. 14, 1915, when the well struck the Bartlesville sand and began flowing at 6,000 bopd, and when the oil overflowed toward a boiler. The well came in on Saturday Nov. 13, but they could not contain the flow. The fire destroyed 3 other rigs, four 1,600-barrel tanks, and a great quantity of oil. Rigs No. 1, 3, and 10 and lease buildings were destroyed. About 200 men built embankments around the oil flowing down the hill, and prevented the fire from spreading. Max Moore, Ralph Brackney, Frank Hubert, Charles Withington, and Bert Berger put out the fire.

p. 14, 16. North-Central Texas, by H.W. Whitney. Developmental wells continue to be drilled in the known fields, and many wells are drilling in wildcat territory. (Details given). The main counties being explored are Palo Pinto, Shackelford, Jack, Wichita, Stephens, Jones, and Wilbarger.

P. 18-19. East Texas and Louisiana, by M.L. Vaughn. About 44,990 bopd is being produced from this area, of which 29,410 bopd is from the southern area of Red River and DeSoto Parishes, and 15,580 bopd from the northern area of Caddo Parish and Northeast Texas. About 60 rigs are working in the Crichton Field area of Red River Parish.

About 25 miles southeast of the Crichton Field, and six miles northeast of Campti, on the east side of Black Lake in Sec. 28-11-6, the Black Lake Oil & Gas Co. well blew out.

Benedum & Trees and H.J. Parker disposed of their holdings of 500 acres and 25 wells with 2,000 bopd production to the Standard Oil Co. of Louisiana, for more than a million dollars.

p. 24. Oil Pipe Line Purchased. The J. Howard Pew Pipe Line Co. has purchased the 3-inch line of the Thelma Oil Co., from Healdton to Ringling, to make shipments by rail to Sabine Pass, Texas, from which the oil will go to the Sun Co. refinery by ship to Philadelphia.

p. 26. P.M. Shannon Dead. Philip M. Shannon, age 72, died at the Duquesne Club last night, Nov. 22, 1915, in Pittsburgh, Pa. He leaves a wife and a daughter. He was an active pioneer in the oil industry since the opening of the Bradford Field in Pennsylvania. He was a resident of Bradford for many years and was a Mayor of that city. He was the pioneer operator in Wyoming in 1889 in the Salt Creek District, having drilled the first commercial well in that area. The local sand was named the Shannon sand and the field was named the Shannon Field after him. Some years ago, he located at Buffalo, N.Y., but continued his oil operations in various fields.

p. 27. Two Men Killed By Nitroglycerine. B.H. Black, 46 years old, and A.J. Hayes, age 45, were killed on the Jeanette Richards lease of the Quaker Oil & Gas Co. near Drumright on Nov. 20, 1915. They were preparing a shot on well No. 9. Black was the Quaker Co. foreman, and Hayes was in charge of the Independent Torpedo Co. at Drumright, Creek County, Oklahoma. Mr. Black came from Oil City, Pa., and worked in West Virginia before coming to Oklahoma. He is survived by his wife, two sons, and two daughters, whose home is at Drumright. His remains were buried at Tulsa.

Mr. Hays leaves a wife, whose home is Salem, Ohio, where he was buried.

p. 27. Radium-Water Well is Struck. John Riley has tapped a radium-water vein in Sec. 20-28N-16E north of Nowata, Oklahoma. There is talk of establishing a health resort.

p. 29. Duncan Area, Stephens County. The bringing in of the big gas well in Carter County by the Gypsy Oil Co. in Sec. 28-2S-3W near Fox has caused some excitement near Loco, which is about 8 miles west and 1 mile south of the well. Some people believe that the well is an extension of the Loco Field. The well is producing about 18,000,000 cfgpd at 1,845 feet. The gas has been cased off and the company is drilling deeper for oil.

The Lone Star Gas Co. is making preparations to lay a 16-inch gas line to the Loco Field, connecting with their Petrolia line near Henrietta, Texas. A rig in Sec. 17 and another in Sec. 26 are being erected near Loco.

The Safety First Oil & Gas Co. was organized by local people and will probably drill in eastern Stephens County, near the Gypsy well.

The Big Anticline well, 8 miles south of Duncan, where oil was found some 2 months ago, has been shut down, but will start up again about December 1, and the production will be determined.

p. 29. Gas Leases in Crawford County, Arkansas, Field. Near Kibler, Crawford County, Arkansas, gas was discovered less than two weeks ago. More than 100 leases have been filed at Van Buren. The prices vary from $1.00 to $7.00 an acre.

About 3 years ago, three small gas wells were brought in at Dora, Crawford County, but the supply became exhausted. The Dora Oil Co. has now been formed, by Howard C. Pratt, Claude Crawford, Harry H. Warner, L.M. Taylor, all of Fort Smith, and C.R. Cordell, of Van Buren, Arkansas, with $10,000 capital. They want to revive the Dora Field.

At Mulberry, some business men have organized a company, with $25,000 capital, to drill around Mulberry. M.C. Alexander, cashier of a bank in Mulberry, is the promoter. Others of the company are B.M. Woodruff, W.F. Wagner, J.F. Wright, all of Mulberry, and S.B. Hawkins, of Van Buren, Arkansas.

p. 31. Shipment of Petroleum on Arkansas River Considered. At a meeting in Little Rock, Arkansas, delegates from Oklahoma met with members of the U.S. Army Corps of Engineers, to discuss shipments of coal and oil down the Arkansas River. About a million tons of freight originates in the Arkansas Valley each year. The army doubted if they would receive much money for the project, because of the war preparations, but the delegates point out that the U.S. Navy might want a good supply of oil and coal. The Army then became interested. A pipe line might be blown up, but it would be difficult to blow up a river.

Vol. 14, No. 26, December 2, 1915, p. 1. Mid-Continent Production. The apparent estimated oil production of the Mid-Continent at the close of last week was 332,000 bopd, with Kansas and Oklahoma outside of Cushing being 165,000 bopd, Cushing 109,000 bopd, Electra District, Texas, 16,000 bopd, and the Caddo District, La. and NE Texas, being 42,000 bopd.

In the week ending on November 27, there was increased activity. The Healdton Field may be able to produce 90,000 bopd. South of Shreveport, La., a gas well on the Youree lease cam in at 22,000,000 cfgpd, at 1,100 psi pressure. Developmental wells continue in the proven fields.

p. 2. Automobile Estimates. In 1910, the licensed cars in the United States was 425,000; in 1911, 564,000; in 1912, 848,000; in 1913, 1,191,000; and in 1914, 1,500,000. The estimate for 1915 is 2,100,000. In the next 12 months, about 1,000,000 more cars will probably be added. An automobile uses about 500 gallons a year. In 1910, about 225,000,000 gallons were used. At present, about 1 billion gallons are being used, for 1915. Trucks, motor boats, and airplanes may use as much, but there are no figures. With this greater demand, it is not surprising that there will be an increase in the price of gasoline.

p. 3. Publicity For Oil Bachelor, A. T. McGhee. A.T. McGhee, a wealthy man of Ardmore, is spoken of as a geologist, a bachelor, and a millionaire. Ever since an article appeared in the Kansas City Star, he has been a marked man. He receives many letters in the mail, for financial aid, for locating a new field as he did at Healdton, and for matrimony from lonely widows.

p. 4. Personal Mention. H.B. Gooch, of Claremore, one of the discoverers of the Flat Rock Pool, was in Tulsa. He drilled the first well at Inola, and has a large acreage near Oologah.

E. Wallace Mullin is interested in oil property near Blackwell and may locate there. His wife and two sons have been visiting in England.

Matt McCormick, of the Gypsy Oil Co., spent Thanksgiving at his home in

Tulsa, but returned that night to Pittsburg County, where he is superintendent of the deep test that Gypsy is drilling in Sec. 6-6N-14E. the hole is now at 3,703 feet deep. They expect to go to at least 4,000 feet.

p. 4, 6. Noted in Passing. W.E. Lawrence, of Tulsa, and E.V. Smith, of Spiro, Oklahoma, have leased 1,700 acres of land in Crawford County, Arkansas, and will drill for oil and gas.

The Commonwealth Oil & Gas Co., of Poteau, has leased 1,750 acres in the new Kibler Field, Crawford County, Arkansas.

The Dora Oil Co. will drill a 3,000-foot in the old Dora Gas Field near Dora, Arkansas. The field was developed about 9 years ago, until the gas was exhausted.

At McKinney, Texas, the Texas Cotton Mills Co. was drilling for water, and at 1,500 feet they got hydrocarbons. An important pool may be opened.

At the dogwood Plantation, about 4 miles from Shreveport, the Gulf Refining Co. struck gas at 2,400 feet, reported to be 11 mmcfgpd.

John Grieves, of Bartleville, drilled the first deep well in the Cleveland Pool, Pawnee County, Oklahoma. He is drilling a wildcat test between Jennings and Terlton, with John Markham, Jr. and the Prairie Oil & Gas Co.

About 18 miles northeast of Chanute, Kansas, a new field has been found. James O'Neill Bruen has struck a 100-barrel well. The field is named the O'Neill Pool, after the late Col. James O'Neill, the organizer of the Kansas Natural Gas Co.

The pipe line between Owens, Washington County, and Turkey Creek, Osage County, Oklahoma, will be taken up, and replaced with new pipe. This was the first pipe line laid in Oklahoma, a 4-inch line, laid by Senator A.T. Fancher.

p. 6. Recent Deaths. Roy Westerman, a tool dresser on Lot 180, Osage County, near Bigheart, was killed on Nov. 26, 1915 in an oilfield accident. He was buried in Tulsa.

p. 8. Summary of Field Operations for November 1915. In Oklahoma, there were 708 completions, including 50 gas well and 159 dry holes, with 62,453 bopd new production, and 979 rigs working or being erected.

In Kansas, there were 206 completions, including 48 gas wells and 27 dry holes, with 1,702 bopd new production, and 146 rigs drillling or being erected.

In North-Central Texas, about 38 wells were completed, including 9 dry holes, for 978 bopd new production, with 162 rigs drilling or being erected.

In the Caddo District or NE Texas-NW La., 41 wells were completed, including 12 dry holes, for 13,610 bopd new production, and 137 rigs drilling or being erected. Most of the production was in the Crichton Field.

In Oklahoma, the leading area was the Healdton Field, with 61 completions, for 29,995 bopd new production. Next was Cushing with 57 completions for 14,570 bopd new production.

p. 10, 12, 14, 16. Oklahoma and Kansas, by R.H. Whitney. In Carter County, the Healdton Field production is estimated at 90,000 bopd. This is the most active area in the State. The Sun Company, under the name of the Twin State Oil Co. has purchased the 3-inch line of the Thelma Oil Co., from Healdton Pool to Ringling. About 30,000 bopd is now being moved by the 3 pipe lines in the field. The Magnolia Pipe Line Co. will soon be able to move 25,000 bopd, to Fort Worth, and the Producers Petroleum Co. will be able to move 15,000 bopd to Gainesville. About 117 rigs are now drilling, and Ragtown is a boom town. The road from Ardmore to the pool is 24 miles long, and is crowded. Many steel tanks are being erected. Most wells are better than 75 bopd, and some are as high as 4,000 bopd. (Details given).

In the Fox Field, in Sec. 28-2S-3W, the Gypsy Oil Co. well is shut in at 1,845 feet, with 12 mmcfgpd. It will be drilled deeper. Many of the wildcat wells in the southern Oklahoma have been drilled to depths less than 1,000 feet, so there is a wide area that is open to deeper wildcatting.

In Kay County, in Northeast Blackwell area, operators are waiting for the completion of the Spencer and Gypsy wells. Since the completion of the Spencer

#1 Alberti test about 4 months ago, there has not been a completion in the pool. The Gypsy Oil Co. #2 Alberti in the NW-SE of Sec. 32-29N-1E, 120 feet NW of the Spencer Oil Co. #1 (now Gypsy), has a fishing job at 3,310 feet. The Spencer Oil Co. #2 Beaver on one location west, in the NE-SW-Sec. 32-29N-1E, is also fishing at 3,000 feet. Several other locations have been made. (Details given).

The Newkirk Field is being drilled deeper, and a refinery may be built there. (Details given).

Just to the north of Kay County is Cowley County, Kansas, where, at Arkansas City, most of the operators stay, who work in the Blackwell development or in the Eldorado, Kansas, development, in Butler County to the north. The town has about 10,000 people and has the Lesh Oil Refinery. Gas is supplied from the Blackwell Pool at 30¢ a thousand cf. There are fine hotel accomodations. There are 4 banks, and 60 miles of streets, and 7 railway outlets. The Augusta and Eldorado Fields to the north, in Butler County, are actively being developed. (Details given).

In Muskogee County, Oklahoma, the Boynton and Cole Pools are producing about 7,000 bopd. Some wells have come in at 100 barrels an hour or 2,400 bopd. It costs about $5,000 to drill a well, so that in a few days the operator will get his money back. The Boynton wells are generally completed in the 1,400-foot sand, and the Cole wells are completed in the 1,600-foot sand. A new sand at 1,200 feet has been found in the Cole Pool in Sec. 4-14N-15E, where Shaffer Brothers and Ross & Gries got 150 bopd. (Details given on other wells).

In Okmulgee County, north of Natura, two oil wells have been completed in the last 10 days. Smith & Cline #1 Sissie Fife lease in Sec. 25-15N-13E got 200 bopd. The Kingwood Oil Co. in Sec. 22-15N-13E got 200 bopd also.

In Wagoner County, near Stone Bluff, drilling continues. Braden & Gobel #2 Chisholm lease in Sec. 5-16N-15E got 300 bopd at 1,225 feet, southwest of #1 discovery. Ross & Gries in Sec. 5-16N-15E have completed a well for 25 mmcfgpd at 1,183 feet.

In Creek County, the Fox Pool has some good new producers. (Details given). The Layton sand is found at 1,600 feet, and has much gas. C.B. Shaffer in the NW-Sec. 15-16N-7E got 10 mmcfgpd in the Layton sand at 1,623-1,653 feet, some gas in the Jones sand at 1,786 feet, and 2 mmcfgpd in a sand at 1,800 feet. About 40 rigs are working in the pool, and the production is about 2,500 bopd. Shamrock is a new oil-boom town in this area, and it is having a building boom.

In Tulsa County, the Wicey Pool continues to be developed. About three years ago, the 1,600-foot sand was struck, and now the 2,000-foot sand is being developed. Wilcox et al in the SE-SW-Sec. 10-16N-13E got 250 bopd at 1,647-1,667 feet. The Andes Oil & Gas Co. #2 Black in Sec. 3-16N-13E got 100 bopd at 2,089-2,120 feet. (Details given on other wells).

In Washington County, in the Vera Pool, the Kansas Natural Gas Co. #2 Bryan in Sec. 29-23N-14E got 2.5 mmcfgpd.

In Creek County, the Cushing field has about 82 rigs working. (Details given on completions).

In Kansas, in Allen County, near Iola, about 7 years ago, the deepest well in Kansas was drilled to 5,300 feet, in search of gas, but nothing was found. The citizens of the town had the well drilled by public subscription.

Recently, in Clark County, Kansas, the Short Grass Oil & Gas Co. drilled a dry hole to 3,807 feet one mile west of Minneola. A.L. Derby of Arkansas City was the contractor.

In Miami County, Kansas, about 35 years ago, there was a small refinery in Paola. The oil was hauled from the E. Russell farm, 2.5 miles SE of Somerset, about 9 miles from Paola. Somerset was the first oil and gas pool found in Kansas or Oklahoma. It cost too much to transport the oil, and the refinery was a failure. Recently, oil has been found within 600 feet of the old refinery. The Tri-County Oil & Gas Co. #1 Hunter Lot, Block 7, in the townsite of Paola, got 180 bopd at 378 feet, about 2 weeks ago. The well is now making 60 bopd. About 2 years ago there was a boom on in Paola for shallow oil on town lots, but water soon developed, and the wells were abandoned. Now there is a revival

of activity. (Details given on wells).

There is much leasing going on in Garvin, Murray, and Carter Counties, because of geological reports linking the Healdton Field with the Arbuckle Mountains by a north-south anticline. In Murray County, 6.5 miles SW of Sulphur, J.W. Scott, of Pittsburgh, Pa., is drilling a well on 50,000 acres, and is at 2,800 feet. At 2,000 feet he found a natural lubricating oil. Many thousands of acres are being leased, and everyone is watching this well.

On the Garvin-Carter County line, a few miles northwest of Homer, about 20 shallow wells have been drilled into a sand at 187 feet, which produces natural lubricating oil that sells for $12.50 a barrel at the wells. Oil flows intermittently over the top of the 6-5/8-inch casing, and the wells produce about 3 to 7 bopd when pumped. The oil is clear amber, of paraffin base. The holes are easily drilled with a water well rig, and the wells are easily pumped with an ordinary pitcher pump. (Homer is in Sec. 11-1S-2W).

p. 20. North-Central Texas, by H.W. Whitney. About 85 rigs are working in the Electra, Burkburnett, and Iowa Park Fields of Wichita County, and Wilbarger County. (Details given on completions). The Strawn Field of Palo Pinto County, the Moran Field of Shackelford County and the Petrolia Field of Clay County are the most active areas.

p. 20. Harry Murphy Wins in Tilt With Death. Harry Murphy, of Sapulpa, a shooter for the Independent Torpedo Co., was shooting a well on the Posey farm, 3 miles NE of Sapulpa, Creek County, for Charley Shaffer. He had filled his torpedo shell with 15 quarts of nitroglycerine at the top of the well when a sudden gush of oil began to push the torpedo out of th well. He tackled the torpedo before it could get away, and then filled it with another 5 quarts, and lowered it into the hole. At about 250 feet, the torpedo shot out again like a bullet, taking Murphy's hat with it as it headed for the top of the derrick. Murphy vacated the rig rapidly, just before the explosion which destroyed the rig and caused a fire. The detonation shook the earth and could be heard for miles around. Murphy was unscratched, and his wagon, with 60 quarts of nitro, was damaged but was not blown up because he turned his horses out to graze. When asked if he was shocked by the incident, he said "Not at all. It was one of those incidents which sometimes takes place in the day's work."

p. 21-22. East Texas and Louisiana, by M.L. Vaughn. About 42,275 bopd is the production of this area, called in general the Caddo District. The southern area of Red River and DeSota Parishes had about 26,780 bopd production, and the northern area of Caddo Parish had about 15,495 bopd production. Oil is now 80¢ to $1.00 a barrel, and there is much activity in the various fields. (Details given). South of Shreveport, the Gulf Refining Co. #1 Youree came in at 22 mmcfgpd at 2,300 feet, with 1,100 psi pressure. Gas was running low in this area, and this gives a new supply for the gas industry in the Harts Island Field.

In the Crichton Field, the Gulf Refining Co. #2 Oliver in Sec. 26-13-11, came in at 8 mmcfgpd at 2,550 feet. Many wells are being completed and drilled in this field. (Details given).

In Cass County, Texas, a few good wells are completed, west of Vivian. (Details given).

After an investigation of the various companies operating in Northern Louisiana, the U.S. Grand Jury warned the public about making hasty investments in oil stocks. Of the 144 companies organized since Jan. 1, 1913, only one company has paid back its stockholders the actual money invested. The purchase of oil stock is worse than a gamble. The promoters make a profit but the investors take all of the chances for losing.

p. 24. Big Well Is Reported At Reelfoot Lake, Tennessee. Near Samburg, Tennessee, on Reelfoot Lake, a Pennsylvania corporation is reported to have a big well at 2,690 feet, rumored to be 1,000 bopd. The owners have 122,000 acres under lease. The Reelfoot Lake Oil co., of Clinton, Ky., is now being organized. The company has 6,000 acres under lease and will drive a well on the Taylor lease.

p. 28. The Geology of the San Antonio District. Since 1989, the area south and southwest of San Antonio, Texas, has been prospected. In 1889, oil showed up in water wells at 500 feet deep. Also in 1889, about 50 barrels of oil was produced from the Dullning mineral-water wells, 7 miles south of town. The oil sold for $5.00 a barrel. The wells are not producing now. later, oil was found 10 miles to the southwest. In 1906 and 107, some tests were made 12 miles south of town, and a small production was found at 1,000 to 1,100 feet, with one well having a rock pressure of 180 psi. A number of small producers are at Somerset, 20 miles to the southwest. In Wilson County, to the southeast, there are a number of showings from 750 to 1,200 feet. The Balcones Fault near San Antonio may have sealed off certain beds, and the oil and gas would occur on the southeast side of the fault. Surface springs are located along this fault zone. The new Alta Vista Field, of low gravity oil, is in Mesozoic beds, mostly in Austin chalk and Taylor marl. Some think that it is also in the Woodbine sand. (On p. 18 is a short list of wells drilling in the Alta Vista Field. The Marr's discovery well is flowing about 50 bopd. The Five Tracts Oil Co. is more than 1,000 feet deep and has 100 bopd estimate. Others are estimated at 75 to 200 bopd, but are still drillilng. (Details are given.)

p. 29-30. Philip M. Shannon, Death. Philip M. Shannon, age 72, died at the Duquesne Club on Nov. 22, 1915, in Pittsburgh, Pa. He was born at Shannondale, Clarion County, Pa., in 1843, and was educated in that area. Before age 15, he enlisted in the Civil War in the 62nd Pennsylvania Volunteers. From 1862 to 1864 he was in the Army of the Potomac. He was wounded, and discharged in 1864. For 4 years he was a salesman in Pittsburgh, and one year in New York.

In 1869-1870 he started in the oil business. With the late Richard Jennings he invested in the Guerilla well at Parker's Landing. In 1871-72, he pioneered in the Millerstown Field, of Butler County, Pa. He was Mayor of Millerstown in 1873. In 1880, he moved to the Bradford Field, Pa., and also drilled in the Allegany Field, New York. In 1882, he drilled the Shannon Myster Well in Forest County, Pa. He organized the firm of Melvin, Walker, Shannon & Co., which included the Union Oil Co. and J.M. Fuller. In 1885, he was the Mayor of Bradford, Pa. He married Miss Hattie McIntosh of Utica, N.Y., in 1881.

In 1889-1890, he opened the Salt Creek District in Wyoming, in association with C.P. Collins, R.J. Straight, of Bradford, and G.H. Strong, of Olean, New York. In 1890, he moved his offices to Pittsburgh, Pa., and operated in Ohio, West Virginia, Pennsylvania, and Wyoming.

In 1895, he became president of the Pennsylvania Oil & gas Co., erecting a refinery at Casper, Wyoming, to take care of the Salt Creek oil.

He was a 32nd degree Mason. He was a veteran of the John S. Melvin Post 141, G.A.R. at Bradford, where he received the title of Colonel, although he was just a boy in the Civil War.

In 1909 he removed to Buffalo, N.Y., purchasing a home at 1168 Delaware Ave., which was his permanent residence. He was a member of the Episcopal Church. He was a director in many oil companies.

His wife and one daughter survive him.

p. 31. A.T. McGhee Had Ideas and Big Oil Resulted. A.T. McGhee was formerly a carpenter at Ardmore, Oklahoma. He had seen oil seeps near Healdton some years ago. After much persuasion he induced Roy M. Johnson, a linotype operator, to become interested in an oil company. S.A. Apple and Wirt Franlkin, lawyers, also became interested. Edwart Galt, former page in the legislature at Oklahoma City, joined them. They formed the Crystal Oil Co. They did not have much money. Johnson talked to Rev. J.M. Critchlow, of Titusville, Pa., a minister who had been a representative of certain Scotch investors. Johnson and McGhee took Critchlow to the Healdton area and showed him the seeps. Later, they struck oil, and the Healdton Field was opened in August 1913. All of the investors are now rich, having taken McGhee's ideas seriously. Several new millionaires have joined the "Who's-Who" class.

p. 32. Gas - Light, Heat and Power. Oklahoma-Kansas. About 349,350,000 cfgpd was develped during November 1915 in Oklahoma and Kansas, with Oklahoma being 280,950,000 cfgpd new gas, and Kansas 56,400,000 cfgpd new gas. Oklahoma is subdivided into 8 districts: Cherokee Deep Sand, 15,950,000; Cherokee Shallow Sand, 3,500,000; Osage, 26,000,000; Cushing 3,000,000; Creek, 100,000,000; Kay, 20,000,000; Healdton, 10,000,000; and Wildcats, 2,500,000.

The largest production was from the Creek District which includes Tulsa and the area south through McIntosh County. In the Tulsa area to Kellyville, 31,000,000 cfgpd was found, the largest well being that of Murphy et al in Sec. 5-16N-11E for 5,000,000 cfgpd, in the Mounds Field. In the Bald Hill Field in Sec. 24-15N-13E, the Oklahoma State Oil Co. #3 Harrison got 3,000,000 cfgpd. The Wagoner-Muskogee Counties area had 38,000,000 cfgpd. In southwestern Wagoner County, in the Stone Bluff Field, the largest well of the month was finished by Ross & Gries in Sec. 5-16N-15E at 25,000,000 cfgpd in virgin territory. In Muskogee County, near Taft, Humphrey & Whiteside in Sec. 19-15N-17E got 6,000,000 cfgpd in another virgin area. In the McIntosh area, the Gladys Belle Oil Co. #1 in Sec. 29-11N-17E had 11,000,000 cfgpd, and Newman et al in Sec. 3-10N-12E have 3,000,000 cfgpd. In Creek County, in the Fox Pool, the Prairie Oil & Gas Co. #1 Oglesby in Sec. 4-16N-7E had 15,000,000 cfgpd. The McMan Oil Co. in Sec. 16-16N-7E got 40,000,000 cfgpd, but they are going deeper.

In Kay County, in the Blackwell NE field, one well was completed, which was that of the Kay & Kiowa Gas Co. #1 Effie Myers in Sec. 5-28N-1E, with 25,000,000 cfgpd mudded off in the upper part, and 20,000,000 cfgpd at 1,400 feet.

In Carter County, in the Healdton Field, most wells are mudded off. McGhee et al in Sec. 15-4S-3W got 10,000,000 cfgpd, and McMan-Corsicana companies got 25,000,000 cfgpd in Sec. 15-4S-3W and they will likely shut the well in.

Arkansas. In Arkansas, the Kibler Field in Crawford County was discovered by the Clear Creek Oil & Gas Co. test, which had 12,000,000 cfgpd.

p. 33. Arkansas Gas. The Citizens Gas Co. of I. H. Nakdimen and associates has been formed at Fort Smith, Arkansas, to distribute the gas from the Kibler Field in Crawford County, Arkansas. They have pledged to sell gas at 15¢ a thousand cubic feet to individuals, and 5¢ to 10¢ a thousand to factories. The present price of gas is 25¢ a thousand, controlled by one company, with the gas coming from Massard Prairie in Arkansas, and from Poteau, Oklahoma. Five companies are developing the Kibler Field.

p. 34. Map of Oklahoma. Tulsa Mapping Co., Tulsa, Ok.. Price $10.00. Sectionized map of the entire state, showing all developments, oil and gas wells, county names, streams in color, and Oklahoma Oil Sands compiled by Fohs & Gardner, giving depth and thickness of sands in the different fields.

Vol. 14, No. 27, December 9, 1915, p. 1. Mid-Continent Production. The apparent estimated oil production of the Mid-Continent during the week ending December 4 was 333,000 bopd with Kansas and Oklahoma outside of Cushing being 175,000 bopd, Cushing 100,000 bopd, Electra District, Texas, 16,000 bopd, and Caddo District, La. and NE Texas, 42,000 bopd. There was much renewed activity in the known fields. The Healdton Field in Carter County, Oklahoma, was the most active.

p. 3. Osage County, Oil and Gas. There are about 3,000 producing wells in Osage County, Oklahoma. About 27,000 bopd and 300,000,000 cfgpd is the average yield of the wells.

p. 4. Personal Mention. W.H. Brimm, of Chicago, Ill., has arrived in Oklahoma and intends to engage in the oil business, with headquarters in Tulsa or Ardmore.

Thomas B. Slick, of Clarion, Pa., was in Tulsa. He has leased 40,000 acres near Paintrock, Concho County, Texas, where he is drilling for oil.

A.W. Geiske, E.L. Lorton, J. France, and Jacob Castleburg, all of Baltimore, Maryland, were in Tulsa. They are stockholders in the Cosden Refining Co., of Tulsa.

P.M. Miskell, of Bradford, Pa., is now with the American Refining Co. at

Okmulgee, Oklahoma.

M.H. Ferguson and son W.A. Ferguson, of Tulsa, have returned from Gibsonburg, Ohio, where they buried Claire Ferguson, their son and brother, who was killed in the Healdton Field, Oklahoma.

Dr. J.A. Udden, of the Bureau of Economic Geology, Austin, Texas, has been appointed director of the Bureau. The former director, Dr. William B. Phillips, resigned, and he will be the new president of the Colorado School of Mines. Dr. Phillips resigned in August and Dr. Udden was appointed on Oct. 26.

Glenn T. Braden, president of the Oklahoma Natural Gas Co., and president of the Osage & Oklahoma Gas Co., has returned from Blackwell and Enid. He made a contract to supply Enid with gas from the Blackwell Pool.

J.A. Simmons, Jr., of New York City, was in Tulsa. His father was a pioneer oil man in the Osage Nation, having drilled the first well there with E.B. Foster. He was co-owner of the first blanket lease in 1896. He was a member of the Phoenix Oil Co., predecessor to the Indian Territory Illuminating Oil Co.

James King Duffy, president of the Export Oil Corporation, was in Tulsa from New York. The corporation has 8 refineries in Oklahoma and Kansas, and the business is handled through a New York brokerage firm.

Robert Galbreath, of Tulsa, and a member of the Democratic National Executive Committee, was in Washington, D.C., to promote Dallas, Texas, as the next place for the Democratic National Convention.

p. 4, 6. Noted in Passing. The Ardmore City Gas Co., of Ardmore, Carter County, Oklahoma, has been sold to Chicago parties.

In Kay County, near Blackwell, 7 miles in advance of production, the Carter Oil Co. struck 10,000,000 cfgpd at 750 feet.

The Stillwater-Pawnee Gas Co. will supply natural gas to Stillwater, Payne County, Oklahoma, from the Yale Field.

The Clear Creek Oil & Gas Co. has increased its stock to $50,000, to expand the Kibler Field in Crawford County, Arkansas.

Arthur G. Harrington, age 33, an oil-field worker, killed himself last Thursday at Drumright, Oklahoma. He worked for the McMan Oil Co. He left a note that he was "sick and tired of a hopeless life".

L.B. Renouse, of the Standard Oil Co. of Louisiana, has been examining asphalt seepages near Glenwood, Arkansas. He predicts that a large field is to be opened up in this area of Arkansas next year.

p. 6. Recent Deaths. Robert Germany, age 45, was killed at the power plant of the Crowley Oil & Mineral Co., working in the Jennings Field, La. He had worked at Jennings for 10 years.

E.E. Strafford, an oil man of Sedan, Kansas, formerly of Tulsa, died at Independence Kansas on Nov. 29, 1915. He was a teacher, an inventor, and a businessman. Surviving are his aged mother, wife, and 3 sons. He died of typhoid fever.

John Bray, of Morris, Oklahoma, died on Tuesday of last week from an accident at a well of the Northwestern Oil Co. in the Boynton Field, Muskogee County. He left a wife and two children at Morris.

Nathaniel Burchfield, age 65, died at Shreveport, La., on Nov. 27, of malaria. He worked for the Producers Petroleum Co. He came from Venango County, Pennsylvania. Two brothers and one sister survive.

Ellen C. Argue, age 72, died at the home of her daughter, Mrs. Elizabeth Russell, of Buffalo, N.Y., on Dec. 4. She was born in Canada and came to the United States, locating in Titusville, Pa., where she married Henry H. Argue in 1871. She spent all her married life in the oil country, and their home was in Buffalo, N.Y., for the past 20 years. Mr. Argue came to Tulsa, Oklahoma, last Fall and built a new house, and the family moved to Tulsa, except for Mrs. Argue who was not well. She was buried in the family plot at Olean, N.Y. Surviving are her husband, two sons, Edward H. and A.J. Argue of Tulsa; a daughter, Mrs. Elizabeth A. Russell of Buffalo, N.Y.; and 4 sisters, Mrs. Sarah McNeil of Selby, Ontario, Mrs. Jane McGahan of Bellingham, Wash., and Mrs. Stephen LaPoint of Clarksburg, W.Va., and Mrs. C.M. Stoppard of Akron, N.Y.

p. 8. 10, 12. Oklahoma and Kansas, by R.H. Whitney. In Carter County, in the Healdton Pool, about 2,000,000 barrels of oil is in storage, and it will not be long before 100,000 bopd is being produced. About 100 rigs are working. Many large wells have been completed. (Details given).

In Kay County, the Blackwell NE Field is not as active as before. There is much fishing. (Details given). A log of the Alberti well is given.

In Creek County, in the Fox Pool, about 4,000 bopd is being produced, with about 50 rigs working, and a few wells being completed. (Details given).

In Muskogee County, in the Cole and Boynton Fields, about 7,000 bopd is being produced. A few good wells were completed. (Details given).

In Wagoner County, 5 miles NW of Coweta, the Famous Oil Co. has a 50 bopd well at 1,290 feet.

In Washington County, the Vera Field had a few completions. (Details given).

In Creek County, the Cushing Field has many good completions, but the field is declining. (Details given).

In Tulsa County, a few good wells were completed in the Mohawk Pool and the Wicey Pool. (Details given).

In Okmulgee County, south of Okmulgee, a deeper sand was truck at 2,033-2,050 feet, for 200 bopd, by Kimbley et al in Sec. 18-13N-13E. This is one of the most important tests in Okmulgee County in some time, and it will probably force operators to drill deeper.

In Kansas, in Butler County, many wells are being drilled in the Eldorado Field. (Details given).

p. 16-17. East Texas and Louisiana, by M.L. Vaughn. About 42,492 bopd is the average production of this district this past week, of which 27,062 bopd is in the southern area, and 15,430 bopd is in the northern area. Many wells are being completed and drilled in the both areas. (Details given).

A new company has been chartered for $100,000 by J.C. Trees, president; H.J. Parker, vice-president; E.K. Smith, treasurer; and M.L. Benedum, secretary. The company acquired 2,129 acres of the Rogers Oil & Gas Co. in the Lewis and Caddo Fields, and they will develop those properties in Louisiana.

p. 17-18. North-Central Texas, by H.W. Whitney. Much drilling continues in Palo Pinto, Jones, Wichita and adjacent Counties. (Details given). The U.S. Geological Survey is making a survey of the Electra and Burkburnett areas.

p. 20. Wealthy Oil Man is Robbed. M.S. Musselman was in Tulsa last Sunday, occupying an apartment in the Wisteria rooming house on East Second Street. A masked man opened his door in the evening and pulled a revolver, and took valuables and money worth $2,000. A suspect was subsequently arrested and positively identified.

p. 27-28. Field Operations During November. In Kansas, 206 wells were completed in November, with 1,702 bopd new production, and 48 gas wells and 27 dry holes.

In Oklahoma, there were 708 completions, with 62,453 bopd new production, and 50 gas wells and 159 dry holes. A new well in Wagoner County may have opened a new field, 5 miles NW of Coweta.

In North Texas, about 38 wells were completed, including 6 gas wells and 9 dry holes, with 978 bopd new production.

In the Caddo District of NE Texas and NW La., aobut 41 wells were completed, including 3 gas wells and 12 dry holes, for 13,610 bopd new production.

p. 28. Flying Machine Used in Fast Lease. In Okmulgee County, about 20 miles from town, the Kingwood Oil Co. brought in a new well in Sec. 22-15N-13E near the Tony Webb farm. Mr. Webb did not want to lease his property, but after a while he let it be known that the first man to give him $10,000 could have the lease. Mr. E.W. Gill immediately got into his car at Okmulgee and was last seen speeding toward the Webb farm. Joe King, of the Kingwood Oil Co. was late finding out, and asked Fred Roberts, a local pilot, to fly him to Webb's farm for $1,000. Roberts flew at 100 miles an hour and got there ahead of Gill,

and the lease was signed and a check was made out just as Mr. Gill arrived in a cloud of dust. This was a new record in lease getting.

p. 30. Tank Builder Dead. T.N. Wood fell from a tank near Ringling, Oklahoma on Nov. 29, 1915, and died on Thursday of last week at Ardmore. He was buried in Rose Hill Cemetery at Ardmore, Oklahoma. No one knew of his relatives or former place of residence.

p. 31. Natchitoches, Louisiana, Drilling. The U.S. Geological Survey has been making a study of this region. Since 1910, about 6 wells have been drilled in this area, and two of the wells encountered enough gas to blow out the wells. Four of the other wells had oil shows. George C. Matson is doing the work for the Survey. Probably hydrocarbons could be found at 3,500 feet deep or more. The Nacatoch sand should be found at about 1,700 feet, as seen in the Natchitoches Oil & Gas Co. #1 Freeman test.

p. 35. Recently-Granted Patents. Oil-tank Protector. J.W. Cunningham, Tulsa, Oklahoma. #1,159,831.

Vol. 14, No. 28, December 16, 1915, p. 1. Mid-Continent Production. The apparent estimated oil production of the Mid-Continent on Dec. 11 was 338,000 bopd, with Kansas and Oklahoma outside of Cushing being 180,000 bopd, Cushing 100,000 bopd, Electra, Tex., 16,000 bopd, and Caddo District, La.-Tex., 42,000 bopd.

Oil has gone up 20¢ a barrel, and is $1.05 to $1.20 a barrel. Developmental wells continue to be completed in the known fields.

p. 4, 6. Noted in Passing. In Creek County, in the Cushing Pool, on the north end, Tiger Township is the richest township in the United States. There are 2,000 wells in the township.

C.H. Light recently died of pneumonia at Oilton, Creek County, Oklahoma. His aged mother was with him, and she had him buried at her home town of Bradford, Ohio.

p. 8, 10, 12. Oklahoma and Kansas, by R.H. Whitney. With the recent advance in prices, some Cushing oil is being sold at $1.60 a barrel. Stripper wells are now being activated again, and more wildcatting is taking place. In Crawford County, Arkansas, hundreds of thousands of acres are being leased. There are 16 tests in the western part of Arkansas, especially in Sebastian, Logan, Scott, and Sevier Counties.

In Lincoln County, Oklahoma, near Meeker, the Oil Right Oil Co. in Sec. 15-12N-4E had a dry hole at 3,750 feet. This is the deepest test in the county.

In Carter County, near Fox, the Gypsy Oil Co. discovery well got a showing of oil at 1,930-1,942 feet, and is drilling deeper.

In the Healdton Field, the production is estimated at 75,000 bopd. The pipe lines are handling about 35,000 bopd. A number of good completions have been made. (Details given).

In Wagoner County, near Stone Bluff, Ross and Gries #2 Colbert lease in the SE-W½-NE-Sec. 5-16N-15E have 500 bopd at 6 feet into the sand. Their #1 is shut in at 25,000,000 cfgpd. This is the new development that was discovered by Braden & Gobel several months ago in the 1,250-foot sand. Braden & Gobel have another good well at 250 bopd, just southwest of their discovery well.

In Muskogee County, just southeast of the city limits, McGranahan et al in the SW-Sec. 36-15N-18E have a 20 bopd well in virgin territory.

In Okmulgee County, in the Bald Hill Field, the Gypsy Oil Co. et al #1 Hager Bruner lease in Sec. 23-15N-14E got 350 bopd in the Red Fork sand.

In the Morris Field, the Dietsche Oil Co. #8 Keaton lease in Sec. 25-13N-14E got 500 bopd in the Fields sand, and this is the deepest production in the field.

In Kay County, in the Blackwell NE Field, there is much fishing. The Gypsy Oil Co. #2 Alberti lease in Sec. 32-29N-1E, 120 feet NW of #1, is still at 3,300 feet. Their #1 is holding at 325 bopd. To the west of #2 is the Gypsy Oil Co. #1 South Beaver, on 80 acres, also fishing at 3,000 feet. The Kay & Kiowa Co. #1 J. Myers lease in Sec. 6-28N-1E has 25,000,000 cfgpd at 1,670 feet.

This is their second well to be shut in. Their #1 Effie Myers in Sec. 5-28N-1E was shut in at 20,000,000 cfgpd at 1,410 feet.

In Muskogee County, the Boynton and Cole Pools are now producing about 6,500 bopd, with a few good completions. (Details given). The Taft Field is also being developed.

In Creek County, the Cushing Pool and Fox Pool are still being drilled. (Details given). Many dry holes are being drilled. Fox is at 4,000 bopd.

In Bryan County, near Durant, the Harmony Oil & Gas Co. in the SE-NE-Sec. 32-5S-13E is drilling at 500 feet. Disney et al are idle in Sec. 28-6S-12E.

In Tulsa County, the Wicey, Mohawk, and Jenks Pools had a few good completions. (Details given). Near Jenks, the American Oil Fields Corporation #14 in Sec. 17-18N-13E has 100 bopd.

In Kansas, the Eldorado and Augusta Fields of Butler County continue to be developed. (Details given).

In Arkansas, some of the best known lease men in the country are working in Crawford, Sebastian, Franklin, Pike, Howard, Logan, Scott, Polk, Benton, Saline, Hempstead, and Sevier Counties, with most of the activity being concentrated along the western border. During the past year, about 15 rigs have been working, but have been shut down mostly because of a lack of money. Only two wells were completed during 1915. Some gas showings have been found.

Near Dora, in Crawford County, Ark., a new company will drill on the Tallman farm in Sec. 16-9N-32W. The Prospect Oil & Gas Co. has 15,000 acres south of the Kibler well near Greenwood and will start a test there. Near Van Buren, Crawford County, the Sara Oil Co. has 2,670 acres near Dyer. The Clear Creek Oil & Gas Co. has 27,000 acres around their discovery well, and will drill another in 30 days.

In Pike County, Ark., Jankowsky & Brannon et al of Tulsa have 1,500 acres in the Glenwood area. Drilling will start next month. Shreveport parties have 6,000 acres between Glenwood, Pike County, and Nashville, Howard County, and will drill in January.

In Franklin County, Ark., near Ozark, Weller & Milliken of Tulsa will start two tests for the Ozark Oil & Gas Co.

In Scott County, Ark., near Waldron, 12 miles west of town, the Bolinger Oil Co. #1 T.W. Denton lease has started drilling. The Producers Oil Company has secured 595 acres.

In Logan County, Ark., the Paris Mineral Oil & Gas Co. #1 in Sec. 36-8N-26W is at 3,150 feet in a hard limestone. The Jefferson Oil Co. is drilling in Sec. 32-8N-26W.

In Howard County, Ark., the Perpetual Oil & Gas Co. in Sec. 29-9S-27W is drilling.

In Polk County, the Grannis Oil & Gas Co. in Sec. 26-6S-32W is drilling.

In Sevier County, Ark., Wilson et al in Sec. 28-8S-32W is drilling.

In Independence County, Ark., the Sulphur Rock Development Co. in Sec. 13-13N-5W is drilling two wells.

In Hempstead County, Ark., the Hope Water Works well in Sec. 32-12S-24W is still drilling.

Other tests are in Sec. 26-6-31, Sebastian County, and 29-17-30 by McGoos in Washington County, Ark.: and McDonald et al in Sec. 25-11N-30W and Buchanan et al in Sec. 22-11N-31W, in Crawford County, Ark.

In Saline County, Ark., Bell et al is drilling near Hot Springs.

p. 12, 14. East Texas and Louisiana, by M.L. Vaughn. The estimated production of this area for the past week averaged 42,775 bopd, of which 27,695 bopd was in the southern area of DeSoto and Red River Parishes, La., and 15,080 bopd was from the northern or Caddo Parish and NE Texas. Nine oil wells were completed this past week for 3,490 bopd new oil, and two gas wells were completed for 5 mmcfgpd and 6 mmcfgpd. About 140 rigs were drilling or being erected also. (Details given).

p. 16, 18. North-Central Texas, by H.W. Whitney. In Wilbarger County, Texas, near Vernon, the Producers Oil Co. #87 Waggoner Ranch lease got 10 bopd at 2,175 feet. This is one of the most important wildcats in North-Central Texas. It is 45 miles west of the Electra Pool of Wichita County.

In Palo Pinto County, drilling continues, with no important completions. The Strawn Field had most of the work.

In Wichita County, in the Electra Field, about 10 wells were completed, with 8 being oil wells. About 45 rigs are working or being erected in this area.

The total runs for the month were 483,501 barrels or about 16,116 bopd. The Electra Field had 329,912 bbls., the Burkburnett Pool of Wichita County had 95,079 bbls., the Petrolia Pool in Clay County had 26,500 bbls, the Strawn Pool had 7,500 bbls, and the Moran Pool of Shackelford County had 24,510 bbls for the month of November.

In Wichita County, in the Burkburnett Pool, 3 new wells were completed, and about 30 wells are drilling.

p. 20. Immense Capital in Doheny Concern. Pan-American Petroleum & Transportation Co., with $100,000,000 capital, is being organized by E.L. Doheny of Los Angeles. This may involve the merger of several large companies. Mr. Doheny sold 3,500,000 bbls of oil for the Mexican Petroleum Co. for 1916, and has a business of 13,000,000 barrels in sight before the end of the year.

p. 24. Gaspe Bay, Quebec, Oil. Oil Springs were first noted in the Gaspe Bay area of Quebec in 1844 by Geologist W.E. Logan. In 1860, at Douglastown, a well was drilled 200 feet deep. At Silver Brook, in 1861-1862, another well was drilled to 1,200 feet. In 1862, a third well was drilled at Sandy Beach to 400 feet. At Silver Brook, oil was found at 900 feet. The area of interest extends from Tar Point, on the south shore of Gaspe Bay, as far west as Falls Brook, a tributary of the York River, and is in that part of the peninsula drained by the York and St. Johns Rivers. About 7,000 feet of sandstones are folded into anticlines, such as the Tar Point Anticline, and the rock is mostly Devonian in age. The country is much faulted. Numerous oil springs are found throughout the district.

Operations began again in 1889, continuing to the end of 1902. The Petroleum Oil Trust and the Canada Petroleum Co. were the main concerns. In 1901 and 1902 about 10,611 gallons of oil were pumped, and a refinery was erected on the York River by the Canada Petroleum Co., 8 miles from Gaspe. About 50 wells were drilled, and the 2-inch line ran 15 miles to the refinery. The wells were mainly to the north of the York River, extending about 2 miles from the river. One group was about 8 miles west of Gaspe, and another group was about 18 miles west of Gaspe, at the mouth of Mississippi Brook.

The Petroleum Oil Trust drilled 40 wells between 1889 and 1902, from 1,230 to 3,640 feet deep, with oil at 500, 1,000, 2,000, and 2,500 feet deep in 24 wells, and some gas below 2,000 feet. About 9 wells were pumped. No. 27 in the western group produced about 20 or more barrels at 2,200 feet, being drilled in 1897, and still producing 2 gallons a day in 1902.

The Canada Petroleum Co. drilled 14 wells between 1899 and 1901, of which 7 had oil shows, and 2 produced 33 bbls between them. Recently an English firm became interested in the area, but the war crippled the effort.

p. 26-28. Various Cracking Processes. The various processes of refining oil are discussed. Patents have been made by Burton, Rittman, Snelling, Wells, Kelsey, Washburn, and others. The Burton process is used by the Standard Oil companies. Standard has spent 8 million dollars in the past 2 years to improve their refining process. The majority of the refineries in the Mid-Continent have been built in the last 6 years, and all could be improved. A Hall process of thermal decomposition is used in England and Russia. All processes use the principle of distillation, with the removal of carbon. The Rittman process converts the carbon to benzol and toluol. The Snelling process was used at Vinita, Oklahoma. The Greenstreet process was used at Cleveland, Oklahoma. The Wells process was used by the Avis Refining Co. at Jacksboro, Texas. The

Kelsey process is being used by the Great Western Refining Co. of Erie, Kansas. Cosden & Co. use steam and heat in their process in their refineries at Tulsa and Bigheart, Oklahoma. The Parker process is being used by the North American Refining Co. at Pemeta, in the Cushing Field, Oklahoma. The Burton process was patented by William M. Burton of Chicago on Jan. 7, 1913, #1,049,667, after filing on July 3, 1912. He assigned his patents to the Standard Oil Co. This process is used at Whiting, Indiana, Sugar Creek, Mo., Wood River, Ill., Baton Rouge, La., and Neodesha, Kansas, and is being installed in the eastern refineries. The Standard is still not entirely satisfied with the process. On Aug. 14, 1914, Dr. Burton was granted a supplemental patent, on low-boiling point products, to treat the paraffin series. The Burton process uses tower pressure stills with about 80 psi pressure, and 500 to 650 to 850°F temperatures, at 4.5 to 5 atmospheres pressure. The McAfee process of using a catalyst to oxidize excess carbon atoms instead of using pressure is being used by the Gulf Refining Co. in Texas. Aluminum sulphate was the catalyzer. A catalyst separates the carbon atoms by burning the link that holds the molecules together. Most other processes use the theory that different sized molecules are cracked into lighter molecules by mechanical distillation.

p. 30. Joplin Zinc Mines Booming. In 1915, about 555,323,525 pounds of zinc ore was produced at a value of $20,694,186. About 81,507,115 pounds of lead ore was produced for $2,145,982. In 1914, zinc ore was 474,189,212 pounds at $8,898,709, showing an increase in 1915 of 17% tonnage but 132% in price.

p. 41-47. Detailed Field Operations, December 1, 1915. In Oklahoma 708 wells were completed, included 50 gas wells, and 159 dry holes, for 62,453 bopd new production, with 979 rigs working or being erected during November 1915.

In Kansas, 206 wells were completed, including 48 gas wells and 27 dry holes, with 1,702 bopd new production, and 145 rigs drilling or being erected.

In Arkansas, 1 well was completed and 16 rigs were working or being erected.

In North-Central Texas, about 38 wells were completed, including 9 dry holes, for 978 bopd new production, and 162 rigs were working or being erected.

In NE Texas-NW La., about 41 wells were completed, including 12 dry holes, and 2 wells in Texas, with 13,610 bopd new production, and 137 rigs working or being erected. The Crichton Field had 19 completions for 11,525 bopd new oil. The Monterey Field was next with 15 completions for 1,425 bopd new oil.

The Thrall Field, Texas, had 13 completions, including 5 dry holes, with 610 bopd new oil, and 10 rigs working or being erected.

The San Antonio Field had 3 completions, incluidng 1 dry hole, for 95 bopd new oil, with 18 rigs working or being erected.

Details are given on each of the above wells.

For gas in Oklahoma, 5 wells were completed in Washington County for 5,450,000 cfgpd, 6 in the Bird Creek-Owasso-Vera area for 10,500,000 cfgpd, 3 in the Cherokee Shallow Sand District for 3,500,000 cfgpd, 1 in the Cushing field for 3,000,000 cfgpd, 1 in the Fox Pool of Creek County for 15,000,000 cfgpd, 12 in the tulsa-Taneha-Glenn-Wicey-Kellyville Pools for 31,000,000 cfgpd, 2 in the Schulter-McIntosh District for 14,000,000 cfgpd, 1 in the Boock Sand-Bald Hill area for 2,000,000 cfgpd, 5 in the Okfuskee-Rogers-Muskogee-Wagoner Counties area for 38,000,000 cfgpd, 1 in Kay County for 20,000,000 cfgpd, 1 in the Healdton Field for 10,000,000 cdfgpd, and 3 wildcats in Pontotoc and Marshall Counties for 2,500,000 cfgpd. (See list of wells for details).

In Atoka County, Oklahoma, the Bannon & O'Day #1 in Sec. 13-2S-11E was a dry hole. In Pittsburgh County, the Hendrickerson well in Sec. 1-7N-18E was a dry hole. In Latimer County, the Owen & Flanagan well in Sec. 30-3N-21E was a dry hole. In Marshall County, the Davidson Brothers #1 in Sec. 36-5S-5E got gas, and the Wells et al #1 in Sec. 11-5S-5E got gas. In Comanche County, the Short Grass Oil & Gas Co. #1 in Sec. 25-2N-11W got 10 bopd, and the Rocky Mountain Oil Co. #1 in Sec. 3-2N-10W got 10 bopd.

Many wildcats (126) in Oklahoma are drilling in Coal, Payne, Pittsburg, Hughes, Noble, Seminole, Jefferson, Stephens, Marshall, Love, Murray, Logan, Oklahoma, Lincoln, Pontotoc, Choctaw, Pushmataha, Pottawatomie, Bryan, Beckham,

Garfield, Atoka, Kiowa, Comanche, Garvin, Johnston, Haskell, and Grady Counties. (Details given on each county.)

In North-Central Texas, 67 wildcats are drilling and 18 rigs are being erected in 25 countrie. (Details given).

In NW La., 3 gas wells were completed, one each in the DeSoto, Crichton, and Shreveport Fields. About 137 wells were drilling in 16 fields. (Details given).

p. 47. Advertisements. Wanted - Address of my brother, John Dougherty, whom I have not seen in 52 years. Have understood that he lives in the oil country. Dan Dougherty, Hospital Ward C, National Military Home, Virginia.

Vol. 14, No. 29, December 23, 1915, p. 1. Mid-Continent Production. The apparent oil production in the Mid-Continent at the close of last week of Dec. 18, 1915, was 343,000 bopd, with Kansas and Oklahoma outside of Cushing being 185,000 bopd, Cushing 99,000 bopd, Electra District, Tex., 16,000 bopd, and Caddo District of NE Tex. and NW La., 43,000 bopd.

The Healdton Field is now the most active in Oklahoma. In other fields, developmental wells are being drilled.

The Gusher Bend area of the Crichton Field in Louisiana is the most active in that area.

In North-Central Texas, many wildcats are scattered over many countries.

p. 1. The world production of petroleum for 1914 was 400,500,000 bbls.

p. 2. Tents Not Comfortable. A mining town of Kusa, in Okmulgee County, Oklahoma, has 1,500 people living in tents. In Winter, life is hard. Builders are being induced to erect permanent dwellings. In other areas in the oil fields, many people live in tents.

p. 3. Cushing Oil. In 1914, the Cushing Pool produced 47,220,250 bbls. of oil. In 1915, the field produced 71,390,000 bbls. with the first 6 months producing 44,155,000 bbls. and the last 6 months, 26,240,000 bbls.

p. 3. Back to the Old Homestead. About Christmas every year, hundreds of oil people travel back east to their old homes in Pennsylvania, Ohio, New York, and West Virginia.

p. 4. Of Personal Interest. Frank A. Gillespie and Mr. Gries were bear hunting in Arkansas. They were surprised by a big black bear. Mr. Gries, at 20 feet up in a tree, asked where Mr. Gillespie was, and Mr. Gillespie told him to shut up, or the bear would never leave. Mr. Gillespie was much higher up in the same tree.

William H. Milliken, of Bowling Green, Ohio, drilled the second well in the Cleveland Field, of Pawnee County, Oklahoma. He afterwards drilled in the Glenn Field, and then in Mexico. He has just started 3 more wells in the Cleveland Field.

p. 4, 6. Noted in Passing. The Imperial Oil Co. is erecting a 10-story office building in Toronto, Canada.

Gasoline in Paris, France, is $1.05 a gallon. In London it is 47¢.

The Gilmer Development Co. has been organized to drill in Upshur County, Texas.

L. W. Burrows, of Ardmore, has returned from Mexico, where he worked for the Producers Oil Co.

H.E. McCormack, of the Midland Petroleum Co., will handle sales of the products from the Phoenix Refining Co. and the Constantine Refining Co., both of Tulsa.

The Sapulpa Refining Co. has been organized by Baltimore, Maryland, people, to drill and refine oil in Oklahoma. They have 1,700 acres under lease near Sapulpa, which is their refining and drilling headquarters.

The Franada Oil & Gas Co., near Francis, north of Ada, in Pontotoc County, Oklahoma, has a 200 bopd well. About 20 automobiles were used to convey Ada

people to the well site to watch the shooting in of the well. The oil gushed high over the derrick.

Muskogee is looking toward the Checotah Gas Field for a supply of gas, 30 miles away. Checotah has about 27,000,000 cfgpd production.

p. 8, 10, 12. Oklahoma and Kansas, by R.H. Whitney. In northwestern Pawnee County, north of Morrison, the Roxana-Fortuna test in Sec. 33-23N-3E has 8,000,000 cfgpd at 2,150 feet. South of Morrison, Gillespie & Owens in Sec. 31-21N-3E are at 1,900 feet, and have had two showings of gas, in Noble County. Watchorn et al #1 is drilling in Sec. 32-23N-3E in Pawnee County.

In Noble County, southeast of Billings, Mid-Co. Petroleum will start a test in Sec. 22-23N-2W.

In Hughes County, northwest of Holdenville, the Penn-West Oil Co. test in Sec. 4-7N-8E was shot with 60 quarts at 3,030 feet and they have about 50 bopd and 10 mmcfgpd with water.

In Carter County, the Healdton Pool is the most active area in the state, with about 75,000 bopd production. (Details given on wells).

In Sec. 7-2S-2W, the Oklahoma-Louisiana Oil Co. got 4 barrels of oil at 1,525-1,531 feet, and they are now close to 1,845 feet.

In Wagoner County, near Stone Bluff, drilling continues. Five wells have been completed there, two of which were dry holes. The Ross & Gries well #2 Colbert lease in the SE-W½-NE-Sec. 5-16N-15E is producing 300 bopd at 1,200-1,206 feet. The Prairie Pipe Line Co. has a 3-inch oil line into the pool. the Oklahoma Natural Gas Co. is laying a 6-inch line to take the gas, which was 25,000,000 cfgpd in the Colbert well. The Braden & Gobel discovery well on the Chisolm farm is making 75 bopd. Their #2 Chisolm southwest of the discovery well is making 500 bopd. Four tests are about completed in this area.

In Muskogee County, the Boynton and Cole Pools are making about 5,000 bopd. Drilling continues in these fields. (Details given). West of Beland and east of the Boynton Pool, the McLaughlin well in Sec. 18-14N-17E is making 85 bopd, in new territory. This may connect with the Boynton Field. Near Taft, where Humphrey & Whiteside completed their gas well in Sec. 19-15N-17E, Bradstreet & Corbin in Sec. 16-15N-17E have 10,000,000 cfgpd at 1,257 feet.

In Pittsburg County, north of McAlester, the deepest well in the state is that of the Gypsy Oil Co. in Sec. 6-6N-14E, where they are fishing at 3,950 feet. The deepest test in Oklahoma before that was the Leschen et al well in Sec. 16-16N-5E in Lincoln County, which was plugged at 3,915 feet.

In Carter County, in the Healdton Field, there are about 500 producing wells, and 103 working rigs or rigs with being erected. Wells are being completed at the rate of about 20 a week, with an average production of 300 bopd, each. The Corporation Commission has suspended pro-rationing as of December 15. The pipe line companies are now increasing their runs and capacities. The field has not been enlarged as yet, with the larger producers being in the western part of the field.

In Kansas, the Eldorado and Augusta Fields are actively expanding. Augusta has a genuine oil boom. Yesterday, the Wichita Natural Gas Co. on the J.C. Varner farm in the SW-NE-Sec. 17-28S-4E in the Augusta Field of Butler County got 1,500 bopd at 2,470-2,500 feet, causing intense excitement. Land is being leased for miles around. (Details on wells given). The sand in the Eldorado Field is believed to be the Peru sand at about 2,500 feet. The shallow sands at 600 to 1,000 feet may not hold up as good as the deep sands.

p. 14. Young People Wed in Dallas. Miss Edith L. Stewart, and B.A. Bywaters were married in Dallas, Texas, on December 16, 1915. They will reside in Dallas. She is the daughter of D.C. Stewart of the Magnolia Pipe Line Co., and he is with the Pierce-Fordyce Oil Co.

p. 14, 16. East Texas and Louisiana, by M.L. Vaughn. The average daily production of this area the past week was about 43,936 bopd, with 28,720 bopd in the southern area of Red River and DeSoto Parishes, and 15,216 bopd in the northern area of Caddo Parish and NE Texas. Oil sells for 80¢ to $1.10 a barrel.

The Crichton Field is the most active. (Detals given on wells). The DeSoto and Red River Parishes produce about 840,000 bbls a month, and the Caddo Parish produces about 457,000 bbls a month. Florian Giaque of Cincinnati, Ohio, has been visiting his large holdings in the DeSoto Parish Field.

p. 16-17. North-Central Texas, by H.W. Whitney. The price of oil is up to $1.20 a barrel, and wildcatting is active all over Texas. At Electra, there are 37 rigs working or being erected. At Burkburnett there are 28 rigs working or being erected. At Petrolia, there are 6 rigs, at Iowa Park there are 4, and at Strawn there are 15 rigs. (Details of wells given).

p. 22. Healdton Field. Carter Oil Co. The Carter Oil Co. paid about $1,000,000 for 110 acres of production in Sec. 6-4S-3W in the Healdton Field of Carter County, Oklahoma. Skelly & Russell sold about 6,000 bopd production and three 55,000 barrel tanks on the 100 acres.

p. 26-28. Various Cracking Processes; Their Value to Refiners. This is a continuation of the same article the previous week, by H.G. James. Dr. Walter F. Rittman developed a thermal decomposition process of hydrocarbons while with the U.S. Government. The Aetna Manufacturing Co. of Pittsburgh, Pa., has erected a plant using this process. It has made 40,000 gallons of benzol and toluol and 40 tons of free carbon. A perpendicular tube is used for distillation, and carbon collects in a vat at the bottom. The crude is vaporized, and the light molecules are gasoline, the heavier are kerosene, and the heaviest are light oils and residuum. The molecules of each are separated and kept in a vapor state. Rittman produced 42% more gasoline from residuum than any other process. Oil is heated to 1,100°F at 350 psi pressure in the process, with pressures as high as 500 psi.

The Seeger Process is being used in the Seeger Refining Co. plant at East St. Louis, Ill. The process is similar to that of the Rittman Process, except that horizontal tubes are used, and steam is injected. Robert Seeger, an old time oil man, is president of the company. R.H. Fardwell, the former Chief Engineer of the St. Louis World's Fair, is secretary-treasurer. Mr. Swatten, a former refiner with the Standard Oil Co., is superintendent. Mr. Seeger is working on better methods of his process.

p. 35. Former Governor Haskell Cleans Up Fortune. Former Governor Haskell moved to Wall Street, New York, before he came to Oklahoma. After failing on Wall Street, he came to Oklahoma, where he made enough money to return to Wall Street. He returned three different times, but failed on Wall Street all times. Recently it is stated that he has made $3,000,000, by moving Mexican oil to the Atlantic Coast and selling the oil directly to consumers in the cities, making oil cheaper than coal, when used as fuel. He has also taken an interest in the Rock Island Railroad, and in steel stocks. If these stories are true, he has finally succeeded in being a successful Wall Street trader.

Vol. 14, No. 30, December 30, 1915, p. 1. Mid-Continent Production. The aparent estimated oil production of the Mid-Continent at the close of last week ending Dec. 25, 1915, was 352,000 bopd, with Kansas and Oklahoma outside of Cushing being 195,000 bopd, Cushing 98,000 bopd, Electra District, Texas, 16,000 bopd, and Caddo District, La.-Tex., 43,000 bopd. Drilling continues in the proven fields in all areas.

p. 1. Smoke particles are caused to flock together by means of an electrical device, causing heavy soot to form and fall back to the bottom of a smokestack. This will help to clear smoke in places like Pittsburgh.

p. 3. New Oil Refinery at Blackwell. The Planet Oil Co., with $50,000 capital, will erect a 1,000-barrel refinery at Blackwell, Oklahoma, with the oil to be piped 12 miles from the field.

p. 3. New Arkansas Company. The Crawford Gas & Oil Co., of Van Buren, Arkansas, has been organized, with $250,000 capital. The concern has leased 25,000 acres in Crawford County, and will install a 10 mile pipe line for either

gas or oil, and will provide gas to the area.

p. 3-4. Two Women Clean Up $8,000,000. Mrs. Dellora Gates, widow of John W. Gates, and her daughter-in-law, now Mrs. Harold Lee Judd, who was the wife of the late Charles W. Gates, son of John W., have stock in The Texas Company, now worth $8,000,000. Mrs. Gates has $5,000,000 and Mrs. Judd has $3,000,000. They live in Chicago. John W. Gates was one of the founders of The Texas Company, having owned many wire mills in Texas, and having invested early in The Texas Company. He was a multimillionaire when he died. His son, Charles W. Gates, took over his father's business, and the stock of The Texas Company was inherited by the son and Mrs. Dellora Gates. After the son died, his widow inherited her share of the stock.

p. 4. Of Personal Interest. R.R. Lockwood, of the Sabine Oil & Marketing co., has returned to Tulsa from Butler County, Kansas. He is the son of the veteran oil man M.L. Lockwood, co-owner of Sabine.

Joe Snakard, of Bigheart, Oklahoma, was in Tulsa. He has been drilling in the United States for many years. He was located at Marietta, Ohio, and before that he was in Pennsylvania. He does much drilling for the Barnsdall interests.

J.A. Twitchell of New York, of Twitchell & Myers Co., was in Tulsa. He was an investor in the early days of the Bradford Field, Pa., and with James Hershberger, was interested in the Sisterville Field, West Virginia. He now has holdings in the Boock Sand field of Okmulgee County, Oklahoma.

J. Frank Eagan and brother George are visiting at their former home at Washington, Pennsylvania. They are both living in Tulsa, and are drilling contractors. Frank has been taking up oil acreages in Oklahoma.

W.T. Herrick, of the Waco Oil Co., visited the Boynton Pool in Muskogee County, where the company has interests. Waco is a newly-organized company, with headquarters in Tulsa.

James D. Nolan, of Indianapolis, Indiana, formerly from Marietta, Ohio, is a new arrival in Oklahoma. He has had much experience in the oil business and wants to get into production. Roger J. McMurray, of Drumright, a former Pennsylvanian, now with the Producers Oil Co., was with him.

Miss Helen Aguste Lange, of Galveston, Tex., and Francis Allan Redmond were married. They will live in Ardmore, Oklahoma. He is head of the fuel department of the Santa Fe Railway Company, and is in charge of the company's oil properties in the Wheeler Field and manager of the former holdings of the Coline Oil Co. in the Healdton Field, recently purchased by vice-president W.E. Hodges of the Santa Fe, for $1,000,000.

p. 4, 6. Noted in Passing. The Hamon-Colcord well near Ringling, Oklahoma, tapped an oil sand under a salt-water stratum, for 200 bopd.

The Oil Field Gas & Electric Co. has been organized, with $200,000 capital, to supply energy to working wells near Shamrock, Creek County, Oklahoma.

Hal Moore has resigned as cashier of the Union National Bank of Bartlesville, to join his father, Clint Moore, in the oil business.

William Sacks, of St. Louis, Mo., and J.B. Levy, of Tulsa, have purchased 1,450 acres of producing properties and wells amounting to 175 bopd from Donald P. Oakes and associates in the Bartlesville District.

The Prairie Pipe Line Co. has started work on an 87 mile long pipe line from the Augusta Field, Butler County, Kansas, to Neodesha, Kansas.

C.H. Frank, an oil-field worker, died in Tulsa on Dec. 23, 1915, from injuries in the Glenn Field on Dec. 18. He was buried at Kiefer, Oklahoma.

p. 6. Recent Deaths. Frederick Boston, formerly with the Boston Drilling Co. of Bartlesville, died at Joplin, Mo., where he had mining interests. He was buried at Stevens Point, Wisconsin.

Peter McGraw, of the Prairie Oil & Gas Co., died in Tulsa on Dec. 24. He was buried in Erie, Pa., where his wife and 8 children live.

T.V. Brown, a tool dresser, died in a rooming house in Okmulgee, Oklahoma, on Dec. 25. He worked for Ray Galbreath. His wife and children live at

Henryetta.

Mrs. H.W. Kiskaddon died at Tulsa on Dec. 26, the wife of a prosperous oil man of Tulsa. She was the daughter of Dr. S.A. Wilhelm, of Clarion, Pa. She was a brilliant organist and pianist. She is survived by her husband, a daughter, and her father.

Hugh Melvin Phillips, age 29, died at Shreveport, La., on Dec. 22. He was the chief engineer of the Producers Oil Co. Surviving are his parents, Mr. and Mrs. W.H. Phillips; five brothers, Leon, Albert, Charles, Kenneth, and Willis; and two sisters, Annie Laurie and Mary Phillips.

p. 8, 10, 12. Oklahoma and Kansas, by R.H. Whitney. The deepest well in Oklahoma is in Pittsburg County, north of McAlester. The Gypsy Oil Co. test in Sec. 6-6N-14E is drilling at 4,050 feet, and will go to 5,200 feet if necessary.

In Carter County, in the Healdton Pool, the Hamon-Colcord well in the NW-NW-SW-Sec. 15-4S-3W has 150 bopd at 1,170-1,200 feet, in a new sand below the salt-water sand of 1,150 feet. The first oil sand was struck at 935 feet, and the second at 950 feet. This will cause operators to drill deeper into the field. About 40,000 bopd is being piped out, and about 40,000 bopd is being stored in the field.

Near Fox in Sec. 28-2S-3W, the Gypsy Oil Co. struck a sand at 2,000-2,025 feet, getting 20,000,000 cfgpd, with some oil. At 1,845 feet the company previously had 15,000,000 cfgpd in this discovery well.

In Creek County, the Cushing Field is still being drilled. (Details given). Much water is being encountered.

In Wagoner County, in the Stone Bluff Field, Braden & Gobel #2 in the NE-W½-SE-Sec. 5-16N-15E got 500 bopd.

In Kansas, the Augusta and Eldorado Pools of Butler County are enjoying a boom. The Prairie Pipe Line Co. is building a line from Neodesha, Kansas, to the Augusta Field, for 70 miles, and then 18 miles northward to the Eldorado Field. It is an 8-inch line. The company is also laying an 8-inch line for 80 miles from their Jonesburg Station in Chautauqua County to the Blackwell Pool in Kay County, Oklahoma. The company already has a 4-inch line to the Newkirk Field and to Mervine Station to the Blackwell Field. The company has also completed 10.5 miles of 8-inch line from Jonesburg Station south to Owens Station in Washington County, Oklahoma. There is much drilling and leasing taking place. (Details given, along with previous history).

p. 12, 14. North-Central Texas, by H.W. Whitney. The proven fields are still being drilled, and many wildcats are drilling. (Details given).

p. 16. East Texas and Louisiana, by M.L. Vaughn. Oil has advanced to $1.10 to $1.20 a barrel, and there is activity in the many fields in this area. About 42,828 bopd was the production this past week, with 27,500 bopd in the southern area and 15,328 bopd in the northern area. (Details given on wells).

p. 22. Tools Shot Upward Three Hundred Feet. The Gypsy Oil & Gas Co. well in Sec. 28-2S-3W near Fox, in Carter County, hit a gas sand at 2,006 feet, one foot into the sand, on Sunday afternoon, and the tools and wire cable were blown 300 feet into the air. One spectator, C.B. Goddard of the Humble Oil Co., said that he had never seen anything like that. A 5 and 3/16th inch bit was at the bottom of the hole. There was a slight spray of oil. It is estimated that the capacity is 67,000,000 cfgpd.

p. 30. Evolution of Drilling Rigs. R.B. Woodworth, engineer with the Carnegie Steel Co., has published a paper on "The Evolution of Drilling Rigs," in The American Institute of Mining Engineers, Bull. 107, Nov. 1915. The first artesian well drilled in the United States was by David and Joseph Ruffner, at Buffalo Lake, near Charleston, West Virginia, in 1806. It was a salt well, of the spring pole type, with 2½-inch bits, with tubing made of wood, in two pieces, bound together with twine. On Jan. 15, 1808 they struck a sand with artesian water. This method was known by the Chinese in 1700, and was used in

1859 when Drake drilled his well. Wooden derricks followed, and then steel.

p. 32. Big Gas Well Near Blackwell. About 11 miles northeast of Blackwell, Kay County, Oklahoma, a gas well was brought in last night, with flow estimated to be 65,000,000 to 70,000,000 cfgpd at 1,710 feet.

p. 32. Blackwell Gas Property Purchased. It is reported that B.B. Jones will take over the gas interests of the Blackwell Field in Kay County. He has purchased the gas rights of the Blackwell Oil & Gas Co., and has options on that of the Southwestern Oil Co. and the Kay & Kiowa Oil & Gas Co., which will give him almost all of the field.

Vol. 14, No. 31, January 6, 1916, p. 1. Mid-Continent Production. The apparent estimated oil production of the Mid-Continent on January 1, 1916, was 360,500 bopd, with Kansas and Oklahoma outside of Cushing being 208,000 bopd, Cushing 95,000 bopd, Electra District, Texas, 15,500 bopd, and Caddo District, La.-Tex., 42,000 bopd. There was a slight cessation in work owing to the holidays.

The Healdton and Stone Bluff Fields in Oklahoma were the most active. The Augusta and Eldorado Fields in Kansas were the most active in Kansas. The Crichton Field in Louisiana was the most active there. North-Central Texas fields continue to be developed.

p. 2. Gasoline. About 1,445,000,000 gallons of gasoline were used in the United States in 1915. About 2,000,000,000 gallons are expected to be consumed in 1916. The price has been going up, and Washington officials will investigate this matter.

p. 3. Where is James Cassidy? In early oil days in Oklahoma, many men worked in the oil fields and died among strangers and were buried, with all traces being lost. Ten years ago, James Cassiday left his wife and 4 children in Pittsburgh, Pa., to seek work in Oklahoma. He found a job in the Glenn Pool and sent money and letters home. Then, later, the letters and money ceased. One child, Marie, now 18, worked in a garment factory, and the mother had to find work to support the family. Marie is now a moving-picture actress, and is a beautiful women, and she now makes enough money to support the family. During the past week, Marie and her mother came to Tulsa and Muskogee, trying to find James. They also went to the Cushing Field, but could not locate him. They would like to know what happened to him.

p. 4. B.B. Jones Buys Gas Property. B.B. Jones, of Bristow, Oklahoma, purchased the gas line and property of the Peoples Fuel & Supply Co., the line running from Blackwell to Chilocco. He paid $100,000. The gas is to be sold to the United Kansas Natural Gas Co. He is to take 10,000,000 cfgpd from the Blackwell Oil & Gas Co., to be delivered through the line, also. He will also sell gas to the Kay County Gas Co., which furnishes gas to Ponca City, Newkirk, and other towns in the area, in and around Kay County, Oklahoma.

p. 4. Of Personal Interest. Gus Kolter, of Nowata, Oklahoma, was married to Miss Kathryn Lee Cook at Rockford, Ohio, during the holiday season. They will live in Nowata, where he is in the oil business.

A.E. Merritt, president of the Merritt Oil Co., arrived in Tulsa from his home town of Charleston, West Virginia.

F.S. Lane, of Cairo, West Virginia, affiliated for many years with the Standard Oil Co., has moved to Dallas, Texas, where he will be in charge of tools for the Corsicana Petroleum Co.

Walter F. Brown, of Toledo, Ohio, and John Clauss, were looking over the Mohawk Pool north of Tulsa. They are with the Clabrowol Oil & Gas Co., the Clauss, Brown & Wolfe Co., and the Western Oil & Gas Co. Mr. Clauss manufactures razors and shears and has holdings in the Ohio oil fields.

p. 6. Noted in Passing. In Pawnee County, Oklahoma, the Watchorn Oil & Gas Co. recently completed a gas well 8 miles north of Morrison, for 20,000,000 cfgpd at 2,100 feet.

J.H. Miller, of Chanute, Kansas, representing the Miller Oil Co., is

building a loading rack at Ponca City, Kay County, Oklahoma, to ship oil from the Ponca City Field to Humboldt, Kansas, for refining.

The Caney River Gas Co. has a 200 bopd well in the Mohawk Pool in Tulsa County, Oklahoma, in the 1,000-foot sand. The company has about 500 bopd oil production in addition to its gas.

The Dotts Martin & Co. well in the Boock Sand District in Okmulgee County in Sec. 13-13N-13E, struck oil at 1,300 feet. The work began Dec. 13 with a 13-inch hole. Casing was set at 1,013 feet.

p. 8, 10. Summaries of Field Operations for December, 1915. In Oklahoma, 826 wells were completed, including 54 gas wells and 135 dry holes, with 48,429 bopd new production, and 1,175 rigs drilling or being erected. (Details given).

In Kansas, 287 wells were completed, including 40 gas wells and 26 dry holes, with 4,260 bopd new production, and 183 rigs drilling or being erected.

In North-Central Texas, 44 wells were completed, including 14 dry holes, with 1,180 bopd new production, and 153 rigs drilling or being erected.

In the Caddo District of La.-Tex., 43 wells were completed, including 8 dry holes, with 9,490 bopd new production, and 8 gas wells, and 150 rigs drilling or being erected.

In Arkansas, about 22 rigs were working or being erected.

(Details are given for each district or field).

p. 10, 12, 14, 22. Oklahoma and Kansas, by R.H. Whitney. Activity was slow during the holidays. In Wagoner County, Ross & Gries #4 in Sec. 5-16N-15E got 2,050 bopd at 1,169-1,194 feet in the Stone Bluff Field. Several months ago, Braden & Gobel #1 Chisolm was drilled in Sec. 5-16N-15E, with oil at 1,200 feet, just north of the Ninety-Nine Pumping Co. oil well, which opened up the Stone Bluff Field. Braden & Gobel went a short distance southwest of their well and drilled another good well, and the expansion began. At present, there are 6 oil wells, 1 gas well, and 1 dry hole in the field. The dry hole was that of the Savoy Oil Co. to the east of the discovery well.

In McIntosh County, north of Hoffman, Brown, Wisener et al in the SE-NE-Sec. 9-12N-14E got 30 bopd at 1,742-1,785 feet.

In Carter County, the Healdton Field is the most active in Oklahoma. The pool is producing about 80,000 bopd. Some good wells have been completed this past week. (Details given).

Near Fox, the Gypsy Oil Co. test in Sec. 28-2S-3W is shut in at 2,020 feet, with 20,000,000 cfgpd at 800 psi pressure.

In Pittsburg County, north McAlester, the Gypsy Oil Co. in Sec. 6-6N-14E is at 4,225 feet. This is the deepest test in the state.

In Pawnee County, the Watchorn Oil & Gas Co. in Sec. 32-23N-3E, about 9 miles north of Morrison, Noble County, got 35,000,000 cfgpd at 2,100 feet, and the well is shut in.

In Muskogee County, the Boynton and Cole Pools are still being drilled. (Details given). The production is about 6,000 bopd in these two pools. One well was completed in the Harris Pool.

Other completions were in the Wicey and Mohawn Pools in Tulsa County, south of Mounds in Okmulgee County, a few in Osage County, and some in the Boock Sand Pool in Okmulgee County. (Details given).

Concerning the Five Civilized Tribes, about 4,161 wells were drilled on Indian land in Oklahoma during 1915, including 322 gas wells and 596 dry holes. About 34,654,645 bbls. of oil was produced on Indian land of the Five Civilized Tribes and of the Osage Nation. An important expansion was the Paden well in Sec. 8-12N-7E, with 2,000,000 cfgpd at 2,800 feet on Nov. 10,1914, that was shut in by the Prairie Oil & Gas Co. on Nov. 15, 1914, and not completed until 1915. The Lawton, Healdton, Ada, Loco, Cushing, Boynton, Haskell, and Paden Fields were the most active during 1915.

In Kansas, the Augusta and Eldorado Fields are actively being drilled. (Details given).

In Kay County, Oklahoma, the Ponca City, Newkirk, and Blackwell Fields were active during 1915. In the Ponca City Field, the 101 Ranch Oil Co.

completed 7 wells in the NE-Sec. 17-25N-2E, one of which was dry. The Kay County Gas Co. completed 1 producer and 1 dry hole. The wells are completed at 1,500 feet in the Ponca sand. There are 65 producers in the field, with about 900 bopd, or 14 bopd per well on wells averaging more than 2 years old.

In the Newkirk Field, about 10 wells were completed in 1915, including 3 dry holes. The production is from the Newkirk sand at 1,000 feet. There are 60 producing wells in the field, with a total production of 1,000 bopd.

In the Blackwell Field, 12 wells were completed in 1915, including 7 shallow wells at 750-800 feet with gas, and 5 deep wells with oil or gas. The two deep oil wells are the B.B. Jones & Buehl #1 Swenson and the Gypsy Oil Co. #1 Alberti in Sec. 32-29N-1E. The three gas wells are the Blackwell Gas Co. #1 Wolfe in Sec. 6-28N-1E, in the Blackwell sand, which is the same sand in the Swenson and Alberti wells; the Kay & Kiowa Co. (Devonian and E.W. Marland) well in the SW-NE-Sec. 6-28N-1E, for 48,000,000 cfgpd at 1,400 feet; and the Kay & Kiowa Co. well in the NW-Sec. 5-28N-1E, for 35,000,000 cfgpd at 1,700 feet. The gas from these wells are going to the Wichita Gas Co. for 4¢ a mcf.

The E.W. Marland well in Sec. 4-28N-4E was dry at 3,500 feet.

p. 17. Corsicana Stock Held By Magnolia Co. At Galveston, Texas, the Magnolia Petroleum Co. held a special meeting to take over the stock of the Corsicana Petroleum Co. and the Magnolia Pipe Line Co., increasing their capital from $9,800,000 to $20,000,000.

p. 17-18. North-Central Texas, by H.W. Whitney. In Palo Pinto County, in the Strawn Field, some wells were completed. (Details given). Many wildcats are being drilled in many counties, such as Stephens County, Eastland County, Jack County, Shackelford County, and adjacent areas. (Details given). Several wells were completed in the Electra Field of Wichita County. (Details given).

p. 18-19. East Texas and Louisiana, by M.L. Vaughn. Many wells are still being drilled in this district. (Details given). The Crichton Field is still the most active.

Miss Mary Claud Pressler, of Shreveport, and James B. Aiken, were married in Shreveport, La. He is president of the International Land & Petroleum Co., president of the Southwestern Oil Co., and vice-president of the Dividend Oil Co.. They were married on Dec. 29, 1915, and they will live in Shreveport.

p. 23. P.J. White Retires From Presidency. P.J. White, of White & Sinclair, has retired as president of the Kathleen Oil Co., the Only Oil Co., and the Oil Production Co., with H.F. Sinclair as his successor. Earl W. Sinclair is secretary-treasurer. Mr. White will spend the next two years in New York, where White & Sinclair have an office. All of the companies have valuable holdings in the Cushing Field, Creek County, Oklahoma.

p. 26. Marcus L. Lockwood, Pioneer Oil Man Dead. (Portrait). Marcus L. Lockwood, age 71, died of pneumonia on Jan. 2, 1916, at his home in Tulsa, Oklahoma. He was born in East Hamburg, New York on Dec. 5, 1844, the son of Philo D. Lockwood. His father died when Marcus was 14, and he left school to work on their farm. In 1865, he left home and settled on Oil creek in northwestern Pennsylvania. In 1871, when he brought in his first well, he married Miss Lydia H. Thompkins, a childhood sweetheart. She died a year ago. In 1876, he was a Pennsylvania representative for Clarion County, for 5 years. He was a member of the bank of Lockwood & Patterson, and president of the First National Bank of Zenianople, Pa.. In 1880 he helped to organize the American Anti-Monopoly Association, of which he was president for several years. He also helped to organize the Pure Oil Co. and was a trustee of that company. In 1901 he moved to Texas and organized the Sabine Oil & Marketing Co. In 1903, he moved to Independence, Kansas, and did some of the first work in the Drum Creek, Wayside, and Bolton Pools. In 1905, he moved to Tulsa. He was an officer of the Kansas Oil & Gas Producers Association, and of the Mid-Continent Oil & Gas Producers Association. He has lived in Tulsa since 1905, where he was buried. He is survived by a brother, George W. Lockwood, of Buffalo, N.Y., and 6

children; Mrs. H.W. Alling, Jamestown, N.Y.; Mrs. Roy E. Porter, Guthrie, Okla.; Mrs. Harold Helm, Moravia, N.Y.; Mrs. S.C. French, Mrs. Elton Everett, and Robert R. Lockwood, of Tulsa, Oklahoma.

p. 26. Geological Survey Estimate for 1915. The total yield for oil in the United States for 1915 was 267,400,000 barrels. Oklahoma was second to California, with 80,000,000 barrels. California was 89,000,000. Kansas was 3,000,000 barrels. Texas was 26,000,000 barrels. Louisiana was 18,500,000 barrels. The stocks held in reserve at the end of 1915 was about 195,000,000 barrels.

p. 28. Aluminum chloride is used in Cracking Crude. A. McAfee, a refining expert, explains how aluminum chloride is used to separate gasoline, kerosene, and paraffin, with hydrogen-saturated gasoline and kerosene resulting. (Details given).

p. 29. Explosion Suit Settled. J.C. Wilson, of Cleveland, Oklahoma, was driving his car between Drumright and Oilton, when he went through a gas pocket from a well, and the car exploded, and he was killed. His widow received an $8,000 settlement from the Prairie Oil & Gas Co.

p. 32. Gas, Oklahoma-Kansas, December 1915. In Oklahoma, during December 1915, 300,600,000 cfgpd of new gas was found, classified under 8 areas: Cherokee Deep Sand District, 29,850,000; Cherokee Shallow Sand District, 10,500,000; Osage County, 14,500,000; Cushing Field, 55,000,000; Creek District, 112,750,000; Kay County, 25,000,000; Healdton Field, 25,000,000; and Wildcats, 28,000,000.

In Kansas, 36,750,000 cfgpd of new gas was found in December 1915.

In Oklahoma, in the Cushing Field, the Producers Oil Co. #22 Gooden had 35,000,000 cfgpd, in Sec. 16-17N-7E. The McMan Oil Co. #3 Fee in Sec. 27-18N-7E, had 15,000,000 cfgpd.

In the Creek District of Tulsa, Creek, McIntosh and adjacent Counties, the C.B. Shaffer #1 Chastain in Sec. 15-16N-7E in the Fox Field of Creek County, got 30,000,000 cfgpd, and the McMan Oil Co. in Sec. 4-16N-7E got 15,000,000 cfgpd. In the Tulsa and Glenn Fields, about 13,000,000 cfgpd was developed. in the Okmulgee Field, Smith & Swan in Sec. 30-13N-13E got 8,000,000 cfgpd. In the Bald Hill Field, McGinley et al Co. #1 T. Jefferson in Sec. 32-15N-14E had 15,000,000 cfgpd. In McIntosh County, Grundish et al Co. #2 Hare in Sec. 5-11N-14E got 15,000,000 cfgpd.

In Kay County, the Kay & Kiowa Gas Co. #1 J. Smith in Sec. 6-28N-1E was shut in at 25,000,000 cfgpd, in the 1,450-foot sand.

In Carter County, in the Healdton Field, the McMan Oil Co. #1 in Sec. 15-4S-3W has been shut in at 25,000,000 cfgpd. In the Fox Field of Carter County, the Gypsy Oil Co. in Sec. 28-2S-3W got 15,000,000 cfpgd at 1,845 feet and about 20,000,00 cfgpd at 2,000 feet, and the well was shut in on Dec. 30, 1915.

In Pittsburg County, the Gladys Belle Oil Co. in Sec. 1-7N-18E got 5,000,000 cfgpd, and the Gladys Belle Oil Co. in Sec. 19-7N-18E got 5,000,000 cfgpd.

In LeFlore County, the LeFlore Gas & Electric Co. #6 and #7 near Poteau got 8,000,000 cfgpd combined.

In Pontotoc County, the Corsicana Petroleum Co. #1 in Sec. 8-4N-6E was shut in at 10,000,000 cfgpd.

p. 33. Fox Gasser Shut In. On December 30, 1915, the Gypsy Oil Co. gas well in Sec. 28-2S-3W near Fox was shut in at 22,000,000 cfgpd. The company will drill deeper at a new location.

Vol. 14, No. 32, January 13, 1916, p. 1. Mid-Continent Production. The apparent estimated oil production of the Mid-Continent at the close of last week on Jan. 8, 1916, was 358,500 bopd, with Kansas and Oklahoma outside of Cushing being 208,000 bopd, Cushing 93,000 bopd, Electra District, Tex., 15,500 bopd, and Caddo District, La.-Tex, 42,000 bopd.

Drilling continues in the known fields. The most important wells were at Augusta, Butler County, Kansas, with 2,000 bopd; one at Healdton, Carter County, Oklahoma, at 2,500 bopd, and one gas well in the Lewis Field, La., at 43,000,000

cfgpd, and two gas wells in the Crichton Field, La., at 20,000,000 cfgpd each.

In 1915, the Mid-Continent produced 167,006,601 barrels of oil. Oklahoma led all states with 117,910,444 barrels, mainly due to the Cushing Pool which was 70,704,854 barrels.

p. 2. Five Civilized Tribes Leases, 1915. In Oklahoma, for the fiscal year ending June 30, 1915, about 27,098,994 barrels of oil was produced in the Five Civilized Tribes area, for $1,537,727 in royalty interest. In 1914, only 12,571,321 barrels were produced, with royalty interest at $1,449,253.

p. 3. Oil Fields of the Western Hemisphere, 1914. During 1914, the United States produced 256,762,535 bbls. of oil, followed by Mexico at 21,188,427, Peru, 1,917,802, Trinidad, 643,433, Argentina, 275,500, and Canada, 214,805.

The estimated future supply is 5,762,100,000 barrels, which would last only 22 years. About 4,109 square miles covers the known oil fields in the United States.

p. 4, 6. Of Personal Interest. Henry Gruver, of Drumright, was in Tulsa. He drilled the first well in the Cushing Pool.

Charles C. Staiti, vice-president of the Healdton-Oklahoma Oil Co., with headquartrs in Houston, Tex., was in Tulsa.

J.P. Flanagan, of Tulsa, was visiting the Healdton Field. He is a young man who came to the Mid-Continent in the early days of its development and who has obtained some good properties.

B.G. Goble, of Tulsa, who opened the Stone Bluff Field in Wagoner County, is now leasing in Butler County, Kansas, in the Eldorado District.

p. 6, 8. Noted in Passing. E.J. Milburn and others are drilling a test north of St. Joseph, Montague County, Texas. They are at 1,400 feet and have passed through 4 oil sands.

In Pottawatomie County, Oklahoma, 4.5 miles west of Maud, a local company has struck gas, causing great excitement.

In Oklahoma, just north of the Red River, north of Gainesville, the Waco Oil Company struck oil.

E.E. Reading, near Lawton, has struck high grade oil at 853 feet. He is formerly from California.

Last Friday, a report from Fox, Oklahoma, in Carter County, said that the Gypsy Oil Co. gas well in Sec. 28-2S-3W had blown off its casinghead and was blowing wild. The roar can be heard for miles.

R.P. Highnote, of Shamrock, Oklahoma, in the Cushing Field, is going into the oil business. He was a police officer and has 19 notches on his gun.

p. 8. Recent Deaths. W.H. James, an old time oil man, died at Loco, Oklahoma, on January 2, 1916. He was a superintendent for the Lone Star Gas Co. He formerly worked in Pennsylvania, West Virginia, Ohio, Kentucky, Kansas, Texas, and Oklahoma. He is survived by a widow and 3 children, who live at Haskell, Oklahoma. An adult son, M.H. James, also lives at Haskell.

p. 10-50. Fields of the United States and Mexico, 1915. About 13,670 wells were completed in the United States in 1915, including 2,045 gas wells and 2,733 dry holes, for 1,715,352 bopd new production. Oklahoma had 4,603 completions, including 350 gas wells and 846 dry holes, for 1,034,700 bopd new production. Kansas had 1,088 completions, including 341 gas wells and 135 dry holes, for 10,258 bopd new production. North-Central Texas had 293 completions, including 24 gas wells and 85 dry holes, for 8,058 bopd new production. The Caddo District of La.-Tex. had 476 completions, including 26 gas wells and 92 dry holes, for 202, 806 bopd new production. Arkansas had 1 gas and 1 dry well.

p. 10, 12. Oklahoma-Kansas. During 1915, the price of oil steadily increased from 40¢ a barrel to $1.20. A few new pools were discovered and there were many extensions to old pools. In Muskogee County, the Boynton and Cole Pools were extended, and the Fern Mountain and Taft Fields were discovered, and the Harris Pool was extended. Oil was found between Beland and Boynton.

In Creek County, the Cushing Pool was extended slightly, and infill drilling was taking place. A new Fox Pool to the south was opened.

In Carter County, the Healdton Pool was slightly extended and infill drilling was taking place. In the Fox area, to the north, a new pool was opened, also called the Fox Field.

In Pawnee County, the Ralston and Jennings Fields were discovered.

In Okfuskee County, the Paden Field was opened up.

In Wagoner County, the Stone Bluff Field was discovered.

In Kay County, the Blackwell NE area was developed.

In Hughes County, the Holdenville NW Field was discovered.

In Pontotoc County, the Ada and Allen Fields were expanded.

In Osage, Nowata, and Washington Counties, near Bigheart, South Coffeyville, and Vera, extensions were made.

In Kansas, the Augusta and Eldorado Fields were expanded. The Eldorado Field was discovered late in 1915, in Butler County.

In Arkansas, the Kibler Field was discovered in Crawford County.

There were many deals made during the year. (Details given).

The following list shows the number of wells completed in Oklahoma in 1915:

Month	Completions	Production	Dry Holes	Gas Wells
January	292	123,504	55	24
February	293	117,558	50	20
March	284	85,025	63	27
April	324	146,026	52	32
May	275	126,360	38	22
June	276	114,370	39	18
July	263	76,420	44	13
August	285	48,798	55	14
September	292	24,525	76	36
October	485	61,227	80	40
November	708	62,453	159	50
December	826	48,429	135	54
	4,603	1,034,695	846	350

The following list shows the same type of data by districts:

District	Completions	Production	Dry Holes	Gas Wells
Cherokee Deep Sand	471	8,001	78	69
Cherokee Shallow Sd.	596	10,535	53	27
Osage	191	15,780	21	20
Cleveland	69	1,308	30	2
Cushing	1,003	827,675	50	17
Creek Nation	1,744	83,541	477	152
Kay	31	1,630	5	11
SW Oklahoma	460	85,655	103	46
Miscellaneous	38	575	29	6
	4,603	1,034,700	846	350

p. 12. The Thrall Field, Williamson County, Texas, 1915. About 206 wells were completed in 1915, including 68 dry holes, with 42,580 bopd production.

p. 12, 14. Texas-Louisiana, Caddo District, 1915. The Crichton Field of Red River Parish, in the southern part of the area, kept this district alive. The total production of this district in 1915 was 15,663,000 barrels. Oil was 60¢ a barrel at the beginning of the year, and $1.20 at the end of the year. Heavy oil was about 35¢ a barrel at the beginning of 1915 and 85¢ at the end. The Standard Oil Co. of La. laid another 8-inch line to Oklahoma, doubling the capacity to its refinery at Baton Rouge, to 40,000 bopd. The Louisiana Oil Refining Co., with a refinery at Shreveport at Gas Center, had 30 miles of lines to the Caddo Field, and laid new lines to Cedar Grove, connecting with the Red River Pipe Line Co. to the Crichton Field. The company also made improvements to its export station at New Orleans, and can handle 3,000 bopd at its refinery. The Caddo Oil Refinery has doubled its capacity at Cedar Grove to 2,000 bopd.

The following table summarizes operations in the various fields in 1915:

Field	Completions	Production	Dry Wells	Gas Wells
DeSoto	49	8,140	17	9
Red River	292	179,216	26	9
Sabine	7	55	5	0
Mooringsport	3	0	3	0
Oil City	10	931	1	0
Jeems Bayou	11	1,155	2	0
Hart's Ferry	10	1,809	1	0
Monterey	35	9,470	12	0
Hosston	7	350	2	0
Vivian	1	40	0	0
Lewis	11	305	2	0
Pine Island	1	0	1	0
Cross Lake	2	0	0	2
Shreveport	10	0	4	6
NE Texas	15	1,335	4	0
Bossier	4	0	4	0
Miscellaneous	8	0	8	0
	476	202,806 bopd	92	26

p. 14. North-Central Texas. 1915. The daily production of this area is about 17,500 bopd, distributed over 6 fields, namely, Electra, Burkburnett, Iowa Park, Fowlkes Station, all of Wichita County, and Petrolia, of Clay County, and the Strawn Field, of Palo Pinto County.

The Strawn Field was opened early in 1915. The wells are shallow and small but are holding up. The Moran Field in Shackelford County is spotty and the wells are small and do not hold up. Wildcatting continues in Coleman, Stephens, Eastland, Wilbarger, Jack, Grayson, and Cooke Counties. The price of crude was 45¢ to 55¢ a barrel at the beginning of 1915, and $1.20 at the end of the year.

The number of completions by the month is as follows:

Months	Completions	Dry Holes	Gas Wells	Production
January	18	6	0	397
February	28	8	0	1,055
March	20	4	1	660
April	27	4	2	633
May	29	9	1	615
June	15	4	2	630
July	13	5	4	200
August	21	7	2	625
September	20	9	1	700
October	20	6	2	385
November	38	9	6	978
December	44	14	3	1,180
	293	85	24	8,058 bopd

The wells by districts are as follows:

District	Completions	Dry Holes	Gas Wells	Production
Wichita County	105	19	3	3,420
Burkburnett	56	9	0	2,080
Clay County	8	1	3	273
Wildcats	124	56	28	2,285
	293	85	24	8,058 bopd

p. 12. Employees of the Tulsa Office of the Carter Oil Co. (picture and names).

p. 14. Employees of the Tulsa Office of the Gulf Pipe Line Co. (picture and names).

p. 16. Employees of Cosden & Co. Offices at Tulsa. (picture and names).

p. 18. Group of Oil Men at Eldorado, Kansas. (picture and names).

p. 28, 30, 32. Production of Petroleum in the United States During 1915, Mid-Continent. Oklahoma-Kansas (p. 28, 30). Oklahoma Production from 1891 to 1915:

Year	Barrels
1891	30
1892	80
1893	10
1894	130
1895	37
1896	170
1897	625
1898	1,020
1899	2,230
1900	6,472
1901	10,000
1902	37,100
1903	138,911
1904	1,366,748
1905	8,562,716
1906	18,618,583
1907	43,524,128
1908	45,798,765
1909	47,859,218
1910	52,028,718
1911	56,069,637
1912	51,427,071
1913	63,579,071
1914	102,897,327
1915	117,910,444
	609,839,241

Oklahoma wells completed and daily average production, 1906-1915.

Year	Daily Average Production	Wells Completed
1906	49,399	2,779
1907	119,244	3,956
1908	125,476	2,844
1909	131,121	3,279
1910	142,544	3,777
1911	153,615	4,087
1912	140,896	5,993
1913	174,190	9,137
1914	281,910	8,297
1915	323,042	4,603
	1,641,437 bopd	48,746

Oklahoma production for 1915 by districts:

District	Total Barrels
Cherokee Deep Sand District	10,079,480
Cherokee Shallow Sand District	3,564,525
Osage	7,113,930
Cleveland	1,487,695
Cushing	70,704,854
Creek Nation	17,682,000
Kay	865,450
Healdton	6,412,510
	117,910,444

Oklahoma production for 1915 by months.

January	10,801,299	August	9,379,670
February	8,788,808	September	8,334,000
March	10,226,311	October	8,346,440
April	11,836,950	November	8,355,000
May	10,972,636	December	9,489,100
June	11,279,190	Total	117,910,444
July	10,101,040		

Oklahoma production for 1915, by districts and month:

Cherokee Deep Sd.	Cherokee Shallow Sd.	Osage Co.	Cleveland	Cushing	Creek Nation	Kay Co.	Healdton	
812,200	279,775	564,200	120,900	7,393,934	1,359,350	75,950	194,990	J
737,940	266,000	518,560	105,000	5,712,000	1,357,720	61,600	29,988	F
827,700	285,200	589,000	120,125	6,916,720	1,361,520	74,400	51,646	M
810,000	279,000	555,000	114,000	8,658,000	1,214,100	71,850	135,000	A
827,700	292,950	589,000	118,420	7,471,000	1,460,720	72,850	139,996	M
804,000	285,000	569,250	113,700	8,002,500	1,215,750	69,000	219,990	J
833,900	294,500	589,000	117,800	6,324,000	1,503,190	68,200	370,450	J
840,100	291,400	574,120	120,900	5,618,750	1,519,000	68,200	347,200	A
834,000	288,000	594,000	126,000	4,260,000	1,554,000	78,000	600,000	S
898,690	325,500	620,000	139,500	3,820,750	1,666,250	77,500	798,250	O
900,000	330,000	645,000	141,000	3,390,000	1,675,500	73,500	1,200,000	N
953,250	347,200	706,800	150,350	3,137,200	1,794,900	74,400	2,325,000	D
10,079,480	3,564,525	7,113,930	1,487,695	70,704,854	17,682,000	865,450	6,412,510	

Kansas production from 1889 to 1915 is as follows:

1889	500	1904	4,250,779	
1890	1,200	1905	3,450,779	
1891	1,400	1906	3,100,065	
1892	5,000	1907	2,409,521	
1893	18,000	1908	1,802,328	
1894	40,000	1909	1,263,764	
1895	44,430	1910	1,128,668	
1896	113,571	1911	1,278,819	
1897	81,098	1912	1,592,796	
1898	70,960	1913	2,375,342	
1899	67,570	1914	4,250,540	
1900	74,444	1915	4,009,329	
1901	179,151	Total	32,874,017	barrels
1902	331,749			
1903	932,214			

Kansas production during 1915 by months is as follows:

January	374,945
February	324,156
March	356,252
April	336,960
May	353,586
June	319,860
July	324,119
August	310,961
September	305,190
October	316,200
November	312,000
December	375,100
	4,009,329

p. 30. Texas. 1915. In Texas, 26,288,525 bbls. of oil was produced. The Gulf Coast was the largest area, with the Humble Field at 12,458,980 bbls. The Thrall Field was 1,147,525 bbls. In East Texas, in Marion County, the production was 239,440 bbls. in 1915. In North-Central Texas, the production was 6,017,266 bbls., of which 5,501,582 was in Wichita and Clay Counties, with the Petrolia Field of Clay County only contributing 395,000 barrels. The total for the Gulf Coast was 20,131,525 barrels.

The total production from 1889 through 1915 in Texas is as follows:

1889-1896	1,811	1900	836,039	1904	22,241,413	1908	11,206,464	1912	11,735,057		
1897	65,975	1901	4,393,658	1905	28,136,189	1909	9,534,467	1913	15,009,478		
1898	546,070	1902	18,083,658	1906	12,567,897	1910	8,899,266	1914	19,803,946		
1899	669,013	1903	17,955,572	1907	12,322,696	1911	9,526,474	1915	26,288,231		

In North-Central Texas, during 1915, 6,017,266 bbls. of oil were produced. Wichita County accounted for most of this production, from the Electra and Burkburnett Fields along with Iowa Park, Fowlkes Station, and Eeds Fields. Petrolia had about 395,000 barrels. The various districts are:

Wichita-Clay Counties	5,501,582
Moran Field, Shackelford Co.	148,279
Corsicana, light	116,153
Corsicana, heavy	198,702
Strawn, Palo Pinto Co.	52,550
	6,017,266

The Strawn Field was opened on January 16, 1915, and was the only new discovery. About 75 wells are producing about 250 bbls. a day from this field. The production by months is:

January	1,400	May	6,000	September	5,000
February	1,800	June	6,000	October	5,000
March	2,000	July	6,000	November	4,500
April	4,000	August	6,000	December	4,850

The Corsicana Field is one of the oldest in Texas, and was opened up in 1896, in Navarro County. The first Texas refinery was built there. The production for 1915 was: (for light and heavy oil):

January	10,521	19,265	July	9,664	16,650
February	10,360	18,169	August	8,095	14,324
March	9,858	18,233	September	8,874	15,426
April	8,963	18,415	October	8,400	13,428
May	10,067	17,762	November	12,302	14,879
June	9,620	17,257	December	9,429	14,894

The Moran Field in Shackelford County had the following monthly production:

January	10,962	May	9,408	September	18,925
February	8,264	June	9,521	October	16,499
March	10,357	July	8,705	November	15,518
April	8,854	August	16,298	December	15,968

p. 32. Texas-Louisiana, 1915. Most of the production is from NW La., with 239,440 bbls in NE Texas in Marion County. About 2,875,254 bbls. were produced in the Gulf Coast in Louisiana, and is not included in the Texas-La. area. The Total for Louisiana for 1902-1915, including the Gulf Coast is:

1902	548,617	1910	6,841,395	
1903	917,771	1911	10,720,420	
1904	6,708,958	1912	9,263,439	
1905	8,910,416	1913	12,498,828	
1906	9,077,528	1914	14,677,102	
1907	5,000,221	1915	18,814,647	(2,875,254 in Gulf Coast)
1908	5,788,874		119,077,747	
1909	3,059,531			

The Caddo District or NE Texas - NW La. production was as follows:

Caddo, light	5,765,633	
Caddo, heavy	1,153,125	
DeSoto, Red River, Sabine	9,020,615	(mostly Crichton Field)
Marion County, Texas	239,440	
	16,178,833	total for 1915.
	15,939,393	total for Louisiana for 1915, Caddo Dist.

p. 34. Cushing Pool, Creek County, Oklahoma. A short history of the pool is given for 1915. (picture of Mid-Co., Fixico well blowing out).

p. 36, 38, 40. Refining in Mid-Continent in 1915. (by H.G. James). Refining fluctuates with supply and demand. There were 2,250,000 automobiles in the United States in 1915, each using about 500 gallons of gasoline a year, 1,000,000 gasoline engines on farms, and 25,000 gasoline tractors. Gasoline was selling for 5¢ a gallon, kerosene for 1¢ a gallon, and fuel oil 23¢ a barrel, f.o.b. at the refinery, at the beginning of 1915. In August, when the Cushing Field began to decline rapidly, the prices began to escalate. Refineries had to adjust. The

war began to settle in favor of England, and exports began to rise, and a large demand accompanied the decline of the Cushing Field, and prices went up. By December, gasoline went up to 15.8¢ a gallon, and kerosene 3.5¢ a gallon, and fuel oil 80¢ to 90¢ a barrel. During 1915, about 13 new refineries were built in the Mid-Continent, and 1,338 miles of primary pipe lines were built. About 5,886 tank cars were operating. About 37,000 wells are supplying the oil. The government is thinking of placing a tax of 5¢ a barrel on crude and 1¢ a gallon on gasoline and kerosene handled at the refineries. A list is given of the 65 refineries in the Mid-Continent, from 1898 to 1915, with the cost of the investment of each, miles of pipe lines attached to each, and the number of wells supplying each, with the daily average barrels used, and the tank cars owned by each. About 34 refineries were in Oklahoma, and 19 in Kansas, and 4 in North Texas.

Mid-Continent Refineries 1915

Year Built	City	Company	Crude Used bopd	Investment	Miles Pipe Lines	Tank Cars Owned	Wells Connected
OKLAHOMA							
1905	Muskogee	Cudahy Refining Co.	300	$95,000			
1905	Muskogee	Muskogee Refining Co.	1,200	350,000	18	65	200
1906	Okmulgee	American Refining Co.	1,500	583,100	20	139	
1906	Okla. City	Oklahoma Refining Co.	1,000	280,667		50	
1906	Tulsa	Uncle Sam Oil Co.	600	50,000		32	
1908	Sapulpa	Sapulpa Refining Co.	3,000	749,907	33	85	
1910	Okmulgee	Indiahoma Refining Co.	2,000	1,258,000	80	125	8
1910	Vinita	Milliken Refining Co.	6,000	999,800		420	
1911	Tulsa	Constantine Refining Co.	3,500	400,000	21	98	15
1911	Coalton	Webster Refining Co.		15,000			
1912	Cushing	Consumers Refining Co.	4,500	464,791	118	315	
1912	Ponca City	Ponca Refining Co.	3,300	225,000	30	140	80
1913	Cushing	Cushing Refining Co.	2,700	90,000		150	
1913	Tulsa	Cosden & Co.	12,000	1,680,000	215	560	
1913	Cleveland	Consolidated Oil Ref. Co.	500	100,000		20	
1913	Sand Springs	Phoenix Refining Co.	2,000	300,000	24	25	27
1913	Sand Springs	Pierce Oil Corp.	6,000	600,000	35	450	60
1913	Tulsa	The Texas Co.	6,000	1,200,000		378	
1914	Cushing	Chanute Refining Co.	4,000	600,000	100	200	50
1914	Ardmore	Ardmore Refining Co.	1,000	100,000	8		
1914	Cushing	New State Refining Co.	1,000	65,000		20	
1914	Cushing	Peerless Oil Refining Co.	2,650	600,000		150	
1914	Cushing	Hillman Refining Co.	200	12,000			
1914	Bristow	Continental Refining Co.	325	20,000		15	
1915	Yale	Webster Oil & Gasoline Co.	500	17,030	1		
1915	Cushing	International Ref. Co.	3,000	200,000		225	
1915	Yale	Sun Oil Co.		100,000			
1915	Pemeta	North American Ref. Co.	1,000	150,000	10	20	4
1915	Okla. City	Capital Refining Co.	125	20,000			
1915	Allen	Crystal White Ref. Co.	100	10,000	3	3	3
1915	Yale	Southern Oil Corp.	new	60,000			
1915	Okmulgee	Portland Oil & Ref. Co.	150	10,000			
1916	Boynton	Mid-Continent Ref. Co.	1,000	40,000			
1916	Lawton	Lawton Refining Co.	250	15,000			
MISSOURI							
1913	Joplin	Wilhoit Refining Co.	500	90,000		27	
1915	St. Joseph	St. Joseph Refining Co.	200	15,000			

KANSAS							
1905	Moran	Eastern Kansas Oil Co.	160	$300,000	3	29	90
1905	Erie	Great Western Oil Ref. Co.	500	754,000	24	60	11
1905	Niotaze	Niotaze Refining Co.	100	275,000			
1906	Humboldt	Miller Petroleum Ref. Co.	400	73,626	7	25	
1906	Kansas City	Kansas City Refining Co.	1,400	250,000		66	
1906	Chanute	Kansas Co-operative Ref. Co.	500	200,000	7	30	10
1906	Coffeyville	Kansas Oil Refining Co.	1,700	300,000	60	100	900
1906	Cherryvale	Uncle Sam Oil Co.	400	125,000		56	
1906	Caney	Kanotex Refining Co.	600	650,000	43	37	70
1907	Chanute	Chanute Refining Co.	2,000	300,000	12	100	
1907	Coffeyville	National Refining Co.	3,200	500,000	110	315	1,000
1908	Coffeyville	Cudahy Refining Co.	3,000	1,000,000	128	342	
1908	Rollin	Rollin Oil Refinery	100	20,000	3		
1909	Chanute	Kansas Crude Oil Co.		12,000			
1910	Independence	Petroleum Products Co.	3,000	2,500,000	170	200	1,300
1914	Ark. City	Lesh Refining Co.	300	30,000		15	
1914	Wichita	Wichita Refining Co.	350	10,000			
1915	Hutchinson	Hutchinson Refining Co.	300	5,000			
1915	Rosedale	Rosedale Refining Co.	1,000	25,000			
TEXAS							
1898	Corsicana	Magnolia Petroleum Co.	2,000	$559,176			
1902	Beaumont	Magnolia Petroleum Co.	8,000	3,885,183			586
1914	Fort Worth	Magnolia Petroleum Co.	12,000	457,840			
1915	Gainesville	Producers Refining Co.	10,000	825,000			
ILLINOIS							
1907	E. St. Louis	Indiahoma Refining Co.	700	$100,000			
1909	E. St. Louis	Consolidated Oil Ref. Co.		50,000			
1915	E. St. Louis	Consolidated Refining Co.		35,000			
1915	E. St. Louis	East St. Louis Ref. Co.	500				
1915	E. St. Louis	Seeger Refining Co.	300				

p. 43-44. Pipe Lines in Oklahoma. 1915. About 1,952 new lines were laid in Oklahoma in 1915. (Details given on each company and place). The Prairie Pipe Line Company was the leader with 939 miles of lines. Prairie handles about 150,000 bopd through their lines.

p. 46. Oklahoma Gas Production in 1915. About 1,735,100,000 cfgpd of new gas was discovered in Oklahoma during 1915. About 409,280,000 cfgpd of new gas was discovered in Kansas during 1915. Much gas was mudded off for the oil.

The following tables show the gas development in Oklahoma during 1915.

Months	cfgpd
January	131,000,000
February	125,500,000
March	109,500,000
April	96,000,000
May	179,500,000
June	70,000,000
July	58,000,000
August	58,500,000
September	150,050,000
October	175,500,000
November	280,950,000
December	300,600,000
	1,735,100,000

District	cfgpd
Cherokee Deep Sand	142,000,000
Cherokee Shallow Sand	30,750,000
Osage	79,000,000
Cleveland	30,000,000
Cushing	189,000,000
Kay	103,500,000
SW Oklahoma	274,000,000
Miscellaneous	71,000,000
Creek Nation	815,050,000
	1,735,100,000

The Catoosa, Owasso, Blackwell, Yale, Ada, Taft, Stone Bluff, and Mounds Fields were some of the more important gas fields developed during 1915.

p. 47. Texas and Louisiana Refineries and Pipe Lines. 1915. The following list of 17 companies in Texas and Louisiana and their refineries is given:

Company	City	Capacity (bopd.)
The Texas Co.	Dallas	12,000
The Texas Co.	Port Arthur	45,000
The Texas Co.	Port Neches	5,000
Gulf Refining Co.	Port Arthur	60,000
Gulf Refining Co.	Fort Worth	7,500
Magnolia Petroleum Co.	Beaumont	25,000
Magnolia Petroleum Co.	Fort Worth	12,000
Magnolia Petroleum Co.	Corsicana	3,000
Pierce-Fordyce Oil Association	Fort Worth	6,000
Pierce-Fordyce Oil Association	Texas City	2,500
Producers Refining Co.	Gainesville	10,000
Panhandle Refining Co.	Wichita Falls	2,000
Wichita Refining Co.	Iowa Park	1,000
Oriental Refining Co.	Dallas	1,000
Dixie Refining Co.	San Antonio	500
Avis-Wood	Jacksboro	600
United Refining Co.	Beaumont	2,000
Houston Oil Co.	Houston	2,000
Orange Refining Co.	Orange	1,200
Standard Oil Co. of La.	Baton Rouge, La.	40,000
Caddo Oil Refining Co.	Shreveport, La.	1,900
Louisiana Oil Refining Co.	Shreveport, La.	1,500
Shreveport Refining Co.	Shreveport, La.	1,200
		241,900 bopd

p. 48-49. Oil Men Who Passed Away in 1915. January. D.W. Burger, age 32, Tulsa, driller, formerly of Monterey, Pa. Hosea Brooks, age 37, Kiefer, formerly of Waynesburg, Pa. Ralph Thompson, age 30, Tulsa, contractor. Irvin Helpman, age 40, Shreveport, La., producer. February. Fred A. Milburn, age 23, Muskogee, supply man. G.H. Linsenbigler, age 35, Drumright, gas producer. Joseph Mosters, age 27, Drumright, Creek Co., tank builder. Dr. George Brown, age 84, Rockford, Ill., drilled first well in Kansas in 1860's. J.J.B. Fink, age 77, Tulsa, producer. John Edwin Prosser, age 42, Tulsa, contractor. Everett B. Huffman, age 26, Cushing, tank builder. John Roy, age 52, Tulsa, producer. March. Charles Miller, age 74, Independence, Kansas, formerly of Warren, Pa. J.E. Winn, age 47, Coffeyville, Kansas, foreman of Cudahy Refinery. E.C. Hoag, age 56, Independence, Kansas, formerly cashier for 25 years at First National Bank of Titusville, Pa. Mert Hilliard, age 35, Okmulgee, manager, Atlas Supply Co. Laura Spellman Rockefeller, age 56, wife of John D. Rockefeller. William A. Henry, age 43, Claremore, with Cudahy Oil Co. Orrin Allen Coleman, age 26, Dallas, Tx., lease broker. Allen Holt, age 52, Tulsa, producer. April. A.M. Williams, age 56, Wichita Falls, Tex., producer. L.B. Meadows, age 47, Shreveport, La., refiner. Kenneth George Coyle, age 19, Tulsa, son of the superintendent of the Prairie Pipe Line Co. Daniel G. Bohan, age 51, Dallas, Tex., manager Pierce-Fordyce Oil Association. J.M. Stotts, age 55, Coffeyville, Kans., contractor. May. H.C. Edrington, age 72, Fort Worth, Tex., president Lone Star Gas Co. James Davis, age 35, Drumright, driller. P.F. Kearns, age 61, Tulsa, leaser. J.S. Fritz, age 40, Dewey, field man. Andrew F. Jackson, age 47, Bartlesville, lease man. W.T. Munn, age 46, New York City, president Kanotex Refining Co. of Caney, Kansas. June. Joseph Tomlinson, age 72, Tulsa, producer. Louis Heilperin, age 46, Shreveport, La., pioneer producer Caddo Field. Solomon Fun, age 76, Mountainburg, Ark., producer. Clark Stevens, age 75, Ochelata, pumper. W.F. Cowric, age 58, Electra, Tex., driller. July. W.L. Patterson, age 31, Oklahoma City, gas expert. John Yust, age 39, Tulsa, traffic manager, Cosden Co. W.C. Coffey, Cushing, tool dresser. Frank Moffitt, age 35, Parsley, Oklahoma, contractor. John Gough, age 84, Webb City, Mo., superintendent of gas companies. William Johnstone, age 57, Bartlesville, banker, merchant, and oil

producer. J. Martin Amsler, age 56, Drumright, producer. A.F. Mosely, Electra, Tex., bookkeeper, Magnolia Petroleum Co. Spire Berry, age 39, Tulsa, producer. August. J.J. Byrne, age 48, Tulsa, contractor. Jene Jansens, age 50, Kiefer, producer. William Sterling Porter, age 49, Los Angeles, Cal., vice-president, Associated Oil Co. of Cal., organizer of Central Petroleum Co. of Oklahoma. James W. Morrison, age 40, Grabham Station, Kansas, driller. September. Glenn Fowler, age 28, Drumright, field man. Homer E. Smith, age 60, Burkburnett, Tex., contractor. October. A.C. Stich, age 69, Independence, Kansas, banker and producer. Robert L. Larkin, age 47, Tulsa, purchasing agent, Gulf Pipe Line Co. Leroy John Havice, age 25, Okmulgee, field man. John McCoy, age 34, Coffeyville, Kansas, field man. November. Oscar G. Benson, age 61, Independence, Kans., producer. Clarence Clark, age 23, Healdton, driller. Claire Ferguson, age 28, Healdton, rig builder. B.H. Black, age 46, Tulsa, superintendent. A.J. Hayes, age 45, Tulsa, shooter. Roy Westerman, age 37, Bigheart, tool dresser. Nathaniel Burchfield, age 65, Shreveport, La., field man. E.E. Strafford, age 61, Sedan, Kans., producer. December. Robert Germany, age 45, Jennings, La., field man. John Bray, age 45, Boynton, driller. Charles David Cartwright, age 42, Kansas City, Mo., manager, Home Oil Co. George H. Orr, age 50, Kansas City, Mo., manager Kansas City Gas Co. Hugh Melvin Phillips, age 29, Shreveport, La., Producers Oil Co. engineer. Frederick Boston, age 45, Joplin, Mo., contractor. Peter McGraw, age 57, Tulsa. Pennsylvania contractor.

p. 51-52. Oklahoma and Kansas, by R.H. Whitney. In Kansas, the Augusta and Elorado Fields are expanding. (Details given on wells).

In Oklahoma, the deepest well in the state was a dry hole at 4,303 feet. The Gypsy Oil Co. test north of McAlester in Sec. 6-6N-14E was plugged this week, with a showing of gas at 600 feet, in Pittsburg County.

In Okmulgee County, south of Mounds, in virgin territory, the Carter Oil Co. in Sec. 28-16N-12E struck 240 bopd at 2,150 feet.

In Okfuskee County, in the Tiger Flats area, McDowell et al in the SE-Sec. 22-12N-11E got 150 bopd at 2,400 feet.

In Creek County, in the Mannford SE area, E.E. Gillespie et al in Sec. 22-19N-9E got about 10 bopd at 2,191-2,247 feet.

In Wagoner County, near Stone Bluff, Ufer et al in Sec. 5-16N-15E, northwest of the Braden & Gobel wells, have 1,080 bopd at 1,200-1,210 feet. Braden & Gobel #3 Colbert in Sec. 5-16N-15E got 2,000 bopd. Their #2 was 2,400 bopd, and their #1 was 100 bopd.

In Kay County, in the Blackwell NE area, B.B. Jones #2 Swenson in Sec. 32-29N-1E got 100 bopd at 3,372-3,379 feet. It is near their #1 that was drilled several years ago, and is now making 55 bopd after 2 years.

In Carter County, the Healdton Field continues to be developed. (Details given on wells). The production is about 75,000 bopd.

In Tulsa County, near Bixby, the Andes Oil Co. #3 Owen in Sec. 3-16N-13E got 300 bopd at 2,085 feet. A number of good wells have been developed in Sec. 10-16N-13E, in the 1,600-foot sand.

p. 55-56. East Texas and Louisiana, by M.L. Vaughn. About 41,675 bopd is the daily average production of this area, with 26,053 bopd in the southern area of Red River and DeSoto Parishes, and 15,622 bopd in the northern area, mainly Caddo Parish. Three big gas wells came in at about 20,000,000 cfgpd each in the southern district. Many wells are drilling in all areas. (Details given on wells). There were 43 wells drilling or being erected in the Caddo Field to the north. An important wildcat, in DeSoto Parish, near the Texas line, 16 miles west of the Naborton Field and 50 miles south of the Caddo Field, is the Citizens Oil & Gas Co., #1 Bland in Sec. 11-11-16, 1.5 miles SE of Logansport, on the east side of the Sabine River, that hit oil at 2,565-2,700 feet, and about 60 feet of oil went into the air. About 1,500 feet of oil stood in the hole at first. Drilling continues in Marion and Cass Counties, Texas. The pool in Marion County adjoins the Caddo Parish pool.

p. 56, 58. North-Central Texas, by H.W. Whitney. There are many wildcats being drilled in Shackelford, Palo Pinto, Jack, Jones, Hood, Eastland, Cooke, Taylor, Hardman, Coleman, Limestone, Tom Green, Montague, Kaufman, Archer, and Wilbarger Counties. (Details given on some wells). In Jack County is the Jacksboro Field, with about 100 wells, each producing about 1 to 6 bopd each of 20 gravity oil, from a bed about 1 to 2-feet thick at 80 to 110 feet deep. About a mile away is the Avis-Wood Oil & Refining Co. plant, using the Wells process, with a 300 bopd capacity. The Electra Field has 30 wells drilling and the Burkburnett Field has 20 wells drilling, in Wichita County, and many wells are being completed. (Details given). In Clay County, in the Petrolia Field, a number of wells are drilling. (Details given). The Weatherford Development Co. has been formed, and they will drill a well in Parker County, southeast of Mineral Wells which is in Palo Pinto County.

p. 68. Discovery of Glenn Pool Recalled. On Nov. 7, 1905, Robert Galbreath and Frank Chesley, or Galbreath & Chesley, started the first well in the Glenn Pool on the Ida E. Glenn farm in Sec. 10-17N-12E, Tulsa County. At 1,438 feet, 8-inch pipe was set, and at 1,468 feet 6-inch was used, when oil began to pour over the derrick top, on Jan. 14, 1906, at 800 bopd. Previously Galbreath & Chesley drilled some wells at Red Fork and got a small producer. Later, Mr. Galbreath went farther south, and located a spot on a small rise. Mrs. Glenn gave him a lease with a one-eighth royalty. He went to Charles F. Colcord for backing, in Oklahoma City, and Colcord consented, but admonished Galbreath for drilling in such poor country for oil. The Glenn farm is now owned and operated by the Gypsy Oil Co. About 15,000 bbls. of oil have been produced per acre on this farm.

p. 70. Report of Geologists on Natural Gas in North Texas. The U.S. Geological Survey Bull. 629 by G.C. Matson and E.W. Shaw will be issued shortly. The Dallas-Fort Worth area needs more gas, and the U.S. Geological Survey has made this investigation for this area. The Petrolia Field of Clay County is about 40% exhausted, and now contains about 70,000,000,000 cfg, with pressures being about half of the initial pressures. This amounts to about a 3 to 5 year supply, taking into account of the other towns on the line. The Mexia-Groesbeck Field has an open flow capacity of about 220,000,000 cfgpd, and a reserve of about 31,000,000,000 cfg, or about a 3 year supply for Dallas-Fort worth, with pressures diminishing to 15 psi near the end of the field. Small fields may be found closer to Dallas-Fort Worth, and fields across the river in Oklahoma may be used to supply the towns.

p. 78-86. Wells. Kansas, Oklahoma, Texas, Louisiana, Arkansas. Jan. 1, 1916. Detailed Reports. In Kansas, for Dec. 1915, 287 wells were completed, including 40 gas wells and 26 dry holes, with 4,260 bopd new production, and 183 wells drilling or being erected.

In Oklahoma, 826 wells were completed in Dec. 1915, includling 54 gas wells, and 135 dry holes, for 48,429 bopd new production, with 1,175 gis drilling or being erected.

In Arkansas, about 22 rigs were drilling or being erected.

In North-Central Texas, about 44 wells were completed, including 14 dry holes, with 1,180 bopd new production, and 153 rigs drilling or being erected.

In the Caddo District, La.-Tex., 43 wells were completed, including 8 gas wells and 8 dry holes, for 9,490 bopd new production, and 150 wells being drilled or erected.

In the Thrall Field, Tex., 10 wells were completed, including 1 dry hole, for 200 bopd new production, and 8 rigs drilling or being erected.

(Details are given on all wells.)

In LeFlore County, Oklahoma, 2 wells were completed and 2 were drilling.

In Atoka County, 4 wells were drilling. In Coal County, 13 wells were drilling, and 2 were completed. In Pittsburg County, 2 wells were completed and 4 wells were drilling. In Marshall County, 12 wells were drilling. In Choctaw, Pushmataha, and Bryan Counties, one well each is drilling. Wildcats are being drilled in 28 counties in Oklahoma.

p. 87. Osage Reservation Production and History. About 73 lessees control 743,000 acres in Osage County, Oklahoma. Of this, 680,000 was originally leased to the Indian Territory Illuminating Oil Co., which sublet most of the acreage to other companies. The first lease was by Edwin B. Foster and associates in 1896, who secured it by assignment from James Scott Glenn, the original lease covering 1,400,000 acres, and was to run for 10 years. The Osage Nation would receive 10% royalty. In 1906 after the I.T.I.O. took over the leases from Mr. Foster, the acreage was reduced to 680,000 acres due to non-development, with royalty increased to one-eighth, and $100 a year for each gas well. The I.T.I.O. sublet to 67 companies, by whom the leases are still held. About $10,000,000 was paid out in royalties to 2,229 members of the Osage Nation, two-thirds of whom live on the reservation. About 16,000 wells have been drilled, but only about 3,000 are producers, with 7,113,930 bbls. being produced in 1915. About 2,600 are oil wells and 400 gas wells.

The first well was drilled by J.S. Glenn on Lot 42, close to Bartlesville, with 200 bopd at 1,816 feet. It was on the strength of this well that the Foster interests purchased the original lease. In the latter part of 1906, the railroad reached Bartlesville, and the pipe line of the Prairie Oil & Gas Co. was extended from Caney, Kansas, to Bartlesville, and that is when production in the Osage Nation is first recorded, even though the wells were drilled much earlier.

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