



KANSAS GEOLOGICAL SOCIETY

BULLETIN

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◆ *KGS Fishing*
Friday, September 16th

◆ *KGS Clay Shoot*
Friday, October 7th

October 5, 2016 Marks 100 Years of Oil In El Dorado

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*Early photo of El Dorado oil fields
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CALL FOR PAPERS

The Kansas Geological Society Bulletin, which is published bimonthly both in hard-copy and electronic format, seeks short papers dealing with any aspect of Kansas geology, including petroleum geology, studies of producing oil or gas fields, and outcrop or conceptual studies. Maximum printed length of papers is 5 pages as they appear in the Bulletin, including text, references, figures and/or tables, and figure/table captions. Inquiries regarding manuscripts should be sent to Rebecca Radford, manager@kgslibrary.com or mailed to 212 N. Market, Ste. 100, Wichita, KS 67202. Specific guidelines for manuscript submission appear in each issue of the Bulletin, which can also be accessed on-line at the Kansas Geological Society web site at <http://www.kgslibrary.com>

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KGS 2016 Technical Talks

Sept. 1— *“Re-thinking Cuttings”* - Bill Chandler

Sept. 20— *“Gas Detector Trouble-Shooting in The Field and Introduction of the Corvascope Re-Born”*
- Keith Reavis

Please remember to check the website for the most up to date information on Technical Talks
<http://www.kgslibrary.com/techtalks.cfm>

Note: For those geologists who need 30 points to renew their licenses, there will be a sign-in sheet at each presentation and also a certificate of attendance.

Other Society News & Happenings

As you plan out your calendar for the fall make sure to mark down to attend
THE THIRD BIENNIAL FIELD CONFERENCE OF THE AAPG MID-CONTINENT SECTION.
See the link below to access more information such as registration and events.

Fort Smith Geological Society and the University of Arkansas Geosciences Department have put together this conference. The conference headquarters is the Chancellor Hotel located on the historic Fayetteville town square in Fayetteville Arkansas. The conference will be held September 30th thru October 2nd. Fayetteville is conveniently located such that there will be two separate field trip opportunities: one to the carbonate dominated Mississippian section and the other to upper clastic dominated Pennsylvanian section. The guide book will cover both trips so you will not miss out on the geology regardless of what trip you might take.

Guest will be included in the Ice Breaker/Poster session and a dynamic evening dinner is planned for Saturday evening with Dr. Tom Paradise speaking on his research in Petra, Jordan.
See you there for an extraordinary fall weekend in the Ozarks guaranteed to not disappoint!

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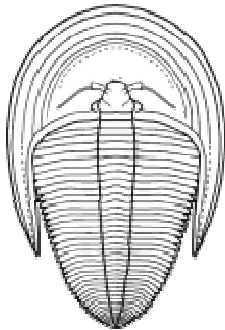
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Paleontology are prohibited from entering.



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President's Letter

Society and Library Members,

The price of oil continued its wobbling up and down price through the course of this summer, despite the decline of our crude production. At the writing of this letter, the overall downward pressure on oil is mostly stemming from high inventories of gasoline, products, increased production from OPEC and fairly resilient big shale plays. With the OPEC nations running full tilt on production and Iran back up to 3.4 to 3.6 MMBOPD, the talk of a current freeze of production to stem prices from heading back down, probably won't happen until Iran is at their pre-sanction capacity of 4 MMBOPD (but it is currently propping up our oil prices). Our hope for any sustained higher oil price looks like it won't happen until the start of 2017. We just need to be patient and be able to hang on just a little longer.

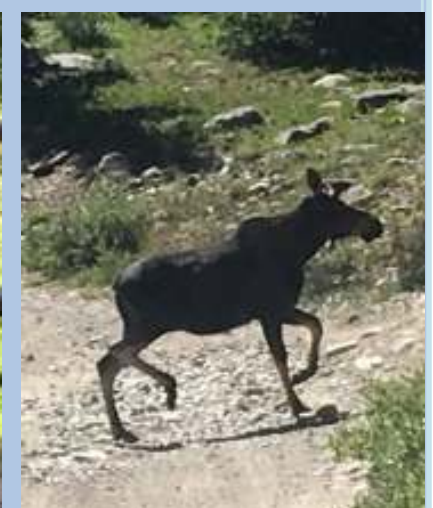
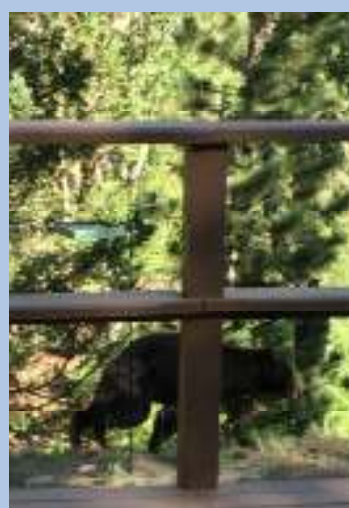
Paper sales at the library had a nice up-tick in July, that we hope will continue and our digital sales have remained consistent without too many swings. As mentioned in the last bulletin, membership at the library and the WDL seem somewhat comparable to last year's numbers.

I was talking with a few of the drilling contractors at the KIOGA convention and they have a few more rigs running than they did this spring and they hope it continues through the fall, because they all know that drilling typically slows down during the winter months. So while there are a few more rigs running in Kansas, I hope you can get your prospects turned and drilled while this little drilling boom is occurring.

With brief up-date on our annual family trek near Buena Vista, Colorado, we had a few surprising events that have never happened to us before. In the 30 or so years of going up here, we had heard about bears near the cabin, but we had never seen one. Much to our surprise at 9:30 one morning, a brown bear (about 275-325 lbs.) was just past the deck eating the bird seed out of our hanging seed box and drinking the water out of the humming bird feeder. It stood about 6' tall when it was on its hind legs. When my son cracked open the back door to take a better picture, much to the displeasure of my wife, it was pretty skittish and ran off. But in any event it had everyone's adrenaline up and nobody wanting to go outside after dark. Then on a brief 4x4 ride up to Tin Cup pass near Mt. Princeton, we had two, pretty much full grown, moose walk right out in front of us about 20 yards away. Five minutes earlier my brother said 'with all the ATV traffic we've seen, I doubt we see any wildlife'. So much for that thought. To say the least, it was a great vacation and collected a few more rocks to take home. In any event, I hope you all have had time to take a small break from work and attended a fun family/friend's event or vacation this summer.

The Kansas Geological Annual Picnic had a pleasant turnout with nearly 60 people attending. Attendance was down from last year, as can be expected, but there were more grand kids and little ones present than last year, which is always good. Any thoughts of changing venues for next year's picnic would be greatly appreciated. The Board will be talking about this in the upcoming months in hopes of stimulating next year's event. We will be having the Fishing Tournament on Sept 16th, so be sure to sign up. With the weather cooling down, we are hoping for a great turnout! Again, please plan to attend these upcoming events and if possible, help with any financial contributions.

Tim Hellman, President



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**KGS Annual Fishing Tournament
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From The Manager

Dear Members,

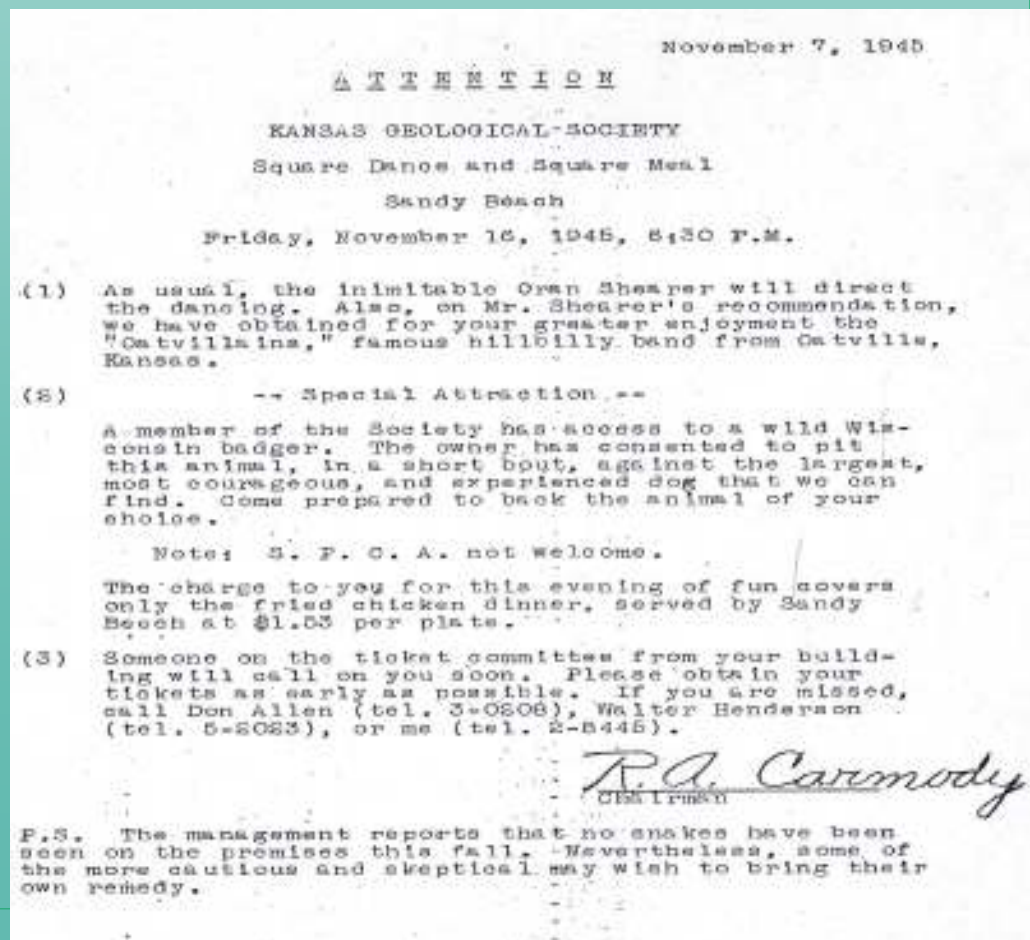
I want to thank those of you who have helped the Society support its events this year. I know it has been a tight year for everyone and yet many of you have found a way to support the Banquet, the Golf tournament, and most recently, the Picnic and the upcoming Fishing tournament (Friday, Sept. 16th). We will be having our final event, the Clay Shoot, the first Friday in October. Most of these events are very well attended and enjoyed. I know the people who chair the events and work hard to make them happen, really appreciate when they call for sponsors and you come through. **Thank you!**

Your library has been a little busier since there are a few wells getting drilled. We have had some unique printing jobs also such as a reference photo blown up for a quilter and one of our members is wanting some old photographs scanned. We can do most any printing or scanning job so please bring any projects you might have to us and we will do our best for you.

Now for something fun....I came across this not long ago and thought it should be shared for a good giggle. See the scan below.

Respectfully submitted,
Rebecca Radford,
Manager

P.S. - Maybe someone could tell us if there really was a badger at the Square Dance.



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October 5th marks 100 Years of Oil in El Dorado

By Julie Clements
Butler County Times-Gazette

In 1915, about 3,000 people called the rural agricultural community of El Dorado home. They had no idea events toward the end of that year would begin something that would forever change not just El Dorado, but the state and an entire industry. But the story begins before oil was struck in El Dorado. In 1912-13 an Oklahoma geologist, Charles Gould, was brought to Augusta to make some engineering drawings of the area. Drilling began in Augusta in 1914. There were seven sites where Gould said there would be gas. "Six of the seven hit gas, which was absolutely unheard of at that point and time," said Kansas Oil Museum Director Warren Martin. "The one well, which didn't hit gas, Gould encouraged them to continue drilling deeper. They drilled down below 2,000 feet and hit oil. One hundred percent success rate on seven wells was absolutely mind boggling."

Also in 1914, the city of El Dorado was in desperate need of gas, so they drilled several test wells all around El Dorado, but was not having any success. But because Gould had mapped out all of Butler County, there was hope for El Dorado. Cities Services bought the lease from the city of El Dorado, coming to an agreement they would give the city back their \$15,000 they paid for the land, as well as royalties off of any oil, and they began drilling. "So the idea from that point forward, no oil company in the world would go and drill a well without seeking the advice of a geologist first," Warren said. "Before 1915, geologists were seen in the same vein as witching and doodlebugs. They were just charlatans. It fundamentally transformed it from that point going forward. Geology was established as one of the great science industries."



According to an article 30 years ago in the El Dorado Times by K.V. Brooks, "Many people did not believe there was any possibility of striking gas or oil in the El Dorado area. In 1909 and 1910, drilling had occurred on the Holdeman tract. At 1,557 feet there were no oil or gas shows, so the hole was plugged. In the spring of 1911 the city of El Dorado had drilled the nearby city park on the east bank of the Walnut River, and it was abandoned at 1,695 feet." According to the article, in 1914 the city needed gas and passed a \$15,000 bond issue. They also leased 750 acres west of the city and started drilling that summer. The article states: "On August 15, when they reached a depth of 2,650 feet, they found it dry and abandoned the hole." Cities Services still agreed to lease 30,000 acres surrounding the last El Dorado well and drilled an exploratory well. On Sept. 1, 1915, H.R. Straight from the Bartlesville, Okla., office and F.L. Frankenberger, superintendent of the Augusta operations, staked the location of Stapleton No. 1.

Then on Oct. 5, 1915 oil was struck in the El Dorado Oil Field at Stapleton No. 1, with 96 barrels of oil per day. The headline on the Oct. 6, 1915 edition of the El Dorado Daily Republican was "Strike Traces of Oil at Test Well," and on Oct. 7 the headline read "Drillers Down to 705 Feet; Put in New Casing Today." "There wasn't a whole lot that was put into the paper about it because no one knew how big it was," said Martin. "The Kafir Corn Festival was what was going on that was in the paper. Everyone was talking about that as well as the World Series." This was evident in the Oct. 9 paper, which had a large headline of "Boston Takes Second Game," with a smaller headline off to the side reading "Leases on 9,120 Acres Near City Have Been Filed." On Oct. 11, Boston was again the focus of the front page, with just a smaller mention of "Bidding is Strong For Leases Near Prospect Well." It also was reported that day people could see "real oil" at The Republican. The story states, "Have you ever seen oil right fresh out of the ground? The Republican went out to the field Saturday and got a bottle and it is now to be seen here in this office and we invite any one to call who cares to see what we are all spouting over and feeling like a million dollars – nearly. It is deemed first class oil and there is not a drop of water in it. Some gas sand at the bottom is the only thing in the bottle besides the real stuff."

On Oct. 13, 1915 it was reported the "excitement about the oil situation is becoming quite intense, each day adds to the belief that we have an oil field here and there is a scramble going on for leases." The news on the oil continued to find a place on the front page, although still not garnering a large headline. Oct. 14 stated "Oil From Well tests 35 Percent" and "New Oil Rig Is Going Up; Wichita Natural Will Start Another Well in a Few Days." The next days' papers continue to report of the scramble for oil leases. On Oct. 25, it was reported "Tulsa Oil Man Opens Up Office Here; Will Develop On Leases Near This City" and Oct. 26 reported "Oil Boom Continues; Rumor of New Drilling Afloat; \$20,000 Paid For One Lease." On Oct. 27 The El Dorado Republican reported a bid deal on the land of Frank Robison was closed, then a few days later it was reported, "Rumor Has it That El Dorado Company Has Been Formed and Developments Will Soon Begin."

On Nov. 4 it was announced a local company was to start drilling at once, as well as the arrival of a new drilling rig.

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To be a Visiting Geoscientist bearing the AAPG flag, you are asked to have at least 5 years of experience and make at least one visit per year to a university. It can be a school with an AAPG Student Chapter, or a college/university without one. Your choice.

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Contact Robbie Gries, co-Chair VGP committee, Denver, if you are interested in learning more. rrgries@aol.com

Updates continued nearly daily, with such headlines as "Tulsa Rig is Expected Here Very Soon" and "Rig For Stapleton No. 5 Here; Many More on the Road" in early November. On Nov. 9 it was reported "Wichita Drillers Lease the A.W. Graper Farm: It is Rumored They Will Drill" and on Nov. 12, "Drillers Expect Heavy Oil Strike on Varner Farm." The price of oil was from 30 to 40 cents in 1914, going up to \$1.55 by 1916 and reaching \$3.50 a barrel, according to Jay M. Price's book, "Images of America: El Dorado Legacy of an Oil Boom." Talk of a refinery began in December 1915. Butler also was leading in the production of gas. Oil headlines began to be more frequent on the front page by the end of 1915, with one paper containing the following: "Good Oil Flow Struck on Hill's," "Oil Goes Up One More Dime," "Big Paying Oil Flow Found in the Deep Test Well: Oil Raises in Casing; Flows Out" and "Drill Strikes Varner Sand in Deep Well."

The oil frenzy continued in 1916, with early headlines declaring "Varner Well Flows 1,800 Barrels" on Jan. 11, 1916; "Carter Company Open Up Office" on Jan. 12; "Lee Scott Has an Oil Office," "Denton Well is 75 Barrel Producer" and "Oil Goes Up to \$1.25," all on the front page Jan. 20; and on Jan. 26, an article stated: "Building Fever in El Dorado at its Height Now: People are buying residence properties which would have been slow in selling before the oil boom, merely as investments and others are buying lots and will erect modern home for rental." In March, it was reported the Chanute Refining Company had leased a tract of land in north El Dorado. According to Brooks, Stapleton No. 1 was finally bottomed out at 2,497 feet in the Wilcox sand on Feb. 5, 1916. Tubing was run and test pumping brought 110 barrels of oil per day. During this time, Stapleton No. 2 was flowing 120 barrels per day, Stapleton No. 3 flowed 50 barrels a day, while Stapleton No. 4 flowed 100 barrels per day. Brooks said in his article, "There was no doubt about it, Cities Service had struck a bonanza. The word spread across the nation, the mad rush was on, and the quiet little town of El Dorado was soon turned into a madhouse. It would be several years before the pandemonium of an oil boom town would subside, and the town could return to a more stable way of life."



Oil boom leads to creation of Oil Hill, Midian

The find of oil forever changed El Dorado, Butler County and the state of Kansas. "I think a lot of people have a real disconnect with how important oil is to Butler County," said Kansas Oil Museum Director Warren Martin. "I think a lot of people knew it was important to Butler County, but not the fact that it still is. The El Dorado oil field really did shape the entire south Kansas area, if not Kansas as a whole. In my opinion there are three big aspects of it. "One is that the oil industry turned El Dorado into, basically at that time, a metropolis town. Had it not been for the El Dorado find, El Dorado might be like Leon or any of these other small agricultural towns around here. It fundamentally transformed and put El Dorado on the map as a permanent location for long term." According to Jay Price in his book "Images of America: El Dorado Legacy of an Oil Boom," in 1915 Kansas produced a modest 2.8 million barrels of oil. By 1917, Kansas produced more than 36 million barrels of crude petroleum. In 1918, production peaked at more than 45 million barrels. Kansas had become one of the leading oil states of the nation along with California (the leading producer), Oklahoma and Texas. In 1917, Empire Gas & Fuel Company alone completed 1,000 wells in El Dorado, with approximately 1,275 wells in 1918, according to an article by K.V. Brooks from 1985. Brooks wrote, "In order to keep up with this frantic pace, and to provide housing for the army of workers, it took thousands of men and hundreds of horses and wagons. It required the construction of machine shops, truck repair garages, horse barns, steam plants, field offices, railroad spurs, refineries, pipelines, dining halls, plus houses with fire departments, roads and schools. Brooks continued: "There was one huge plus in the Empire's El Dorado operation. World War I started on July 28, 1914 in Europe, and by the time U.S. declared war on Germany on April 6, 1917, the oil boom in the El Dorado was going full blast. The El Dorado field was given credit as a major factor in the Allies victory over Germany that ended on November 11, 1918, because of the huge supply of oil that was funneled to the war effort in Europe. Some said the El Dorado oil supply changed the nation. If you count World War I, President Wilson said it changed the world."

According to a speech by Ardath Lawson, of the Kansas Oil Museum, "At the El Dorado field's zenith in 1918, this single field was producing some 29 million barrels of oil per annum, constituting 65 percent of Kansas oil population, and 9 percent of the entire nation's output. One especially famous well was known as the Trapshooter No. 1, which had been started by a group of hunting friends eager to get in on the boom, churned out an astonishing 10,000 to 15,000 barrels a day at its peak. The

price of a lease skyrocketed from \$1/ac in early 1915 to an average of \$25/ac after the Stapleton strike, and even went so far as to reach an exorbitant \$3,750/ac in one case." The El Dorado Oil Filed consisted of 34 square miles. With so much work, it also brought a lot of people to the area. The 1910 census showed 23,000 people, while the 1920 census was more than 43,000 people. "What people say is all of a sudden people start realizing there are no motel rooms," Martin said. "All these people start showing up. It was quite a bit later when people really began to understand how big this was." With the arrival of so many people so quickly, tent cities could be found on the outskirts of town. "Oil towns like Oil Hill, the largest company-owned town in America, sprang up almost overnight, but even so there was not enough housing to meet the needs of all the workers and their families coming in to take advantage of the oil boom," Lawson said in her speech. "A 1917 map of El Dorado outlines structures such as chicken coops and tents along with houses and shops, showing the kind of lodging that a significant percentage of the town's burgeoning population had to make do with at the time. Midian also was constructed to house the oil field workers. "Those (Oil Hill and Midian) were primarily built to house the pumpers after the oil well was drilled," Martin said. "Before that you had mostly single men that would bunk up anywhere they could. They were generally rabble-rousers. El Dorado didn't see a fundamental shift in population until really 1916 and 1917. That was when Oil Hill was being built and things really began to change. A pamphlet from the chamber in 1918 showed population in 1915 was 3,500 and in 1918 it was 18,500 people."

Oil Hill was founded by the Empire Gas & Fuel Co., following the Stapleton strike. Nearly everything in the town was company owned, including the houses, schools and most of the stores. It included a general store, post office, community center, filling station and garage, barbershop and homes for "foreign" workers, Price said in his book. There also was a swimming pool, tennis courts and small golf course. According to a sign marking the site of Oil Hill, at the height of the oil boom in the late 1910s, Oil Hill was the largest company town in the world, with some 8,500 residents. The town covered about 64 acres, located northwest of El Dorado. In response to the boom, it was recorded El Dorado was building 1,000 new homes, which created buy-in to the El Dorado community, something Oil Hill did not have. Another town started in response to the boom was Midian, although it is no longer in existence. The Butler County Shrine Club held a commemorative event of Midian in 2010, near the intersection of Shumway and 10th. Midian got its name from the Midian Shrine rite of Freemasonry. According to Price, shortly after Trapshooters No. 1 finding oil, Cities Service's extension company, the Empire Oil Company, began building a town at the site, starting with boarding

Continued on pg. 14

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houses for single men. At one time, the oil town, which got its start in 1912 when the Missouri Pacific Railroad built a siding at that location, had 6,000 residents and boasted schools, a post office, churches, stores, a railroad station and oil wells. According to Price's book, Midian spread out over 28 different leases dotted with 1,132 different wells. By late 1918, Midian had a post office, a two-story railroad station, a brick school, a grocery store, a lumberyard, a bakery, a pool hall, a barbershop, a drugstore, a filling station, a baseball diamond, a community hall for social events, and even a movie house. The "downtown" was at the intersection of Washboard Avenue (today's Shumway Road) and Silk Stocking Row – also the intersection of the Ralston, Paulson, Shumway and Enyart leases." It remained in existence from about 1916 or 1917 until the mid-1940s. The boom lasted through the 1920s, according to Lawson, and even into the 1930s when production declined, many boom towns remained. After the war, oil production shifted to commercial use, and exploration expanded primarily to the south and east of the main El Dorado field. Exploration focused on a series of long, narrow fields called the "Shoestring Sands" in the southern and eastern parts of the county.

Among the investors included Deering Marshall, who owned interest in the Tidal Oil Company, which he sold for \$650,000. In 1918, he became president of the recently formed Kansas Oil and Gas Association. There also were other



smaller oil companies throughout Butler County. According to Price, Tidal Oil Company operated in Magna City, east of Douglas, on the Fox-Bush Pool. The field between Gordon and Augusta supported Haskin's Camp, Browntown, Pine Oil Camp and Reeve's Lease. Oil Valley, east of Elbing, developed in response to strikes on the Leydig and Lathrop farms and had its own stores and entertainment venues, bank branch and post office. Price wrote in his book the first major layoffs began between 1921 and 1922. He said the volatile Kansas weather remained a challenge for the oil industry in Butler County. In 1918, a storm in Kansas and Oklahoma destroyed several thousand rigs. On July 10, 1922, a series of tornadoic winds destroyed 650 rigs in the El Dorado field alone. Many were never rebuilt. Price wrote that by 1930, the county had lost 18 percent of its 1920 population of more than 8,000 people. Of

the boom towns, Midian was the first to close. Cities Service tore down vacant structures or sold them on the condition they had to be move. In 1940, the school closed and Midian declined. Until the mid-1990s, all that remained of Midian was the old wrought iron arch marking the relocated Midian Cemetery entrance. This was removed around 1995 due to construction on Highway 254. Price said Oil Hill declined more slowly, with the big change occurring a decade after Midian. The homes existed until the 1940s, then in the late 1950s, the new construction of Highway 196 bypassed the community. In 1958, Cities Service moved those who were left, closed the town for good and tore down most of the structures. Ralph and Marion Moulton's cafe remained until May 1969.

Oil Continues to Impact El Dorado

Oil's influence on El Dorado is undeniable. Oil refineries, oil businesses and resulting surrounding businesses have made El Dorado into the community it is today, but over the course of history the town has seen a lot of changes.

In "El Dorado -Legacy of an Oil Boom" by Jay M. Price, he writes, "By 1918, there were eight refineries in the vicinity of El Dorado and Augusta. The White Eagle Refinery was in Augusta. The Vickers Refinery was in Potwin. El Dorado had two refineries: the El Dorado Refining Company, or 'El Reco,' to the north of town and what became the Skelly Refinery to the south. In the early 1920s Derby built a refinery in Wichita as well. Several other smaller refineries also developed, but were short lived." The impact of oil reached beyond El Dorado. Martin said the oil find did establish Wichita as the air capital of the world. "One of the direct benefactors of the El Dorado field was a guy by the name of Jake Moellendick," Martin said. "He made tons of money off of the El Dorado field and became really an oil baron. He liked to fly and he liked airplanes so he started trying to put money into airplanes." "He was single-handily responsible for brining Laird, Walter Beech, Cessna, Burke and Stearman," Martin said. "He brought all of those together and at different points they all worked together creating the swallow. "But Jake Moellendick was notorious for, especially in the oil field, people couldn't work for him. He was so abusive as a boss people would work for him for a while, then they would have to leave. When he brought these different inventors of airplanes to form an air company, the same was true. They started building the swallow, the first real plane that was manufactured in Wichita, but he was unbearable as a boss and over time each one of these individuals went off on their own and started their own companies: Cessna, Beechcraft, Stearman (which became Boeing). The reason Wichita became the air capital of the world was Jake Moellendick made a lot of money. All of that is directly because of the El Dorado find." According to Price, Skelly's operations in El Dorado centered on two companies. One was the Midland Refining Company, formed in 1917 to operate a refinery in El Dorado.

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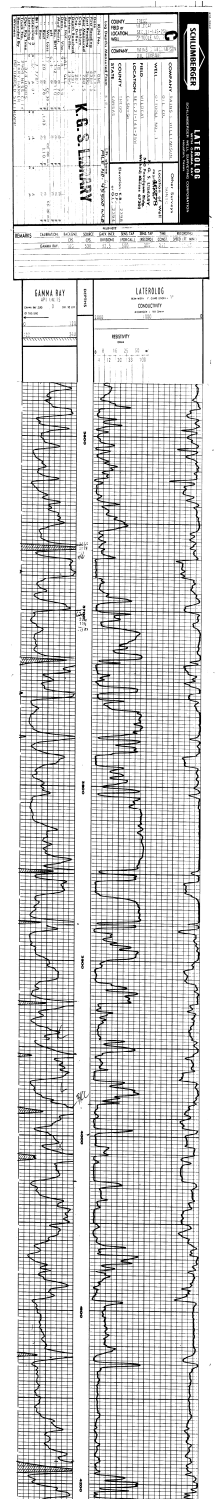
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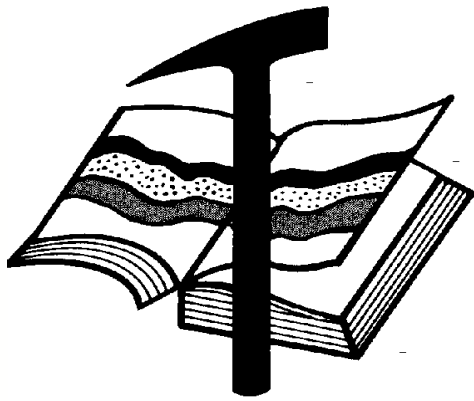
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The Kansas Geological Foundation was founded in March, 1989 as a not-for-profit corporation under the guidelines of section 501(c)(3) of the tax code to provide individuals and corporations the opportunity to further the science of geology. It is dedicated to providing charitable, scientific, literary and educational opportunities in the field of geology for the professional geologist as well as the general public.

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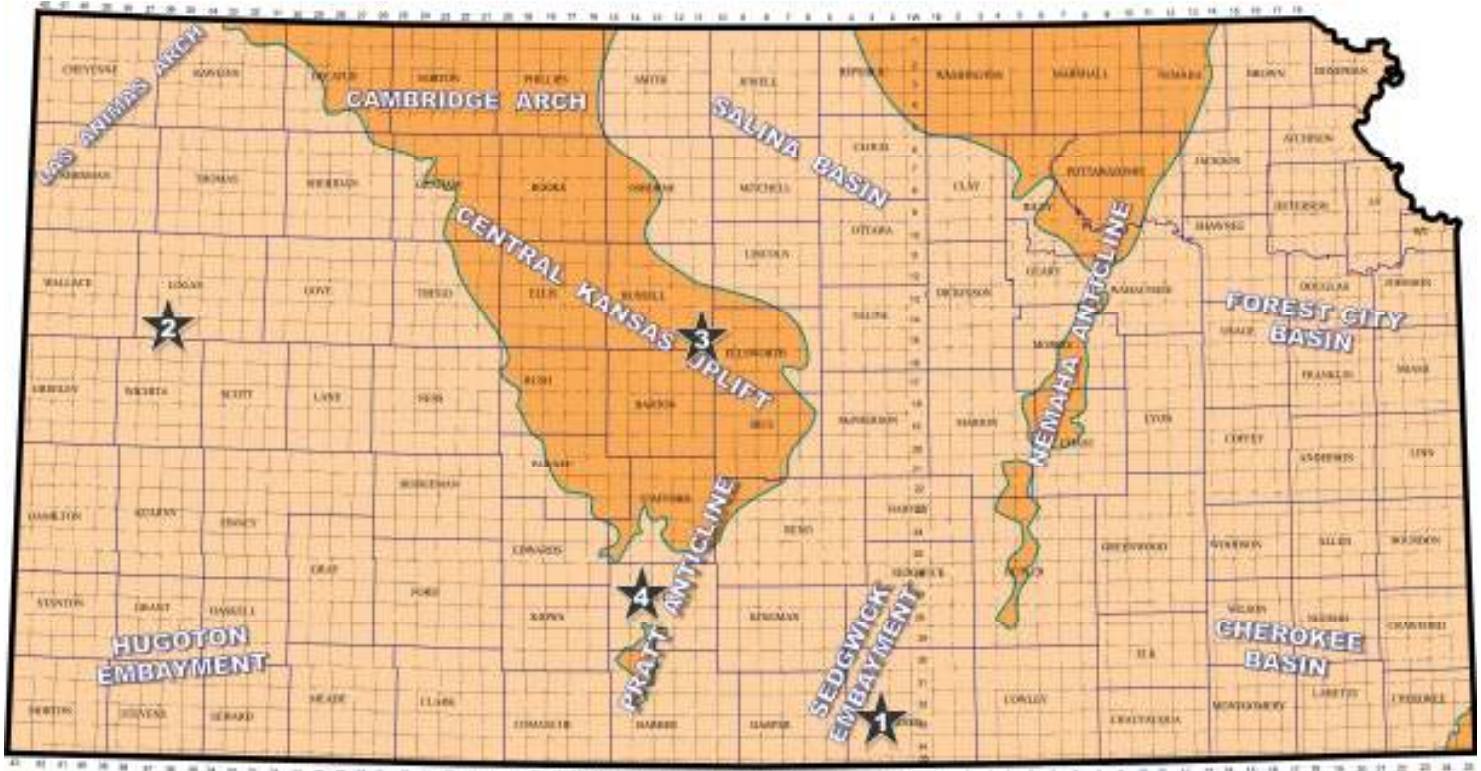
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1- B5 Operating LLC, Wellington (KS), has a new oil and gas discovery in western Sumner County at the #1 Simons Bros. Unit. The lease is located in the NW/4 of section 10- T33s- R3W, about one mile north and seven miles west of Perth, Kansas. The well's producing formation is currently being held confidential, however, the new Simons Bros. pool opener lies over one mile northwest of the Olive Branch Field (1960) where oil and gas has been produced from the Lansing-Kansas City, Mississippian and Simpson formations. The Simon's Unit well was drilled to a total depth of 4,490 ft. by WW Drilling tools.

2- Ritchie Exploration, Inc., Wichita (KS), is producing an undisclosed amount of crude oil from the Marmaton (Altamont) formation at their #1 Koehn - Mollenkamp wildcat well in Logan County. The new Rackmaster pool discovery was drilled in the NW/4 of section 14- T15s- R36W, about eleven miles south and six miles west of Russell Springs, Kansas. Total depth was stopped at 4,927 ft. The new oil deposits lie nearly one mile north of Ritchie's recently established Wing Field (2015). The Wing Field currently has three Marmaton oil producers.

3- American Warrior, Inc., Garden City (KS), has successfully perforated and completed their #1-25 Charvat exploratory well in Russell County to begin producing oil from the Arbuckle formation.. Operator is presently installing pumping equipment to go on production. The wildcat test was drilled to a total depth of 3,385 ft by Discovery Drilling tools at site located in the NE/4 of section 25- T15s- R11W, nearly 7 miles south and one mile west of Wilson, Kansas. The new reserves lie over one mile southeast of the established, five-well Hoch West Field, which has produced nearly 45,000 barrels of crude from the LKC, Conglomerate and Arbuckle zones. The new oil field has not been named.

4- CMX, Inc., Wichita (KS), has discovered new Lansing-Kansas City oil deposits in Pratt County with the successful completion of its #1-21 Money Shot. The wildcat well establishes a new unnamed oil field in the SE/4 of section 21- T 27s- R 14W, about three miles north and east of the city of Cullison in south central Kansas. Operator drilled the well to a total depth of 4,780 ft. The well is currently on pump making an undisclosed amount of crude oil. CMX's new find is situated one and one-quarter miles southeast of LKC oil production in the multipay Blowout Field (1951).

Robert Hazlett was president of the El Dorado National Bank., and he helped organize the Midland Refining Company, as well as Inland Oil Company whose purpose was to drill oil for the refinery. In 1923, both firms merged with the recently founded Skelly Oil Company. Later Hazlett became a major figure behind the formation of a second refinery in the El Dorado area, El Reco. "El Dorado has been basically the same size since 1918," said Kansas Oil Museum Executive Director Warren Martin. "That has shown El Dorado grew because you had at that point, three oil refineries here in town. Two were closed down and lost and now you have one, and it takes fewer people to run a refinery than it used to, so in essence that shows growth, rather than a dying town."

The remaining refinery is HollyFrontier Refinery. It began as Skelly Oil, then was Getty Oil, then Texaco, before becoming Frontier Oil, then HollyFrontier. According to Price, Frontier Oil and Refining, which purchased the plant in 1999, was the largest refinery in Kansas at the time and the only one of the eight original area refineries still in operation. It employed 400 workers and could process 120,000 barrels of crude oil and 15,000 barrels of natural gas liquids daily. In June 2011 it was announced Frontier Refinery will be officially changing from Frontier Oil Corp. to HollyFrontier Corporation following approval by Frontier shareholders of a merger created by Frontier Oil Corp. and Holly Corp. in February valued at nearly \$3 billion. Holly Corporation was originally incorporated under the name General Appliance Corporation in 1947, and in 1949, Frontier Oil was originally incorporated under the name Wainoco Oil Corporation. In 1952 General Appliance changed its name to Holly Corporation to broaden its interest into oil production. It wasn't until 1991 when Wainoco purchased Frontier Oil Corporation and in 1998 the named was changed to Frontier Oil Corporation. Frontier purchased the El Dorado refinery in 1999, quadrupling the company's refining capacity. In 2013, HollyFrontier was listed as one of the 150 largest companies in the U.S. by Fortune magazine. HollyFrontier continues to bring a positive impact on the community. While HollyFrontier's base employment is between 400 and 420, El Dorado Inc Executive Director Linda Jolly said their turnaround and capital improvement activity has a great impact on sales and bed tax revenue. She said they also have contract employees throughout the year. During a turnaround, the refinery has brought in anywhere from 150 up to 1,600 contract workers at one time to complete projects, according to information provided by the refinery for 2014. During the peak time, it created \$808,466.99 in retail sales, \$98, 532 in hotel spending and \$384,933.97 in total earnings.

There also is an indirect impact felt by many in the area. According to information compiled by Jennifer Callaway with the El Dorado Convention & Visitors Bureau and the Kansas Oil Museum, oilfield related businesses with a presence in El Dorado and Butler County include: G & G Machine and Welding Service, Hogoboom Oil Field Trucking Service, Maclasky Oilfield Service, Phillips Well Service, R & D Electric, Simmons Well Service, Timm Backhoe, Weatherford International, Buckeye Supply Company, Harbison-Fischer Sales, Hizey Service and Supply, Sunrise Oilfield Supply, MJ Murphy Oil Company, Aztec Oil Company, Flowers Production Company, Inc., Kaneb Pipeline Company, Plains Petroleum Marketing, Inc., Teichgraeber Oil, Baker Petrolite, Champion Technologies, Chem-Co Warehouse, Energy Services, Inc., United Cementing and Acid Company, Savage Services Corporation, SemMaterials, Magellan Midstream Partners, Frontier Refining and Marketing, CDH, Drisco, Tri-Hydro, Consolidated Oil Field Services, Hoyt Supply, Inc., C-Tech and BG Products, Inc. "A lot of the jobs they have supported the refinery on a day in and day out basis," Jolly said.

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| Frank M. Brooks | 03/98 | 1998 | John Stone | 02/10 | 2010 |
| Robert F. Walters | 04/98 | 1998 | Craig Caulk | 03/10 | 2010 |
| Stephen Powell | 04/98 | 1998 | Joseph E. Moreland, Jr. | 03/10 | 2010 |
| Deane Jirrels | 05/98 | 1998 | Gene Garmon | 03/10 | 2010 |
| William G. Iversen | 07/98 | 1998 | James F. Dilts | 05/10 | 2010 |
| Ann E. Watchous | 08/98 | 1998 | Jerry Pike | 05/10 | 2010 |
| W.R. "Bill" Murfin | 09/98 | 1998 | Donald Hollar | 06/10 | 2010 |
| Donald L. Hellar | 11/98 | 1998 | Delbert Costa | 08/10 | 2010 |
| Joseph E. Rakaskas | 01/99 | 1999 | John Tanner | 08/10 | 2010 |
| Charles W. Steincamp | 02/99 | 1999 | William (Bill) Owen | 09/10 | 2010 |
| Robert and Betty Glover | 10/96 | 1998 | Harold (Hal) Brown | 10/10 | 2010 |
| Howard E. Schwerdtfeger | 11/98 | 1999 | Edmund G. Lorenz | 11/10 | 2010 |
| W. W. "Brick" Wakefield | 03/99 | 1999 | Thomas E. Black | 05/11 | 2011 |
| V. Richard Hoover | 01/00 | 2000 | Wayne E. Walcher | 07/11 | 2011 |
| Warren E. Tomlinson | 01/00 | 2000 | Henry F. Filson | 07/11 | 2011 |
| James A. Morris | 01/00 | 2000 | Thomas Ray | 07/11 | 2011 |
| Eric H. Jager | 03/00 | 2000 | Edgar E. Smith | 09/11 | 2012 |
| Kenneth W. Johnson | 03/00 | 2000 | Marilyn Messenger | 06/13 | 2013 |
| Dean C. Schaake | 03/00 | 2000 | Micheal Mitchell | 09/13 | 2013 |
| Fred S. Lillibridge | 05/00 | 2000 | Orvie Howell | 11/13 | 2013 |
| Jerry A. Langrehr | 07/00 | 2000 | James Thompson | 11/13 | 2013 |
| Clark A. Roach | 07/00 | 2000 | Dick Rowland | 09/13 | 2014 |
| Floyd W. "Bud" Mallonee | 10/00 | 2000 | Robbie Thompson | 12/13 | 2014 |
| Ralph W. Ruuwe | 09/00 | 2000 | Kris Kennedy | 04/14 | 2015 |
| Robert L. Slamal | 02/01 | 2001 | Annette Hedke | 02/15 | 2015 |
| Jerold E. Jespersen | 06/01 | 2001 | James Devlin | 04/15 | 2015 |
| William A. Sladek | 06/01 | 2001 | Robert Gensch | 09/15 | 2015 |
| Harlan B. Dixon | 06/01 | 2001 | Jerald Rains | 05/16 | 2016 |
| Edward B. Donnelly | 08/01 | 2001 | Max Houston | 05/16 | 2016 |
| Richard P. Nixon | 02/02 | 2002 | | | |
| Robert W. Frensley | 12/01 | 2002 | | | |
| Gerald W. Zorger | 01/02 | 2002 | | | |
| Don L. Calvin | 03/02 | 2002 | | | |

Robert F. Walters Digital Library

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The screenshot displays the Robert F. Walters Digital Library website interface. At the top, there is a search bar with fields for "Search Within" and "Find". Below the search bar, there are several filters and options, including "All Fields" and "Advanced Search". The main content area shows a table with columns for "WELL", "COUNTY", "DEPT", "DATE", "DEPTH", "DIP", "DIRECTION", "WELL NAME", "WELL TYPE", "WELL STATUS", "WELL DEPTH", "WELL DIRECTION", "WELL LOCATION", "WELL COUNTY", "WELL STATE", "WELL YEAR", "WELL COMMENTS", "WELL NOTES", "WELL DATA". The table contains several rows of data, including well names like "BARBARA OIL CO" and "BARBARA OIL CO". To the left of the table, there are several small windows or pop-ups, including one for "Google Book Card" and another for "BARBARA OIL CO". To the right of the table, there is a form for "WELL INFORMATION" with fields for "WELL NAME", "WELL TYPE", "WELL STATUS", "WELL DEPTH", "WELL DIRECTION", "WELL LOCATION", "WELL COUNTY", "WELL STATE", "WELL YEAR", "WELL COMMENTS", "WELL NOTES", "WELL DATA". At the bottom of the screenshot, there is a large form for "WELL INFORMATION" with fields for "WELL NAME", "WELL TYPE", "WELL STATUS", "WELL DEPTH", "WELL DIRECTION", "WELL LOCATION", "WELL COUNTY", "WELL STATE", "WELL YEAR", "WELL COMMENTS", "WELL NOTES", "WELL DATA".

CHANGE SERVICE REQUESTED

KGS BULLETIN
 September—October 2016

September 2016

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|------------------|------------------|-----|-----|--|-----|
| | | | | 1 | 2 | 3 |
| 4 | 5 Library closed | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 KGS Board Mt. | 14 | 15 | 16 KGS Fishing | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 Arkansas AAPG Mid-Continent Field Conf. | |

October 2016

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|------------------------------|-----|-------------------|-----|-----|-------------|-----|
| | | | | | | 1 |
| 2 Mid-Cont. Field Conference | 3 | 4 | 5 | 6 | 7 KGS Clays | 8 |
| 9 | 10 | 11 KGS Board Mtg. | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | 31 | | | | | |