



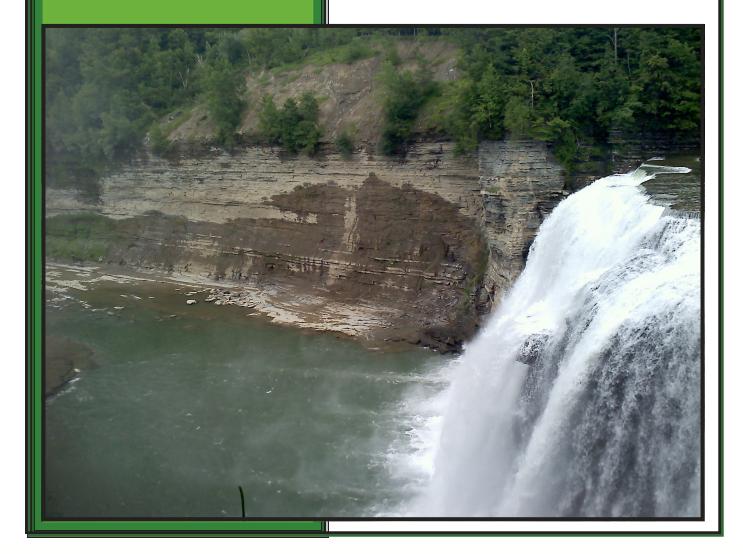
BULLETIN

Volume 86 Number 4

July-August 2011

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Letchworth State Park—upstate New York: vacation photos –pg. 14 Geo-Scenes Belize Field Trip Pg. 19





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ON THE COVER:

Letchworth State Park in upstate New York

is roughly 17 miles long, covering 14,350 acres of land along the Genessee River. Within the park there are three large waterfalls on the river and perhaps as many as fifty waterfalls found on tributaries that flow into it.; the gorge formed by the river, with rock walls rising up to 550 feet in places, which narrow to 400 feet across above the middle of the three falls, is how the area became known as the Grand Canyon of the East.

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 Technical Editor Dr. Sal Mazzullo at salvatore.mazzullo@wichita.edu, whose mailing address is Department of Geology, Wichita State University, Wichita, Kansas 67260. 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

SOCIETY Technical Meetings

Spring 2011 Schedule

There are no technical meetings scheduled for the summer months. We will reconvene in September

Photo taken at the February 22 technical talk featuring Brian Cardott of the Oklahoma Survey speaking on the Hartshorne Coal Rank Applied to Arkoma Basin Coalbed-methane Activity in Oklahoma.

Location for Technical Meetings

All KGS technical presentations are held at 12:30 p.m. at the Wichita Bar Association, located at 225 N. Market, ground floor conference room, unless otherwise noted.

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.

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Bulletin committee members and PhD's in Paleontology are prohibited from entering.

KGS Annual Picnic



Friday, August 19th

All Star Sports West

8333 W. 21st Street



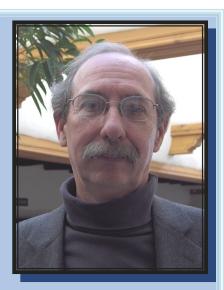
Food Served at 6:00 PM Bingo & Activities start at 7:00 PM

President's Letter

Dear Members,

Greetings fellow geologists, I hope that all is going well for each of you this summer. As I am writing this letter, the Golf Tournament Committee is getting ready for tomorrow. Dave Barker and his committee will be presenting a great event. Also, remember to thank all the girls from the library for their help.

Marj Crane –Noel and her picnic committee are working hard towards the August Picnic. Again, it will be at the West All Star Sports on August 19th. So bring your spouse, children and/or grandchildren and have some fun.



This year Randy Teter and the Fishing Tournament Committee have decided to have a fall program. The tournament will be at Pratt County Lake September 16th. Finally, the Sporting Clays Tournament is scheduled for October 7th. Sign-up sheets will be in the library.

In talking with Bob Cowdery, he has about half of the fall lecture program scheduled. Also, he will be setting a program for continuing education for this fall. This class will be taught be Larry Richardson. So watch for the date.

The library and the Walters' Digital Library sales are both doing very well. Which is why it is so difficult to find well-site geologists for our drilling programs.

Have a great summer!

Respectfully submitted, Douglas V. Davis



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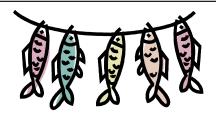
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KGS Fishing Tournament September 16th

> Will be held at the Pratt County Lake

Watch the web site for the registration flyer

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From The Manager-

Dear Members,

Summer seems to have started early this year and the heat is intense out there in the oil patch. I think we should all be thankful for the men & women who are willing to go out and watch a well in this weather!

The library is staying quite busy this summer. Usually is slows down a bit in June & July but not this year. People are busy and we love it. We are adding images weekly to the Walters Digital Library. To the tune of several thousand images. I have several people linking Scout Cards so we are trying to get those all up to date also. It is a constant job but we are at least seeing cards from 2010 now and as we get new ones, we scan and send them in to be linked.



The digital library membership has increased to 197 and we are looking forward to that 200th membership. I think I might have a special gift for the 200th person to join.

We had our Annual Golf Tournament on June 24th. The next event will be the KGS Picnic being held again this year at All Star Sports West. Cash prizes for bingo and a good time for all is what our Chair Marj Noel has in store for us. Hope to see you there! That will be on the Friday before KIOGA, August 19th.

We will have a booth at KIOGA again this year. It is always a nice time to see many of our out of town members. Here's wishing you all a wonderful summer!

Respectfully submitted,

Rebecca Radford

Manager

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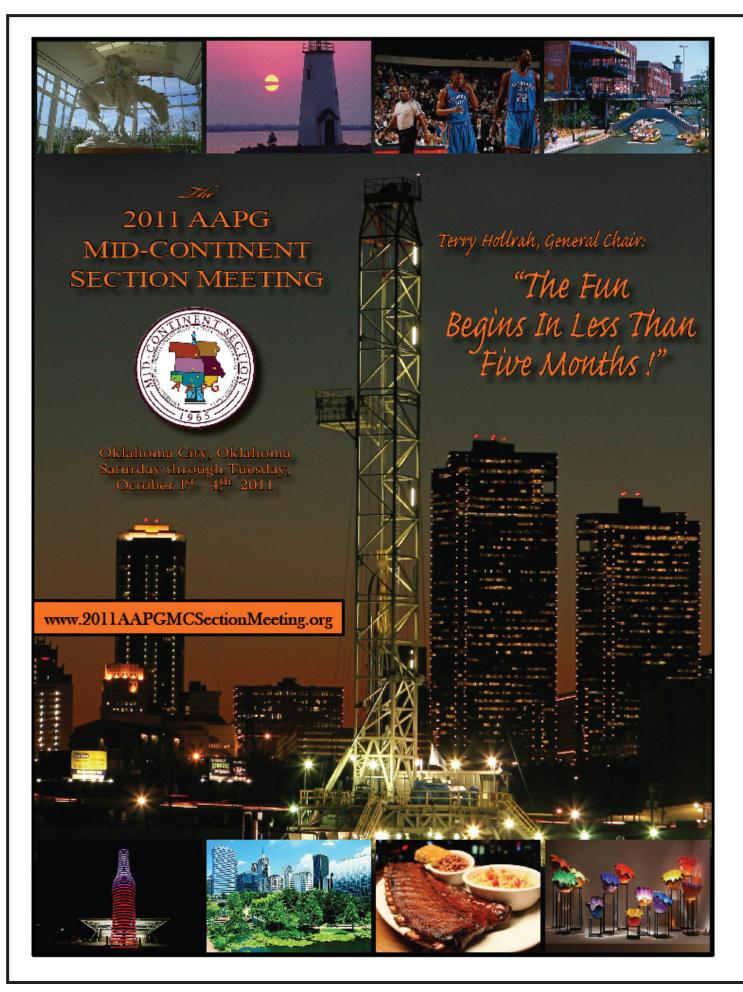
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KGS Picnic

Friday August 19th At All Star Sports 8333 West 21st street

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Lots of cash prizes for Bingo!!

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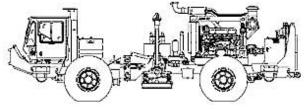
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Letchworth State Park Upstate New York

KGS employee Tammy Nichols and her son, Lee Huff visited the upstate New York area around Rochester and Buffalo.

These photos were taken at Letchworth State Park. This gorge is known as the Grand Canyon of the East Coast. It is a shale formation with some layers of limestone and sandstone.

The bedrock that is exposed in the gorge is Devonian in age. There are many marine fossils exposed in the rock. This is in the Genesee River valley which is very young geologically, caused by a diversion of the river from the old valley by the last continental glacier, forcing the river to cut a new section of the valley.

There are three major waterfalls in the park; Upper, Middle and Lower Falls. All are located in Portage Canyon in the southern section of the park.

The highest waterfall in New York Sate is located in this park. It is a ribbon waterfall that is located on a tributary creek a short distance east of Inspiration Point overlook, just west of the park visitor center. Know as Inspiration Falls, it has a total drop of 350 feet.





Thank you Tammy and Lee for sharing these wonderful photos.



Note: If you have any vacation photos to share of interesting geologic formations, please email with information to manager@kgslibrary.com

NEWS FROM THE KANSAS GEOLOGICAL FOUNDATION

22 June 2011

Dear KGF and KGS Members,

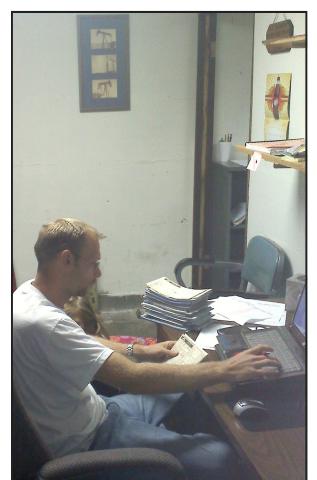


The Kansas Geological Foundation Board and I would like to thank everybody that attended the Annual KGF Mixer in May. We had a wonderful turnout for this event along with excellent food, drink, and company. We would also like to thank the sponsors and those that donated money to make this party happen. It is a fun way to promote the Foundation and its' causes as well as for all of us to get together before summer. Thanks again to everybody.

I visited with Ted Jochems briefly last week regarding the Accelerated Integration Project. We have two fulltime people working this summer and great progress is being made with the sorting, scanning and cataloging of the multitude of data that needs to be incorporated. We are continuing to accept monetary donations throughout the year to facilitate this enormous project, so please keep this ongoing project in mind.

The Kansas Geological Foundation awarded scholarships this spring to several college students for the fall semester. Once again, we received many applications from the various Kansas universities and are pleased that we can provide some funding to help these young students pursue their geological degree.

The KGF Board takes a summer vacation from their Board meetings for a few months, which is a good thing, considering how busy we all are! Enjoy your summer and thank you again for your support.



Respectfully, Beth A. Isern KGF President

Nolan Mans and Megan Haas have been working for approximately 30 days and have checked 2710 logs against our files and have found on average, 47% of them are not in our files. So this effort is definitely worth the time & money. They both will be working through the summer months and if we can keep enough funds coming in for this project, we can keep them working longer and get more data into our files for your use. Please consider a mid-year gift to the Foundation.

Kansas Geological Society Board Minutes

Kansas Geological Society Board Minutes

Condensed version for Bulletin

May 10, 2011 Mr. Doug Davis called the meeting to order at 11:42 a.m.

FINANCIAL REPORT/MANAGERS REPORT

- **A.** Treasurer's Report- Mrs. Noel presented us with the Treasurer's report for April 2011. The CD that expired in April at Kanza State Bank was moved to a CD at Relianz Bank with a rate of 1.23% for 13 months. The earliest a CD will be maturing is June 23, 2011 at Kanza State Bank. Mr. Scribner moved to accept the Treasurer's report as presented. Mr. Dixon seconded the motion and the motion passed unanimously.
- B. Manager's Report- Mrs. Radford presented the Manager's Report for April 2011. Monthly income was \$53,661.06 and expenses were \$49,488.03, making the profit \$4,173.03 for the month. Mrs. Radford noted that there is about \$1,823 in Accounts Receivable that is over 120 days due. The "KGS Management" fee will be eliminated in future WDL reports since it has been purchased by the KGS. Mrs. Radford is giving discounts to college students who are working on school projects. The library will need to replace an employee for a part-time position.

OLD BUSINESS

- **A.** Backlog of Well Information from the KCC to be Scanned Mrs. Radford hired a temporary employee to scan the backlog of well information from the KCC. The Kansas Geological Survey is paying for part of the employee expense.
- **B.** WDL Committee Mrs. Noel reported the Kansas Geological Survey programmers are working to provide a link on a well from their website to the WDL website that will provide a written list or paper data and thumbnail image of digital data available for purchase.

NEW BUSINESS

- **A.** <u>Continuing Education</u> Bob Cowdery is working with Larry Richardson to provide a condensed course in Subsurface Geology that Larry is teaching at WSU. Bob is also scheduling speakers for the Fall 2011 Technical programs.
- B. <u>Library purchased Corel Draw software</u> The software will enable the Library to print geological reports created in Corel Draw.
- C. <u>KGS Picnic</u> The annual picnic will be on Friday, August 19th at All Star Sports West from 6:00 to 10:00 pm. This weekend coincides with the start of the KIOGA Annual Convention on August 21st.
- **A.** Geophysical Society of Kansas Honorary Lecturer Tad Smith with Apache Corporation, Houston Texas, will present "Practical seismic petrophysics: The effective use of log data for seismic analysis" on Tuesday, October 11th, in Wichita.

ADJOURNMENT- Mr. Saenger motioned to adjourn the meeting at 1:11 p.m. and the motion passed unanimously.

Respectfully submitted, Robert Milford, Secretary

The KGS Board opted to not hold a meeting in the month of June, 2011. All board packets were emailed out to board members.



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Geo-Scenes



Modern Carbonate Field Studies in Belize

The identification of specific reservoir plays, or the generation of oil/gas prospects in a petroliferous basin, obviously requires analysis of all available geologic information. The idea for reservoir plays originates from one's experience in and/or knowledge of depositional systems in sedimentary rocks gained from personal experience or reading papers and books on these subjects. Likewise, the formulation of well-conceived geologic prospects is based on their relationship to local depositional facies models and structural analysis within an overall framework of the regional geology and geologic history of the area being explored. Such idea generation is the essence of Wallace Pratt's long-revered philosophy, modified for political correctness here, that "oil is found in the minds of geologists". A long-standing approach to understanding depositional facies systems in ancient rocks as analogs of stratigraphic and paleogeomorphic reservoir trap systems has been to go into the field to examine modern sediments as well as ancient rocks. Seeing what modern depositional systems are all about, and relating them to ancient rocks, is where prospecting ideas are born. As the famed and successful Permian Basin petroleum geologist Dr. Jack Elam used to preach, without creative and innovative new ideas, we rapidly risk growing stale geologically.

In this vein, together with some of my Geology Department colleagues I have led a number of field trips since arriving at WSU in 1987 to examine modern and Pleistocene marine carbonate sediments and limestones in Belize. These trips have been designed either specificially for students, to show them modern depositional processes and products; or for petroleum geologists, engineers, and exploration managers to illustrate the variety, lateral juxtaposition, and scale of modern and



Pleistocene depositional facies Figure 1—Typical first stop in Belize field trip.

and post-depositional, diagenetic processes as analogs of how subsurface reservoirs in carbonate rocks work. Such trips have proven invaluable to petroleum geologists for the ideas they help to generate. In this

contribution I will show some representative photos of field studies in northern Belize that were taken in 2007. You may recognize some faces in these photos as many former WSU geology students are now employed in the petroleum patch here in Wichita and surrounding areas.

Figure 1 shows a typical first stop of the first day of such field trips, where we hold introductory lectures on the beach adjoining the beautiful Caribbean Sea to explain the geologic setting of the northern Belize field area and its relevance to ancient rocks. Sand, surf, and sun – can it get any better? Field trip participants, students and professional petroleum geologists alike, are immediately mesmerized early on during the trip by the beauty of modern carbonate environments, the setting of the field area, and the immediate application of ideas and concepts to their own thesis or exploration projects. Field work naturally progresses from land stops to the marine environment (Figure 2), where we continue our lectures aboard small boats guided by expert(?) Belizean boatsmen. In this photograph, Dr. Burke of the WSU Geology Department is lecturing on modern coral reefs in shallow-marine, high-energy environments. Of course, no field excursion to Belize is ever complete without examining modern mud-mounds, which coincidentally are the site of massive dolomitization here in Belize. In Figure 3 we see some field trip participants who pulled the boats onto the mudbanks as the water obviously was too shallow to motor through. What they soon realized as they continued walking onto the shoal is that mudbank sediments are very soft and unconsolidated, and they quickly begin to sink up to their hips in dark, fetid mud (stinky, for sure -- but modern dolomitization here is converting an



Figure 2—Dr. Collette Burke lecturing on modern coral reefs in shallow –marine, high energy environments.

otherwise tight, Holocene lime mud into a porous, reservoirgrade rock beneath our bare feet!!).

These Holocene carbonate sediments in northern Belize overlie Pleistocene limestones that were deposited about 130,000 years ago during a higher-than-present interglacial sea-level stand. I am shown in Figure 4 attacking an outcrop of the Pleistocene limestone with my hammer in order to show the field trippers the tremendous meteoric dissolutional interparticle and biomoldic porosity that developed beneath the top-of-Pleistocene subaerial

unconformity here. At this locality there is also a 1000 yr-old Maya site where one can find many pottery



sherds and chert tools made by the Maya. Finally, the field days ends and we all adjourn, tired and sunburned, to the patio of the hotel where we relax and enjoy cold beverages, chat with the boatsman (the sun-darkened fellow on the left side of the photo), and relive the geologic adventures of the day.

submitted by Sal Mazzullo

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ALFRED JAMES III Petroleum Geologist Kansas - Colorado - Utah

200 W. Douglas, Ste. 525, Wichita, Kansas 67202

SIPES # 1111 Office (316) 267-7592 alfred.james55@yahoo.com

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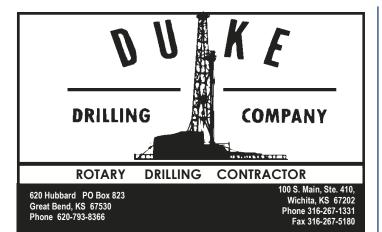
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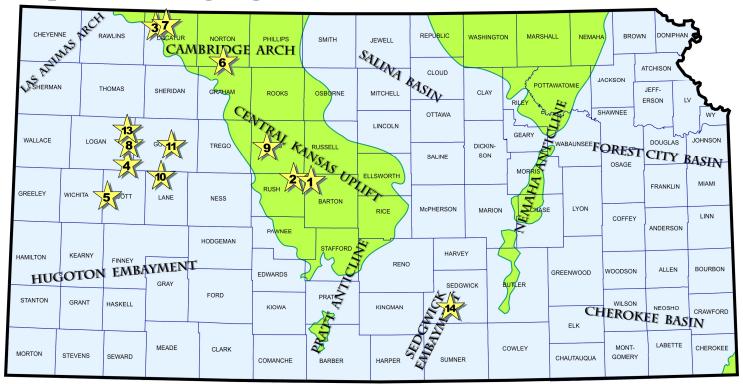
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Exploration Highlights



- (1) Samuel Gary Jr. and Associates, Inc., Denver (CO), has discovered new Lansing- Kansas city oil reserves nearly nine miles northwest of the city of Olmitz in northwest Barton County. Discovery was made at the No. 1-30 Steinert Etal well, located in the SE/4 of section 30- T16s- R15W. The wildcat pool opener was drilled to a total depth of 3,697 ft. by Discovery Drilling tools. No details have been released on production volume. Well site lies one and one-quarter miles east of Gary's Allenbough East field which they established in August last year and has produced nearly 18,000 barrels of oil from the LKC zones.
- **(2)** Elsewhere in **Rush** County, **Samuel Gary Jr. and Associates, Inc.** is pumping 25 barrels of oil and 10 barrels of water per day from an infield pool discovery well located north of the expanded Duck Creek field. The No. 1-7 Stramel, drilled in the C S/2 N/2 S/2 in section 7- T16s- R16W, is producing oil from three separate zones in the Lansing-Kansas City formation from 3,408 to 3,498 ft. overall. Rotary total depth was stopped at 3,631 ft. The infield wildcat lies five-eighths mile north of producing wells in the Duck Creek field, where in addition to the LKC, oil has been produced from the Conglomerate and Arbuckle zones.
- (3) Murfin Drilling Company, Inc., Wichita (KS), has a new Lansing-Kansas City oil discovery over one mile east of known production in the Jording East (Lansing-Kansas City) oil field in north western **Decatur** County. Murfin's May No. 1-18 was drilled to a total depth of 4,524 ft. in January this year. Site located in the SW/4 of section 18- T2s- R29W, is about five and one-half miles northwest of the town of Oberlin, Kansas. The well was placed on pump in February for an undisclosed potential. The new field has not been named.
- (4) Lario Oil and Gas Company, Wichita (KS), has found Cherokee (Johnson Zone) oil deposits at a rank wildcat well in

- **Logan** County, about twenty miles southeast of Russell Springs, Kansas. The No. 1-21 Kansas Feed Yards, spotted in the SW/4 of section 21- T15s- R32W, was put on pump on April 25, 2011 at an undisclosed rate. The well was bottomed at 4,600 ft. The new unnamed field is situated over three miles southeast of the one-well Little Pyramids field which was opened by Brito Oil Company in February last year. The pool discovery well has produced nearly 7,000 barrels of oil from the Altamont and Fort Scott limestones of the Marmaton Group.
- (5) In Scott County, Lario Oil & Gas Company has completed the No. 1-21 Boulware as a multizone oil producer from the Marmaton and Cherokee (Johnson Zone) formations. The wildcat well establishes a new unnamed oil field about three-quarters mile south of Modoc, or nine miles west of Scott City, Kansas. Operator drilled the well to a total depth of 5,000 ft. in March this year and put the well on pump by mid-April. Closest known production in the vicinity is located nearly three miles to the southwest in the one-well Modoc field which produced nearly 16,000 barrels of oil from the lower Marmaton formation from 1995 to 2008. Cherokee oil is sparse in the area. Closest recognized Cherokee pay lies over eleven miles to the north of well site in the newly discovered Pence field in section 27- T16s-R34W, discovered by Shakespeare Oil Company in December last year.
- (6) Ritchie Exploration, Inc. , Wichita (KS), has a new oil discovery with the completion of their No. 1 Circle Ranch (34-B), located in the NW/4 of section 34- T5s- R23W, in southern Norton County. The 3,750-foot deep wildcat well was completed for an unknown potential on April 21, 2011. Well site is located nearly three-quarters mile north of production in the Norham field which has produced over 124,000 barrels of crude from the

Lansing-Kansas City and Arbuckle zones since June, 1983. Ritchie's latest find is located two miles south and five miles east of Lenora, Kansas. The new field has not been named.

- (7) Murfin Drilling Company. Inc., Wichita (KS), has discovered Lansing-Kansas city oil reserves on the Faith lease located about six and one-half miles northwest of Oberlin, Kansas in northwestern **Decatur** County. The No. 1-7 pool discovery well is producing an undisclosed amount of crude slightly over one mile east of existing wells in the Traer Southeast pool where the LKC zones also have produced since 1980. Well site lies in NW/4 of section 7- T2s- R29W. Rotary total depth was obtained at 4,080 ft.
- (8) Elsewhere in Logan County, Murfin's No. 1-5 Vanava has opened a new unnamed field with multipay production from the Lansing-Kansas City, Marmaton and Cherokee formations. The wildcat well was completed on pump on April 28, 2011 at site in the SE/4 of section 5- T13s- R32W, or nearly thirteen miles southwest of Oakley, Kansas. The new oil deposits were found approximately one mile east of the High Hat field (Marmaton & Cherokee oil) another Murfin discovery made in late 2009.
- **(9) Meridian Energy, Inc.**, Franktown (CO), is producing an unknown amount of oil at the No. 1 Staab, spotted in the SW/4 of section 35- T13s- R19W in **Ellis** County. The wildcat well found the Lansing-Kansas City zones to be productive. The new unnamed field is situated nearly three-quarters mile northeast of the Stadelman field which produces both LKC and Arbuckle oil. Total depth is 3,898 ft. Site is located three and one-half miles west of Hays, Kansas.
- (10) Brito Oil Company, Inc., Wichita (KS), is pumping 83 barrels of oil and 7 barrels of water per day at the No. 1-32 Jennison Unit, located in the SW/4 of section 32- T16s- R29W, Lane County. The well has discovered new Cherokee pay source within the Shay East field which previously had produced Marmaton oil since 1983. Britos's new addition is producing oil from Marmaton perforations placed from 4,304 to 4,342 ft. overall and the Cherokee (Johnson Zone) from 4,472 to 4,484 ft. Total depth is 4,564 ft. Well is located about five and one-half miles west of Shields, Kansas.
- (11) RL Investments LLC, Morland (KS), has established a new unnamed Mississippian oil field almost five miles northwest of the Castle Rock North field in Gove County, where the Lansing-Kansas City and Mississippian formations have given up crude since 1984. The No. 1 Tuttle was drilled to a rotary total depth of 4,413 ft. at site located in approximately SE SE NW in section 13- T13s- R28W, or about six miles southeast of Gove, Kansas. Production started in April this year. The new field has not been named.
- (12) Black Diamond Oil, Inc., Hays (KS), has completed their No. 1 White in Graham County for 15 barrels of oil and 2 barrels of water per day. The wildcat well opens a new unnamed field with Marmaton production from a depth of 3,740 to 3,744 ft. WW Drilling tools bottomed the well at a total depth of 3,820 ft. New discovery was made in the NE/4 of section 11- T7s- R22W, about eight miles northeast of Hill City, Kansas. Closest established production in the vicinity lies over one mile away.
- (13) New Gulf Operating LLC, Tulsa (OK), has established new oil production three-quarters mile east of the Younkin field in Logan County. The No. 1 Sheetz, SW/4 of section 16- T12s- R32W, commenced production on April 29, 2011 eight miles southwest of Oakley, Kansas. Operator found oil deposits in the Mississippian formation. Total depth was stopped at 4,780 ft. Completion deatails have not been released. The new field has not been named.
- (14) Daystar Petroleum, Inc., Valley Center (KS), has successfully washed-down a 1984 dry "show" hole in Sedgwick County and is producing 44 barrels of oil and 196 barrels of water from the Mississippian formation. The successful completion adds a new pay source and extends the boundaries of the Thome field, which has produced oil from the Lansing-Kansas City zones since 1984. The No. 1-25 Klausmeyer OWWO, located in the SE NE NE of section 25- T28s- R2W, was cleaned-out to 3,504 ft. in March and completed on pump on May 5, 2011. Field area lies about two and one-quarter miles southwest of Schulte, Kansas.









Kansas Geological Foundation

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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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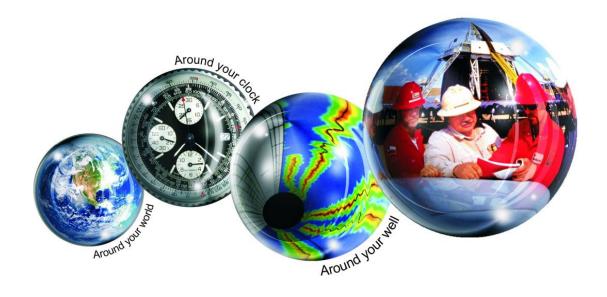
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