



KANSAS GEOLOGICAL SOCIETY

BULLETIN

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July—August 2016

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IN THIS ISSUE

*Memorials:
Max Houston*

**Geologic Mapping of Kansas
Page 13**



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Table of Contents

Features

Memorials.....	10
Featured Paper	13
WSU Geology in Idaho.....	14 & 21

Departments & Columns:

KGS Tech Talks	4
President's Letter	7
Advertiser's Directory	8
From the Manager.....	9
Professional Directory	15 & 16
Exploration Highlights	20 & 21
Kansas Geological Foundation Memorials.....	23

ON THE COVER:

Dr. Gray, Wichita State Geology department took a few students to Idaho for a study of the Bitterroot Front Range. See several photos on pages 14 & 21.
All photos are courtesy of Alvine Wetiba, student.

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>

SOCIETY Technical Meetings

KGS 2016 Technical Talks Talks will resume in September

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!

<http://aapgmcs.org/field-conferences/2016>

Dear AAPG Members,

We'd like your assistance and advice in a very important process for AAPG. The AAPG Nominating Committee, a sub-committee of the Advisory Council, is responsible for recommending a list of nominees for AAPG office to the Executive Committee for its approval each year. And to help us compile the best list possible, we're seeking your input and suggestions as to potential AAPG officer candidates.

The deadline for nominations is 1 August 2016. Nominations received after 1 August will be held for next year's officer nominations. The nominating committee will consider candidates for the following positions:

- **President-Elect:** (one-year term: 2017-18; President 2018-19)
- **Vice President Regions:** (two-year term: 2017-19)
- **Secretary:** (two-year term: 2017-19)

Contact Karin Alyea [kalyea@aapg.org] for more information on nominations



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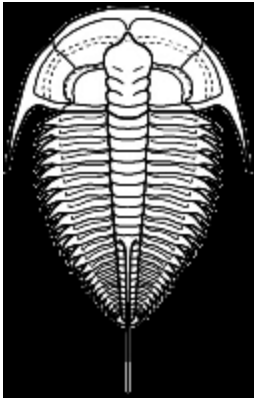
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The last one as: *Ceratonurus*
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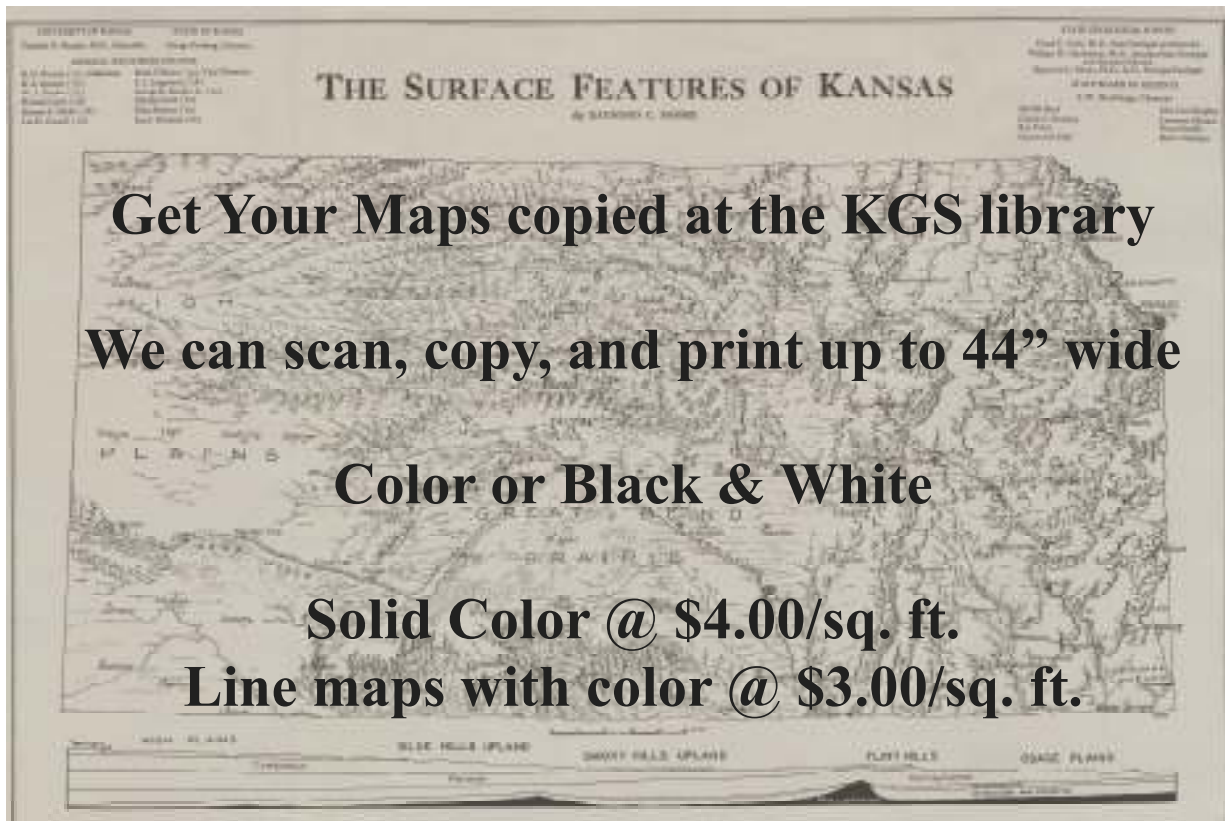
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President's Letter

Society and Library Members,

The price of oil continues its overall climb which is good & the EIA expects further drops in U.S. crude production which could begin a steeper decline later in the year. This should help shore up prices, but also tells the tale of a whole industry struggling to be a big part of the economy.

As sales continue to be depressed at the Library, we do have the Library Committee working with the Board in looking for additional ways to knock down expenses and improve our overall health. Membership at the library and the WDL seems somewhat comparable to last year's numbers, but we just need more of us buying material and prospecting. Even my company has held off on drilling anything so far this year, so we haven't been a big help either. But we do have plans for fourth quarter, if we continue to see a slight improvement in the oil price. It will be a slow start, but at least we feel we can get the economics to work in our favor to do some drilling. Hopefully most of you too can get some projects started.



Photo by A.J.

On a fun note, our family has stayed in a few cabins over the last 30 years just west of Mt. Princeton Hot Springs, Colorado, which is about 9 miles southwest of Buena Vista. It's our family destination every year. Geologically it's a very interesting area. The Chalk Cliffs as they are called, are a 'decomposed' granite, leached and bleached white from the geothermal waters, leaving mostly white quartz and some calcite, taking on the appearance of chalk. A number of faults run through the area, but luckily aren't active! The Mt. Princeton Hot Springs has the highest Geothermal Heat Flow of anywhere in Colorado. The waters can reach 181°F. The cabins we stay at are nestled between two Fourteeners, Mt Princeton to the north at 14,197' and Mt. Antero to the south at 14,269'. The Weather Channel has a series called 'Prospectors', with Mt. Antero as one of the mountain claims that the Busse Family mines for aquamarine crystals due to its highest concentrations of the crystals anywhere in the country. Overall a great destination, with a lot of hiking, 4x4 trails to abandoned mines, old mining towns you can drive to and great restaurants in Buena Vista. Be sure to take a dip in the Mt Princeton Hot Springs. Whether it's in 'hot part' of Chalk Creek itself or the pools, at 94° to 104°F regulated temps, you can't go wrong at any time of the year! Need a summer trip, here's your place! And don't forget that if you need to do a little work to write off the vacation, the Walters Digital Library is at your fingertips!

The Kansas Geological Society's Golf Tournament will have taken place by the time you read this and as of this writing we have 101 folks signed up. Attendance is down from years ago, but very respectable in today's market climate. We will be having the Fishing Tournament and the KGS Family Picnic later this summer. Again, please plan to attend these upcoming events and if possible, help with any financial contributions.

Tim Hellman
President



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	<i>page</i>
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GeoSteering	13
Kansas Geological Foundation	18
Kansas State University	8
Lockhart Geophysical	19
Lone Star Geophysical Surveys	23
MJ Systems	2
Murfin Drilling Company, Inc	19
PARAGON Geophysical Services, Inc	2
Professional Directory	15-16
Trilobite Testing	6
Walters Digital Library	11
Well Enhancement Services, LLC	11

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From The Manager

Dear Members,

Summer has arrived and with it plenty of hot temperatures and humidity, making Tim Hellman's letter in this issue a good reminder of the cooler temps in good ole Colorado! Maybe it is a good time to head west for a little vacation.

We had a very successful Golf Tournament at the end of June, thank you goes out to David Barker for organizing, raising funds, and giving us an all out great tournament. Thank you also to those who helped support it, not only by attending but by giving funds, golf balls, towels, and other give-a-ways.



Our next event will be the KGS Picnic. It will be held Friday evening, August 12th back at All Star Sports West. See the flyer in this issue for more information. I hope we get a good turnout as that is always a fun evening. We hear that they have remodeled the facility.

I have photos from a geology field trip that a few WSU students took to Idaho on pages 14 and 21. Check out what they were looking at.....some interesting stuff!

Your library is still pretty slow as far as business is concerned but the last few weeks we have seen some orders for geologist report printing come in so it feels like drilling is starting to pick back up. We certainly appreciate any business you can give to your library as I know you want us to keep these doors open. In our down time, the staff and I are keeping busy by helping to integrate donated data into our system.

I hope you all get to take some sort of summer vacation and if you see any interesting geology, please share your photos with the Bulletin as our President did in this issue. It's fun to see and learn about a new area and if we all can't take that same trip, we can at least enjoy your photos and tales.

Stay cool!

Respectfully submitted,

Rebecca Radford

Manager



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Memorials — Max Houston



Max was born on June 13, 1920 in Norton, KS, to John Ross Houston and Bernice (Wentworth) Houston. He went to high school in Colby, KS, and, after military service, obtained a BS degree in geology from Kansas State Univ. He served in the US Army Air Forces during WWII, and taught other pilots to fly multi-engine aircraft.

Max married Martha Ann Peterson on September 23, 1944 during a brief leave from the USAAF. He came to Wichita in 1949 to begin working in the oil and gas industry, for Atlantic Petroleum, El Dorado Refining, Glickman Oil Co., Okmar Oil Co., and finally Berexco. Max had professional affiliations with the Kansas Geologic Society, and the American Association of Petroleum Geologists. He grew up in and around Colby, KS during the Great Depression and Dust Bowl days, seeing his grandfather's bank fail and his father struggle on a small farm. With this background, he found new horizons and new skills which he applied with great persistence and dedication.

This brought him and his employers much success, and helped bring economic revival to Western Kansas as a significant oil producing area.

He never stopped wanting to give back to good causes, including the World Wildlife Fund, Audubon Soc., Kansas State Univ. (football fan), and a variety of organizations that help disabled veterans and poor Americans. Max had a wide circle of friends, including fellow members of the Kansas oil community, and very much enjoyed meeting with them over lunch at the Petroleum Club. He enjoyed sharing stories ("swapping lies"), but was skilled at avoiding antagonism if the discussion got into polarized politics. Max was preceded in death by his parents and wife. He is survived by his son, P. Sam (Wichita); daughters, Tasker (Eugene, OR) and Sara Houston (Wichita); grandchildren, Rachel, Rebecca, and Lucas Tublitz; and great-grandchildren, Hazel and Eli Tublitz (NYC).

Max was 95 years old when he passed away on Thursday, May 26, 2016. A private family service was held. Donations are suggested in memory of Max S. Houston to the DAV Charitable Service Trust or the National Audubon Society. A memorial has also been established with the Kansas Geological Foundation.

Jerald Rains passed away May 3, 2016 in Sidney, Nebraska. A memorial has been established with the Kansas Geological Society. Services were provided by Gehrig-Stitt Chapel & Cremation Services in Sidney, NE. Obituary may be viewed at www.gehrigstittchapel.com.

L.D. Davis passed away on May 27, 2016. Services were held June 2, 2016 at the First Assembly of God, Great Bend, KS. Condolences may be sent and notice viewed at www.bryanthfh.net

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The Mid Continent Section has **17 AAPG Student Chapters**, but only **3 Visiting Geoscientists**...which makes it almost impossible to have a professional geoscientist visit to each school at least once a year or even once every two years. The aim of AAPG's program is to give students a flavor of a professional life in energy resources. It also hopes to encourage dialog between industry and academia.

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.

The Mid Continent schools with Student Chapters are: Missouri University, Fort Hays State University, Iowa State University, Kansas State University, Missouri State University, University of Nebraska, Northwest Missouri State University, Oklahoma State University, University of Oklahoma, University of Arkansas, University of Iowa, University of Kansas, University of Missouri, Columbia University of Tulsa and Wichita State University.

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

Geologic Mapping in the State of Kansas

Greg Ludvigson
Kansas Geological Survey

The National Cooperative Geologic Mapping Program (NCGMP) administered by the U.S Geological Survey, supports geologic mapping activities throughout the United States. The STATEMAP program component of the NCGMP, a competitive grants program that supports geologic mapping by state geological surveys, was inaugurated by an act of the U.S. Congress in 1993. State geological surveys submit proposals each fall for technical review by a national panel that ranks them and guides decisions on funding awards. The Kansas Geological Survey has participated in this program since its inception and to date has received more than \$2,700,000 in STATEMAP federal funding to support geologic mapping activities in the state.

STATEMAP program participation requires state geologists to establish so-called “multi-representational panels” to determine geologic mapping priorities for each state and to provide guidance in the selection of geologic mapping projects. The programmatic intent of forming these panels is to ensure that the selection of mapping projects by each state geological survey is externally directed and influenced by a process that values socially relevant applications of the earth sciences. In Kansas, this group is the Kansas Geologic Mapping Advisory Committee (KGMAC). Members of the KGMAC serve on a rotating basis as appointed by the director of the Kansas Geological Survey. Current members of KGMAC are:

- Bob Henthorne (Chair) – Kansas Department of Transportation
- David Bollenback – Kansas Corporation Commission
- Norm Bowers – Kansas Association of Counties
- Matt Brueseke – Kansas State University
- Rex Buchanan – Interim Director, Kansas Geological Survey (nonvoting member)
- Tom Cyre – National Resources Conservation Service
- William Jones – Foundation Testing and Consulting/PileTrac LLC
- Greg Ludvigson – STATEMAP Coordinator, Kansas Geological Survey (nonvoting member)
- Ernie Morrison – Mull Drilling Company
- Mark Rude – Southwest Kansas Groundwater Management District 3
- Frank Rockers – Mid-States Materials
- Bob Sawin – Kansas Geological Survey (nonvoting member)
- Jon Smith – Kansas Geological Survey (nonvoting member)
- Susan Stover – Kansas Geological Survey (nonvoting member)
- Bob Vincent – Ground Water Associates, Inc.
- Andy Ziegler – Director, USGS Water Science Center in Kansas

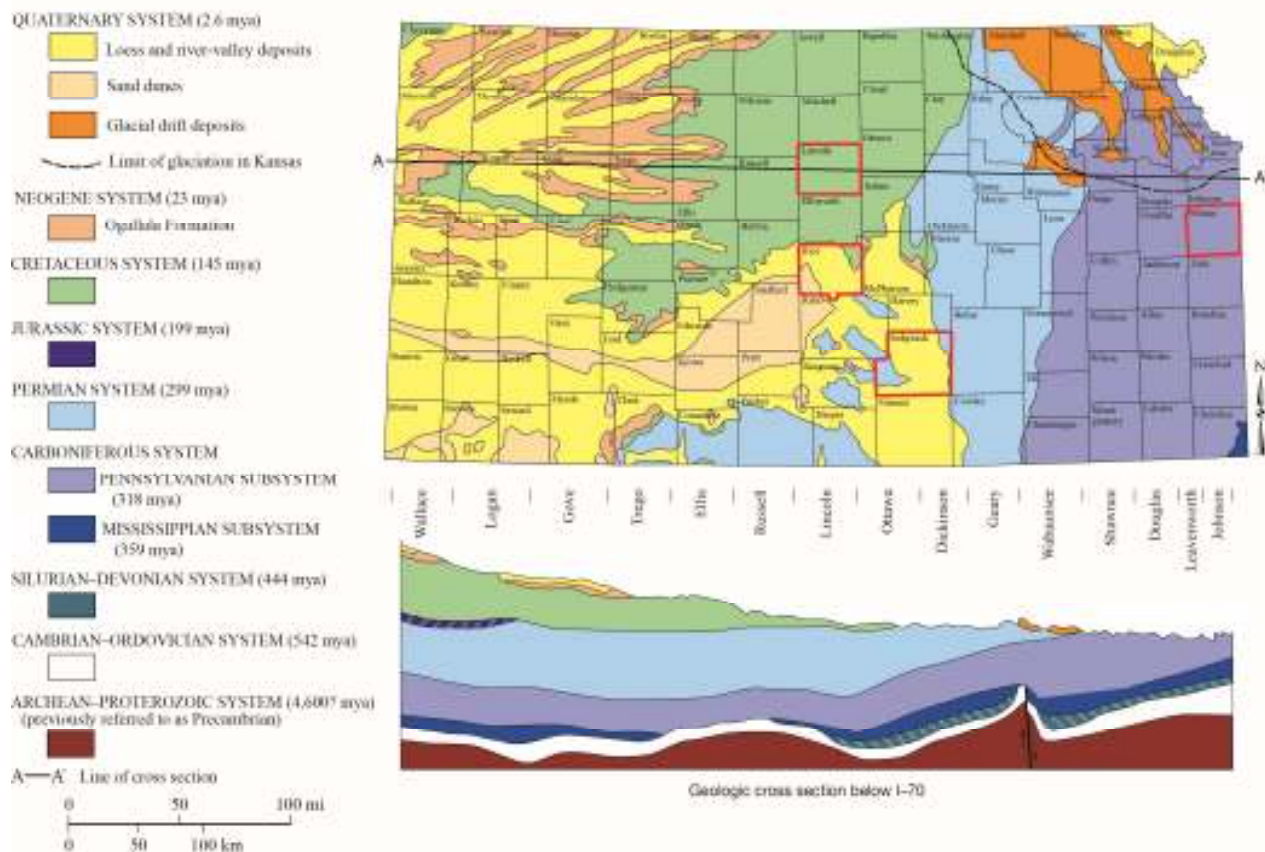


Figure 1. Location of current geologic mapping projects (perimeters in red) supported by the STATEMAP program in Kansas.

This committee provides guidance for the Kansas Geological Survey to develop a long-range geologic mapping plan. Each fall, the committee ranks the order of priority from a list of projects proposed by the Kansas Geological Survey. The natural resource issues that guide selection of mapping projects are determined at the discretion of the voting members of the KGMAC. The Kansas Geological Survey and the members of the KGMAC welcome suggestions from interested parties who are willing to serve as advocates for new geologic mapping projects in the state. By long-standing tradition and current practice, the areas of mapping projects in Kansas have been defined by counties, but there are no national programmatic requirements for that particular definition of map boundaries.

In 2006, the Kansas Geological Survey reached an important milestone in completing published county geologic maps of some vintage in all 105 counties. Many of the older published maps were completed on base maps that were printed long before the release of 1:24,000-scale 7.5 minute quadrangle topographic map coverage in their subject areas. Updating maps to newer, more high-resolution topographic control—including digital elevation models from aerial LiDAR data—provides much better topographic and geomorphic control for geologic mappers—and this is one possible driver for the selection of new mapping projects. Another major consideration concerns the mapping definitions of priority geologic mapping units and whether the older-vintage maps provided sufficient information to usefully discriminate these units for addressing natural resource topics of current concern. At this writing in June 2016, the Kansas Geological Survey is in the process of completing three geologic mapping projects in Miami, Rice, and Lincoln counties, with a multi-year project currently in midstream in Sedgwick County (Fig. 1).

For further information about the National Cooperative Geologic Mapping Program (NCGMP) and geologic maps in Kansas, visit these websites::

NCGMP website: <http://ncgmp.usgs.gov/>

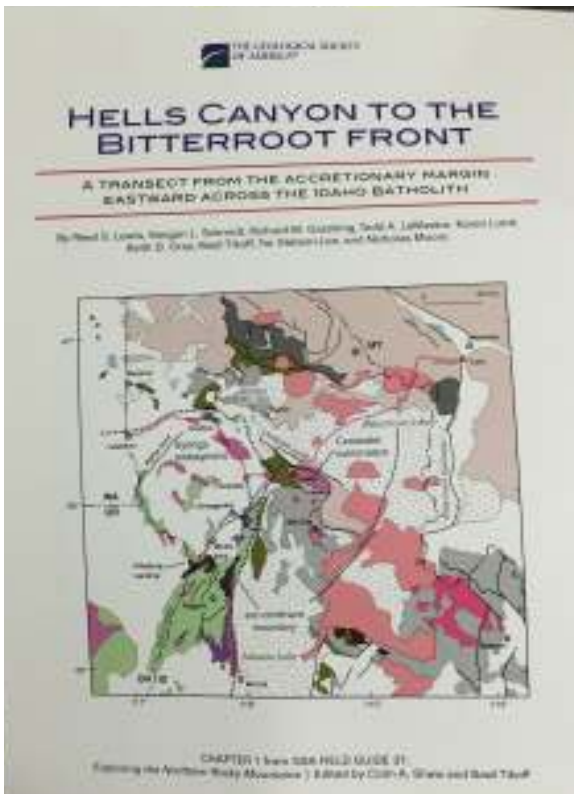
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The **WSU Geology Club** is participating
And **YOU** can help them!

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We Invite You To join

Kansas Geological Foundation

***\$50.00 membership is
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Call 316-265-8676

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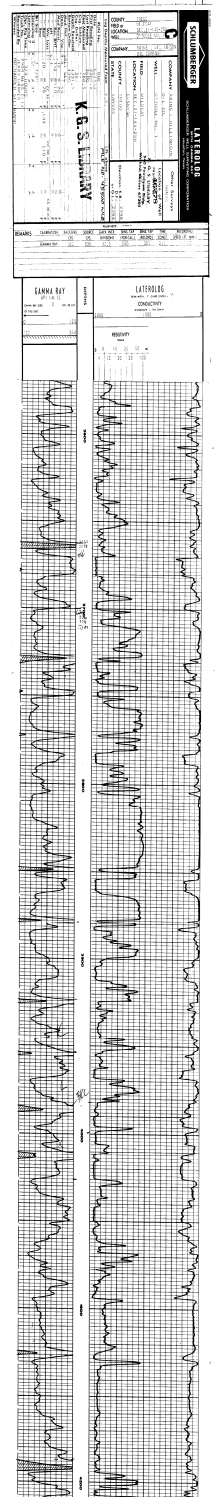
- 8-drawer completion card cabinets
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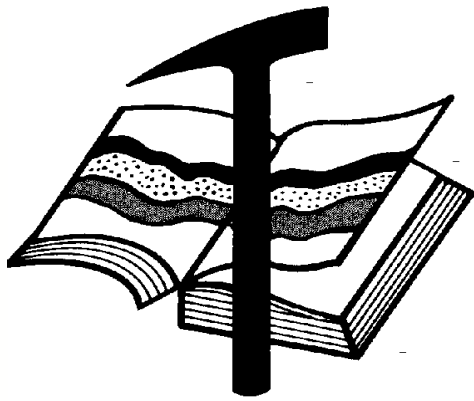
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Web Site: www.kgfoundation.org

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A not-for-profit educational and scientific corporation

GOALS:

- promote geology and earth science
- preserve geological records
- establish memorials and endowments
- support field trips and seminars
- financial aid and grants to students

PLEASE HELP SUPPORT THE FOUNDATION

Kansas Geological Foundation Services

The Kansas Geological Foundation provides the following services as a part of the organization's commitment to educate the public regarding earth science.

Speaker's Bureau

A list of speakers available to talk about various aspects of geology may be obtained by contacting Janice Bright at the KGS Library, 265-8676. This service is free to the public.

DVD/Videotape Library

The KGF maintains a DVD & videotape library focused primarily on the various fields of earth science. These tapes may be checked out without charge by the public. To obtain a list of tapes, please contact the KGS Library, 212 N. Market, Ste. 100, Wichita, KS 67202, or call Janice Bright at 265-8676.

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.

KGF can receive in-kind donations through which the donor may receive a tax deduction. Of equal importance, the KGF provides the financial resources to sort, process and file this data at the KGS library. If you have a donation to make, please contact the KGF at 265-8676.

Your tax-deductible membership donation helps to defray the cost of processing donations and to support public education programs about the science of geology. Annual membership begins at \$50.00 per year. Donations of \$100.00 or more are encouraged through the following clubs:

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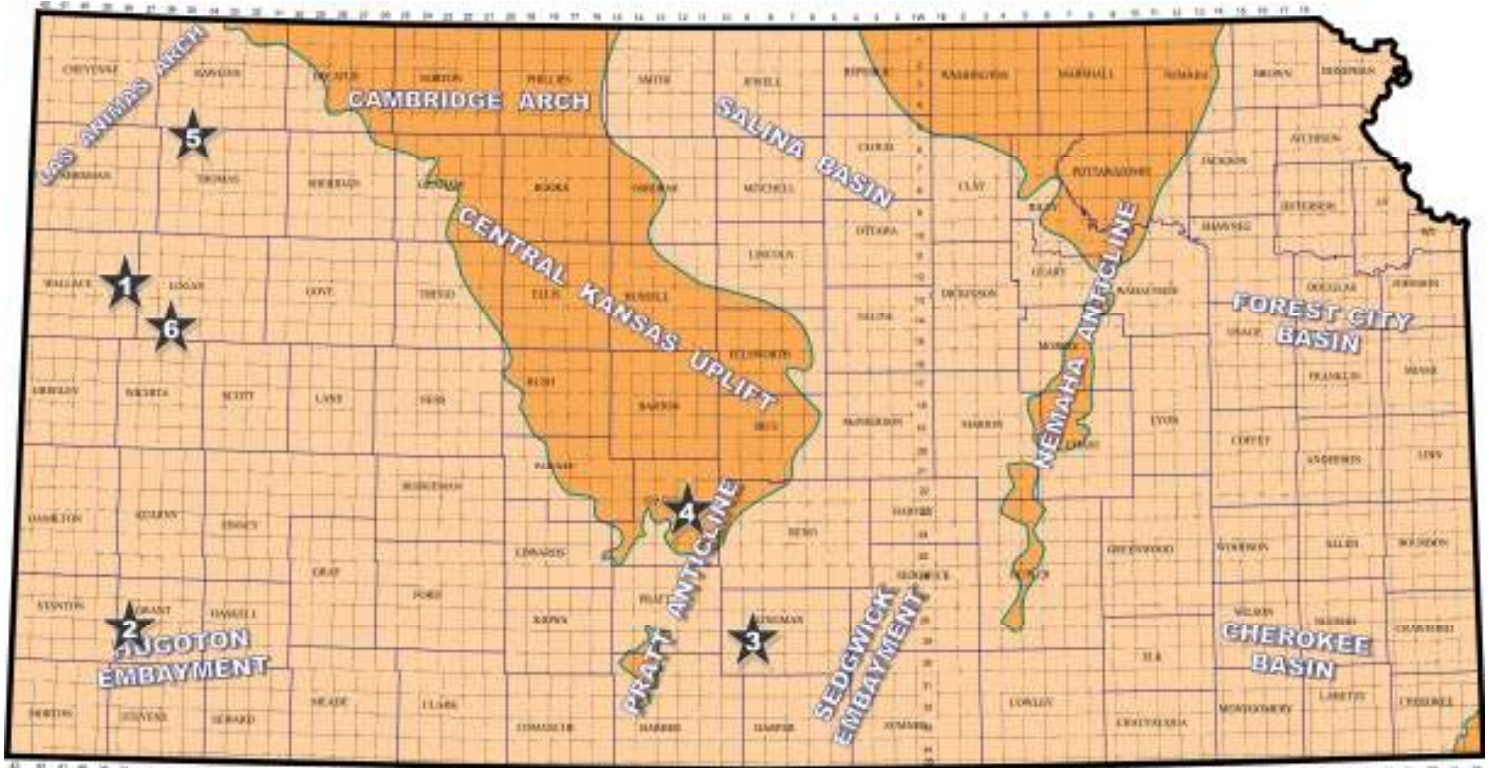
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Friday, August 12th

All Star Sports West
West 21st Street
6:00 PM—10:00 PM
Call 265-8676 for reservations

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Exploration Highlights

By John H. Morrison, III
Independent Oil & Gas



1-Red Oak Energy, Inc., Wichita (KS), has discovered new oil reserves in Wallace County with the successful completion of the #1-30 Johnson View. The remote wildcat discovery well is completed for 10 bbl of oil per day in the SW/4 of section 30- T13s- R38W, about one mile south of the town of Wallace, and over five miles from closest known production in the Sharon Springs Field (1977). Production comes from the Shawnee (Topeka limestone) formation. Total depth was stopped at 4,810 ft. WW Drilling was contractor. The new field was given the name of Johnson View.

2-Merit Energy Company LLC, Dallas (TX), has established new Mississippian oil production in Grant County, southwest Kansas. The #1-10 Longbow is producing an undisclosed amount of crude in the NE/4 of section 10- T29s- R38W, about two miles south and five miles west of the city of Ulysses, Kansas. The wildcat pool opener was drilled to a total depth of 5,950 ft. by Duke Drilling tools. Site lies nearly four miles from recognized Mississippian oil and gas production in the Big Bow Field (1988). The field has been named Big Sky.

3-Messenger Petroleum, Inc., Kingman (KS), has discovered Lansing-Kansas City oil reserves at the #1 Doc's Trust in the NE/4 of section 20- T29s- R9W, Kingman County. This is a new pay source in the

recently discovered Goetz North Field that Messenger Petroleum established in June 2014. The field's discovery well, 1 Anna, lies about one-half mile to the northeast of the Doc's Trust confirmation well. The Anna produced oil from the Viola formation. Field area lies almost four miles north and three miles west of Zenda, Kansas.

4-Charles N. Griffin, Pratt (KS), has a new Viola oil discovery in Stafford County with the completion of the #1 Rice in the NW/4 of section 16- T23s- R12W. The new pool discovery was drilled to a total depth of 3,820 ft with WW Drilling tools. Site is located over one mile south of known Simpson oil production in the Rattlesnake Creek Field (2014), or three miles south of Hudson, Kansas. The new field has not been named.

5-Independent oil producer L. D. Drilling, Inc., Great Bend (KS), reports the discovery of new Cherokee oil reserves at the #1-30 Baird, spotted in the SE/4 of section 30- T6s- R35W, in Thomas County. The new pool discovery is on pump making over 80 barrels of oil per day. Total depth was reached at 4,850 ft. The new deposits were found over one mile east of the established Sun Dog Field, which was discovered by

Raymond Oil Company in early 2015 with Marmaton (Pawnee) oil pay. The new unnamed field lies about nine miles north and five miles east of Brewster, Kansas.

6-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 unnamed pool discovery is located in the NW/4 of section 14- T15s- R36W, about eleven miles south and six miles west of Russell Springs, Kansas. Operator hired WW Drilling to drill the well to a total depth of 4,927 ft. The new oil deposits lie nearly one mile north of Ritchie's recently established Wing Field. The Wing Field currently has three Marmaton oil producers.



Alvine Wetiba sketching a megascopic scale diagram of the intersection between Oceanic and Continental crust, in Riggins, Idaho.



Contact mapping of Kessler Creek. Had to reach an elevation higher than expected in order to include contacts between formations.

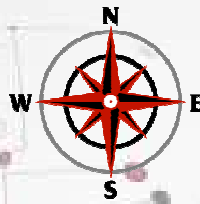


Looking at a stretching lineation



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Robert Gebhart	01/90	1990	Donald M. Brown	11/02	2003
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Harold McNeil	03/91	1991	Robert Noll	09/03	2003
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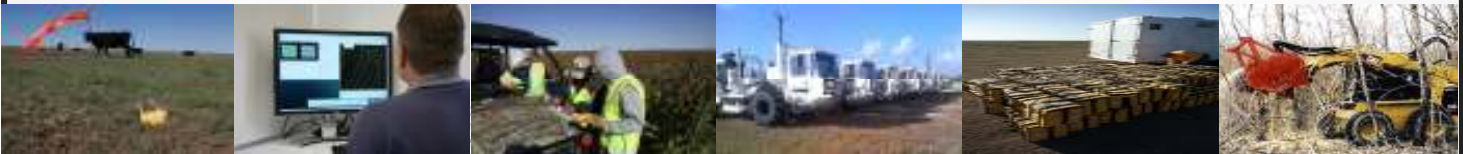
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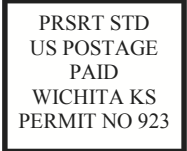
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 July—August 2016

July 2016

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					1	2
3	4  Library Closed	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19 KGS Board	20	21	22	23
24	25	26	27	28	29	30
31						

August 2016

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