



Established 1925

KANSAS GEOLOGICAL SOCIETY

BULLETIN

Volume 84 Number 5

September—October 2009

IN THIS ISSUE

Memorials:

Earl Brandt

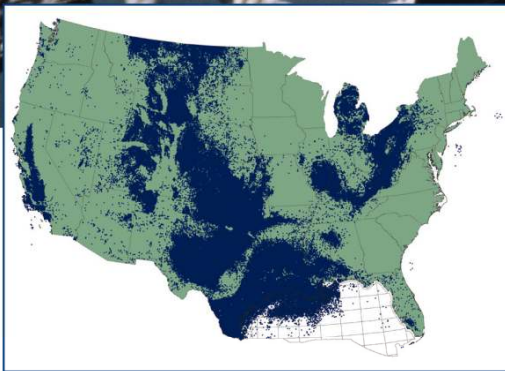
Tom Wesselowski

Geo Scenes — page 14



Introducing

LASSO



Lasso up all the digital LAS well log data you need from the industry's largest collection

With LASSO, lock in TGS' program rates on digital LAS well data from our US collection, growing at an unprecedented pace to more than 500,000 wells over the next several months. LASSO strengthens your exploration projects with the higher-order capabilities of increased digital well log use. LASSO digital data from TGS, the industry's well log data leader, is quality controlled and available online for immediate downloads.

For more information about LASSO, contact your TGS account representative or call 1-(888) LOG-LINE.



www.tgsnopec.com

NORWAY +47 66 76 99 00 | USA +1 713 860 2100 | UK +44 (0) 1234 272122 | AUSTRALIA +61 8 9480 0000
© TGS-NOPEC Geophysical Company. All rights reserved.

Table of Contents

Features:

Memorials

Earl Brandt	12
Tom Wesselowski	12
George Angle	12
GeoScenes	14

Departments & Columns:

President's Letter	7
From the Manager.....	9
Professional Directory	19
Advertiser's Directory	17
KGS Tech Talks	4
Kansas Geological Foundation	24
Exploration Highlights	22
KGF Memorials.....	26

ON THE COVER:

Karsting of Osagean cherty limestone has resulted in the formation of remnant limestone towers and intervening vertical chambers of dissolutional origin. Photo by S.J. Mazzullo taken on Highway 13 near Reeds Spring, Missouri.

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

Fall 2009

Sept. 15—Alan DeGood— “ The Role Kansas’s Natural Resources Played in the Development of Kansas”

Sept. 22—Ernie Morrison— “Fairport Field: A 120 Mile Step Out”

Sept. 29—Ray Sorenson

Oct. 6—Tom Ostrye

Oct. 20—Robert Henthorne, KDOT

Oct. 27— Norman Hyne—”The Glenn Pool Oil Field & the Start of the Oklahoma Oil Boom”

Nov. 3— Sal Mazzullo, etal—”Mississippian Outcrop-to-Subsurface correlations & Depositional Systems: Implications for Reservoir Prospecting”

Nov. 17 William Morris

Nov. 24—Matt Brueseke, Kansas State -

Dec. 1—Brian Cardott, “History of CBM in Oklahoma”

Dec. 15— Paul Ramondetta

Dec. 22—Dr. Stephen Hasiotis, KU

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.



BOARD OF DIRECTORS

PRESIDENT

Lynn Watney

PRESIDENT-ELECT

Rick Saenger

SECRETARY

Dave Clothier

TREASURER

Beth Isern

DIRECTORS

Ernie Morrison
Steve Frankamp
Robert O'Dell

ADVISORS

Jon Callen
Paul Gunzelman

COMMITTEE CHAIRMEN

Advertising

Kent Scribner

Advisory

Jon Callen
Paul Gunzelman

Annual Banquet

Doug Davis

Bulletin

Sal Mazzullo

Continuing Education

Robert Cowdery

Distinguished Awards

Ernie Morrison

Directory

Larry Richardson

Environmental

Kent Matson

Field Trip

Larry Skelton

Fishing Tournament

Randy Teter

Future Plans

Golf

David Barker

Historian

Larry Skelton

Investment

Beth Isern

Library

Roger Martin

Ted Jochems

Membership

Larry Friend

Nomenclature

John H. Morrison, III

Picnic

Marjorie Crane-Noel

Public Relations

Robert Cowdery

Shooting Tournament

Larry Richardson

Technical Program

Robert Cowdery

Ticket Sales

Bill Shepherd

A.A.P.G. DELEGATES

Ernie Morrison	Robert Cowdery	Alan DeGood
2010	2009	2009

BULLETIN STAFF

EDITOR

Sal Mazzullo
salvatore.mazzullo@wichita.edu (316) 978-7211

ADVERTISING

Kent Scribner
Stelbar Oil Corp. (316) 264-8378

PROFILES/MEMORIALS

Robert D. Cowdery
Consultant (316) 267-9030

EXPLORATION HIGHLIGHTS

John H. Morrison, III
Independent O&G (316) 263-8281

STATE SURVEY

Rex Buchanan
KS Geological Survey (785) 864-3965

SOCIETY NEWS

KGS Library (316) 265-8676

EDITOR EMERITUS

Wes Hansen (316) 863-7313

K.G.S. LIBRARY

PHONE 316-265-8676 FAX 316-265-1013

email: frontdesk@kgslibrary.com or

Web: www.kgslibrary.com

LIBRARY MANAGER

Rebecca Radford 265-8676

manager@kgslibrary.com

The KGS *Bulletin* is published bi-monthly by the Kansas Geological Society, with offices at 212 North Market, Wichita, Kansas 67202 Copyright 2006, The Kansas Geological Society. The purpose of the *Bulletin* is to keep members informed of the activities of the Society and to encourage the exchange and dissemination of technical information related to the Geological profession. Subscription to the *Bulletin* is by membership in the Kansas Geological Society. Limited permission is hereby given by the KGS to photocopy any material appearing in the KGS *BULLETIN* for the non-commercial purpose of scientific or educational advancement. The KGS, a scientific society, neither adopts nor supports positions of advocacy, we provide this and other forums for the presentation of diverse opinions and positions. Opinions presented in these publications do not reflect official positions of the Society.

TRILOBITE TESTING INC

Eleven Trucks Serving
Kansas - Colorado - Texas
Nebraska - Illinois

Slickline services using the same
Alpine Electronic Pressure
Guages as used on DST's

Back pressure testing (G1 & G2)

DST's

1-800-728-5369

FAX: 1-785-625-5620
trilobite @eaglecom.net

SHOPS LOCATED IN:

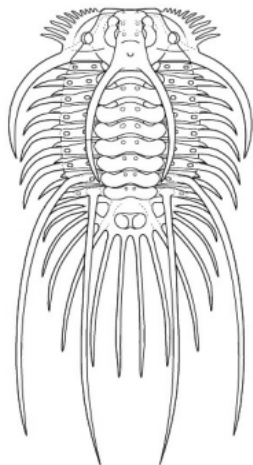
Hays, KS

Scott City, KS

Pratt, KS

Hugoton, KS

Clay City, IL



CAN YOU NAME THE CRITTER?

Sponsored by Trilobite Testing, Inc.

Is your paleo up to date?

If you know the name of the trilobite,
submit your guess via e-mail to
manager@kgslibrary.com

Remember that Trilobite Testing is
sponsoring your efforts, so be sure to thank
Paul Simpson the next time that you see him.

**Congratulations to David Hale of Wichita Falls, TX
For correctly guessing the July-August trilobite as**

Order- Phacopina, Super Family- Acastoidea,
Family-Acastidae, Genus-Asteropyge, Species-Metacanthina
Sub-Species-issoumourensis

WOW! Such specification!

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



OCTOBER 11-13, 2009
2009aapgmidcon.com

AAPG MID-CONTINENT SECTION MEETING

TULSA MARRIOTT SOUTHERN HILLS

OCTOBER 11-13, 2009

www.2009aapgmidcon.com

Now, in the 21st Century, we and future generations must develop every available energy resource at our disposal. The AAPG is welcoming an entirely new generation of geoscientists into our ranks, and it is our responsibility as a professional organization to provide the intellectual resources to these new hires (and old hands alike) so that they can develop the new energy resources for generations yet to come.

Session Topics Include:

- The Woodford Formation
- Applications for 3-D Seismic: Structure, Stratigraphy, & Fracture Identification
- Horizontal Plays in the Mid-Continent: Geologic Opportunities, Drilling and Completion Techniques
- Fractures & Microfractures: Importance to Resource Plays
- Professional Development for Geoscientists: New Hires to Old Hands, Concepts to Completions
- Mid-Continent Petroleum Systems
- Unconventional Technology in Mature Fields
- Shale and Coalbed Reservoirs in the Mid-Continent
- New Oil and Gas Ventures: Dare-Dream-Do
- Geology of the Mid-Continent

Visit us online at

www.2009aapgmidcon.com

for updated technical program, field trip, short courses,
student awards, and sponsorship information!



Registration opens July 1, 2009!

Presented by the Tulsa Geological Society

President's Letter



I was fortunate to be able to participate in a number of events this summer including AAPG Annual Meeting in Denver and a seminar at the West Texas Geological Society in Midland both in June, an informative two-day oil and gas seminar in early August sponsored by Kansas Next Step, a non-profit organization in Hays that helps students achieve academic success, and the KGS Annual Picnic and KIOGA Annual Meeting in Wichita in mid August. Late August to mid September are rounded out with the KDHE Geology Section Fall Seminar in Wichita, AAPG Leadership Conference in Tulsa, and EKOGA Trade Show in Chanute. Many topics were discussed that ranged from the new software interface to the Walter Digital Library, exciting geoscience-related discussions on play and field development, using new drilling technologies in Kansas, developing Kansas' low BTU shallow gas resources, and getting CO₂ to Kansas oil fields to support enhanced oil recovery. Your new ideas matched with new technologies and access to data will continue to make Kansas a great place to do business.

KGS staff and its members are looking forward to participating in the 2009 AAPG Mid-Continent Meeting in Tulsa on October 11-13 and the Energy Libraries Conference that precedes that meeting. Also, I hope you can be present to hear the 12 excellent speakers who will present at the Tuesday noon KGS Technical Meetings this Fall at the Sedgwick County Law Library. The annual KGS Shooting Tournament will also be held this fall at Lynnbrooke Sporting Clays (on a Monday this year, October 5th).

As we enter the Fall season, the economy continues to be an important topic in our conversations whether it is casual or business related. The economy shows signs of slow improvement, oil prices and Kansas drilling activity have also risen and, thankfully, business at the KGS Library is on the rise. Yet, natural gas has not realized the same recovery. The boost in oil prices is attributed to more rapid economic recovery and demand in places such as China. In contrast, a record high level of working gas in underground storage and a cooler summer in the US has led to a steady decline in gas prices to the lowest levels in seven years. On a BTU basis, gas is undervalued compared to oil by four times. However, NYMEX future contracts for gas this winter are a couple of dollars higher, around \$5/MCF, and recent indicators of more industrial output suggest, at least to me, a sense of optimism. The 56% decline in natural gas rigs since the same time last year in the U.S. will mean less new production and eventually decreased supply. It's a familiar path of down and up and I speak for many hoping that a fair price for gas will return sooner than later.

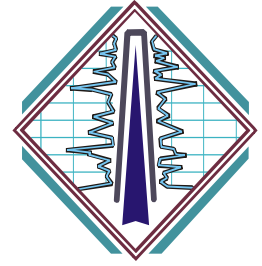
May you all have a productive and enjoyable Fall season. I look forward to seeing you at the upcoming events.

Respectfully submitted,

Lynn Watney



Robert F. Walters Digital Library View Millions of Documents!



Membership Details

If you are a member in good standing of the Kansas Geological Society Library, you can purchase a yearly membership to the WDL for an additional \$600.00/yr.

If you do not belong or qualify to belong to the KGS library, you can purchase a yearly membership to the WDL for \$1500.00 /yr.

Cost to Download

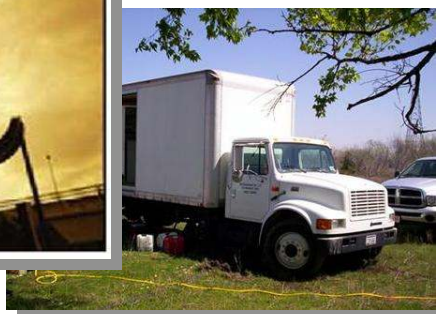
- ◆ Download pages of all document types.....\$.50/page
(with the exception of Independent Scout Cards)
- ◆ Download IOG scout cards\$2.00 / card
- ◆ Download entire document (well log or plotted geo report)\$10.00/document

Membership allows for unlimited viewing

Would you like to increase your production?



Well Enhancement Services, LLC is jetting laterals utilizing new technology and coiled tubing. Operating across Kansas, we have perfected the lateral jetting process with the ability to place acid hundreds of feet away from the well bore. This technology is revolutionizing the oil industry across the nation. It has firmly established itself by repeatedly increasing production in both new and existing wells. Contact us for more information, questions or to schedule your next well with WES.



Please Contact Us:

Phone: (785) 625-5155

Fax: (785) 625-4151

wesofhays@hotmail.com
www.wellenhancement.com

Box 87 Schoenchen, KS 67667

Tap into success.....with WES

From The Manager

Dear Members,

Okay, it's time to get busy again....the price is moving in an upward motion and everyone keeps telling me they are going to be doing more drilling in the 3rd & 4th quarter. Your library needs the business so please make use of our data when planning your drilling.



The Library has purchased a Neuralog color log printer that will take most any file type, TIF, Corel Draw, LogPlot, etc. so please bring your Plotted Geo Reports in on a disc or jump drive and we can print them for less than the competition, I am sure. Note that there is an 8.25" width restriction. This is your Library and Society and we want to keep it around for your future and future generations but you must support it in order for that to be a reality.

Soon the new software that will run the Walters Digital Library will be complete and you will see a marked difference in the amount of data that is on-line and the ease at which you will be able to access it. We had a demonstration of the software at KIOGA and will be beta testing within the next two weeks so we are close to wrapping this project up and getting it out there for your use. If you are in the library, please stop in my office for a preview of the software. I want to take this time to commend and thank Kurt Look and Eileen Jones at the Survey for their hard work on this project and their expertise in what we needed. I think all of you digital users will be very pleased!

We had a very successful picnic again this year and our thanks goes out to Marjorie Crane-Noel for organizing that event again. We have the last KGS event of the year coming up on October 5th, which is a Monday. The 16th Annual KGS Shooting Tournament will be held again at Lynbrooke Sporting Clays Range near Augusta. This is a wonderful facility and one of the best events the KGS puts on, so please dust off your shotguns and register for the Clay Shoot.

Respectfully submitted,

Rebecca Radford

Manager

Kansas Geological Foundation's newest CDs & DVDs

OIL INDUSTRY

Areas of Historical Oil and Gas Exploration and Production in the United States – USGS—The USGS recently completed a map compilation showing historical oil and gas exploration and production.

Petroleum Systems and Geologic Assessments of Undiscovered Oil and Gas, Hanna Laramie and Shirley Basins Province, Wyoming and Colorado - USGS—The assessment is based on geologic principles and uses the total petroleum system concept.

Geologic Assessment of Undiscovered Gas Resources of Eastern Oregon and Washington Provinces – USGS
The assessment is of the undiscovered oil and gas resources of the Eastern Oregon and Washington Province, which encompasses about 60,000 square miles.

Jurassic- Cretaceous Composite Total Petroleum System and Geologic Assessment of Oil and Gas Resources of the North Cuba Basin Cuba – USGS

Major Oil Plays in Utah and Vicinity – Oil and Natural Gas R&D – U. S. Department of Energy – Office of Fossil Energy – NETL

Focused Oil Technology Programs (Native American Independent Producers, PUMP PRIME, and Tech Transfer) ARCHIVE – Office of Fossil Energy – NETL

Modern Shale Gas Development in the United States: A Primer – NETL

Oil Program-Enhanced Oil Recovery (EOR) Archive – Program Results from the Mid70's to 2009 – NETL
Disk 1: Introduction/Analysis, Chemical Flooding, CO₂/Gas Injection, and General
Disk 2: Heavy Oil, Improved Sweep, Microbial, Stimulation/Models, Thermal, and Waterflooding

GIS Data Set – Teapot Dome, Natrona, County, Wyoming – Rocky Mountain Oilfield Testing Center

NPR-3 Well Log Data Set – Teapot Dome-Natrona County, Wyoming – Rocky Mountain Oilfield Testing Center

Core Data from Well 48-X-28 – Teapot Dome-Natrona County, Wyoming-Rocky Mountain Oilfield Testing Center

Virtual Petrophysical Tool – Brochure and Samples – HDS 2000

U.S. Department of Energy's Advanced Diagnostics Imaging System (ADIS) and Drilling Completion Stimulation (DCS) Project Archive –Office of Fossil Energy – NETL

Reservoir Solutions – 2005 – Ryder Scott Company

ALASKA

Geologic Assessment of Undiscovered Technically Recoverable Coalbed –Gas Resources in Cretaceous and Tertiary Rocks, North and Adjacent Waters, Alaska – USGS

Alaska Oil and Gas Opportunities – February 2009-State of Alaska, Department of Natural Resources

Oil and Gas Basin Resource Studies – Interior Alaska-Copper River Basin, Holitna Basin, Minchumina Basin, Nenana Basin and Sustna Basin – State of Alaska Department of Natural Resources

Oil and Gas Basin Resource Studies-Alaska Peninsula-General Information, Digital Well Data, Maps, Posters, Scanned Well Log Images and Digital Seismic Data-State of Alaska, Department of Natural Resources

Oil and Gas Basin Resource Studies-North Slope Alaska-Oil and Gas Programs, Regional Geology, Seismic Data Availability, Gravity and Magnetic Data- State of Alaska, Department of Natural Resources

PERU

Peru: a window of opportunities- Hydrocarbon Exploration Opportunities in Peru, Technical Information – Peru Petro

Hydrocarbon Exploration Opportunities in Peru – General Information – Peru Petro

GEOPHYSICAL INFORMATION

All Data Programs – Echo Geophysical Corporation

Seismic Data Set-Teapot Dome-Natrona County, Wyoming – Rocky Mountain Oilfield Testing Center

3-D Seismic Exploration Project, Ute Indian Tribe, Uintah & Ouray Reservation, Uintah County, Utah (Four

(CDs & DVDs continued)

Disks) Work performed by Wind River Resources Corporation for U.S. Department of Energy – National Energy Technology Laboratory

GENERAL

Carbon Sequestration Atlas of the United States and Canada – NETL

Carbon Sequestration – Office of Fossil Energy

Videos included on CD include: Geologic Carbon sequestration – A path toward zero emission energy from coal – An introduction to carbon capture and sequestration

Geothermal Technology Program – Tools and Resources – U.S. Department of Energy

All About Geothermal Power – Joint effort by several companies

U.S. Department of Energy’s Environmental Program Archive – Program Results from 1991 to 2008 – Office of Fossil Energy – NETL

GIS-UDRIL Data Sets “Salt Tectonism of Northern Gulf of Mexico”, “Georeferenced Raster Images of Gas Shales”- AAPG/Datapages

AAPG 2009 Annual Convention and Exhibition – Abstracts Volume - AAPG

These are the latest to be added to the Kansas Geological Foundations Video Library and are available for check out by calling 316-265-8676 (ask for Janice) or stop by the KGS Library at 212 N. Market, Ste. 100, Wichita, KS.



Plan to Attend the KGS Annual Clay Shoot

**MONDAY, October 5, 2009
Lynbrooke Sporting Clays Range**

**See Registration Flyer Insert in this issue
(on-line—see Events page)**

Memorials

Earl Brandt

With the passing of Earl Brandt on April 21st, the Petroleum Industry lost one of its stalwarts and the community table at the Petroleum Club lost one of its regulars. Earl was born on a farm near Emerald, Nebraska, which is 6 miles west of Lincoln. His mother died when he was two years old and his father raised Earl as well as two brothers, now deceased and a sister, Nelda Soper, residing currently in Lincoln.

He graduated from nearby Malcolm High School in 1943. While at Malcolm he played on championship basketball and baseball teams. In his senior year he was State High School high jump champion. Following graduation, Earl joined the Naval Reserve and served in the South Pacific on a destroyer as a radioman. The ship was involved in the invasions of Iwo Jima and Okinawa. After serving three years he was discharged and he enrolled at the University of Nebraska, graduating from there in 1950.

His employment history began with Cities Service Oil Co. as a “jug hustler” on a seismic crew near Lovington New Mexico. Later he worked out of Lewiston, Montana. In 1951 he was transferred to Wichita and in 1952 he was once again transferred, this time to Bartlesville, Oklahoma, the home office of CSO and he also spent some time in the Oklahoma City Office. 1956 found him once again in Montana, this time as District Geologist in Billings. After two years in Billings, he spent five years in the Oklahoma City office and then resigned in 1963. While at CSO, he was responsible for the discovery of the Yaeger Field on the Nemaha Ridge in Riley County.

From 1963 until 1968, Earl was Chief Geologist for Clinton Oil Company, a very active period in that company’s history. Earl then formed a partnership with Bob Clark, a former CSO landman and they operated under the name of Brandt Clark Oil. In 1970, Earl established Brandt Oil adding Brandt Drilling in 1976. At one point in time he drilled 10 wells in Northeastern Kansas in 66 days and was able to meet AFE cost on the package almost to the penny.

Earl was active in several professional organizations, including AAPG, SIPES, and KGS. He served as Nomenclature Committee Chairman for the KGS. His activity in community affairs included serving as building chairman for Ascension Lutheran Church when their new church was built.

His wife, Gerry and his sons Tim of Lawrence, Kansas, and Brad of Wichita survive Earl. Three grandchildren are also survivors. The family has designated “Victory in the Valley” as a memorial. A memorial has also been established in Earl’s name with the Kansas Geological Foundation.

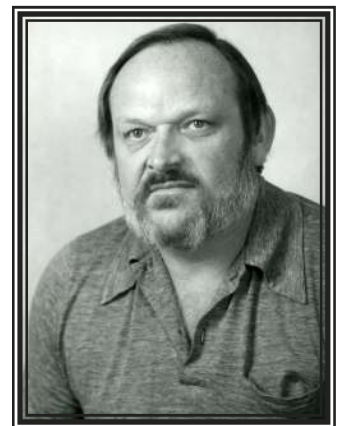


Tom Wesselowski

With the passing of Tom Wesselowski on April 5, 2009, the Kansas Geological Society lost a former member and the industry, a man of many interests. Tom was born in Jewel, Kansas in 1934 where his mother was a schoolteacher and his father a businessman. He had three brothers: Dan, Walt and Tim. He attended grade school in Mankato and Beloit and then Middle School and High School in Beloit. Tom graduated from Kansas State University with a BS degree in Geology.

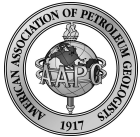
On September 10, 1955, he married Janet Boettcher who survives as well as their three children: Susan, a math teacher at Wichita Heights; David, a professional musician in Austin Texas; and Kirk, an engineer for Zeeco in Tulsa, Oklahoma. In his career as a geologist, Tom worked for Amoco in Houston, Raymond Oil, Rains and Williamson Oil, Chief Drilling, Viking Resources and completed his career as an Independent.

Tom had many interests outside of geology. He enjoyed motorcycling and horseback riding, but in later years competed in Track and Field. As competitor, he won 14 National Championships in masters track and field throwing events. He also won the National drug free championships in power lifting and at age 52, set a national age group record of 546 pounds in the dead-lift. Besides being a competitor, he served as a Volunteer Coach in Track and Field at Northwest High School and Friends University. The family has designated the YMCA as a memorial.



George Angle

George Angle, 85, a geologist and member of the Kansas Geological Society and AAPG, passed away August 12, 2009. No services were held.



Security for AAPG Members
& Their Families
Through Group Insurance

*Life
Health
Dental
Disability
Auto and Homeowner
Supplemental Plans*

AAPG's
GeoCare Benefits Insurance Program
P. O. Box 189
Santa Barbara, CA 93102-0819
800-337-3140
E-mail: geocarebenefits@agia.com
www.geocarebenefits.com

Kansas Geological Foundation Video / DVD Collection

The KGF has an extensive collection
of videos available for check-out
at no charge.

Only pay for shipping back.

These are ideal for classroom or
general public viewing.

See the web for
titles & descriptions
www.kgfoundation.org

Call 316-265-8676
Ask for Janice to check out videos



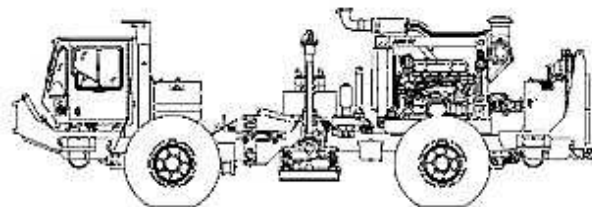
"Setting The New Service Standard"

Burt Gowdy
Technical Sales Engineer

Open Hole Wireline Services
Servicing KS, OK, TX & AR

2409 South Purdue Drive
Oklahoma City, OK 73128
Fax: (405) 601-5737
Cell: (405) 514-0643
24 hr. Dispatch 1-918-645-1091

Email: Burt.Gowdy@TuckerEnergy.com
<http://www.TuckerWireline.com>



~The TOP CHOICE for 3D SEISMIC~

John H Beury III ~ Pres John Aguilar ~ Op. Mgr.

PHONE (316) 636 - 5552 FAX (316) 636 - 5572

3500 N. Rock Rd., Bldg 800, Suite B
Wichita, KS 67226

paragon@paragongeo.com

GEO SCENES



Karstification

The term “karstification” refers to a set of processes related to wholesale dissolution of rocks, commonly carbonate rocks and evaporites, that result in the formation of diagnostic landforms and smaller-scale features on rocks. Most karst dissolution takes place in the shallow subsurface, beneath unconformities, as a result of exposure to undersaturated fresh water, although surficial dissolution of rocks exposed at the surface also occurs. Subsurface dissolution by relatively hot, basin-derived fluids locally may create caves and caverns as well. The process of karstification also makes possible the precipitation of carbonates in open voids in the form of cave decorations such as stalactites, stalagmites, columns, and flowstone. Karst dissolution is an important process that initially creates porosity and permeability in carbonate rocks, including those that eventually may become oil and/or gas reservoirs such as in the Arbuckle and Mississippian in Kansas. The results of karst dissolution take on many forms, from creation of micro-scale porosity-permeability systems in rocks to larger-scale voids and cave-filling deposits, some of which are discussed herein as analogs of some oil/gas reservoirs in Kansas.

The cover photo of this issue of the *Bulletin* shows exposures of Osagean limestone (Reeds Spring Formation) in Missouri wherein preferential dissolution along joints and fractures resulted in the formation of open, vertical passages between remnant limestone towers. Such dissolution usually takes place in the shallow subsurface immediately beneath soil layers, and the rocks in the cover photo subsequently were exposed at the surface by later erosion (and road building). The depth to which the vertical passageways persist is indeterminate here, but it likely is just a few feet more than shown in the photograph. Such vertical passages are ready avenues for enhanced fluid flow, and they are associated with tighter capping and underlying beds without such passages. The remnant towers in the cover photo are held up by rocks with little porosity and permeability. Such relationships likely characterize some oil/gas reservoir systems in Arbuckle and Mississippian rocks in Kansas. Such systems might be manifested as wells that initially test or produce a whole bunch of oil or gas, but then don’t produce much after that.



Figure 1. Roadcut on Highway 39 north of the town of Miller, Missouri showing black sandy shale of inferred lower Pennsylvanian age filling a cave in the Osagean Burlington-Keokuk limestone. The underlying orange rock (black arrow) is rauwacke, and collapsed roof-derived clasts embedded in the shale are indicated by white arrows.

Figure 1 shows a cave in Osagean Burlington-Keokuk limestones in Missouri that appears to have formed during the latest Mississippian as it was filled by sandy shales of likely lower Pennsylvanian age. Within the shales are relatively large blocks that fell from the currently still-intact roof of the cave. The floor of the cave is limestone that has been heavily altered by dissolution, hence, it is very porous and so crumbly that it can readily be disaggregated by hand. Such altered rock is sometimes referred to as “rauwacke” in the older geologic literature. **Figure 2** shows an exposure that is a few miles north of Figure 1. It illustrates another cave that also formed in Burlington-Keokuk strata prior to deposition of lower Pennsylvanian rocks in the area. This cave is filled by two thick units of presumed lower Pennsylvanian sandstone separated by a thinner section of dark gray, sandy shales. The roof of the cave is thin, and it is deformed by slump into the cave below (black arrow). Note that the contact between the host limestone and the cave and cave-filling deposits is vertical. Imagine drilling a well and penetrating a few feet of Arbuckle dolomite or Mississippian limestone that is underlain by sandstone and shale. Among many other possible interpretations, one can imagine a filled cave system in such an occurrence. The roadcut exposure depicted in **Figure 3**, which was photographed on Highway 39 near Figure 2 in southwestern Missouri, illustrates a fairly thick section of cross-stratified, cave-filling sandstone in host Burlington-Keokuk limestone strata. The roof of the cave has been eroded here (likely by Tertiary erosion), leaving this sandstone as a “plug” in an otherwise limestone-dominated section -- another puzzling feature if encountered in the subsurface



Figure 2 - Two beds of cave-filling sandstone separated by dark gray sandy shale in a cave in the Burlington-Keokuk Limestone. Note vertical contact (arrow and white line) between sandstone-shale and host limestone, and slumped cave roof (black arrow). Highway 39 near Miller in southwestern Missouri.



Figure 3 - Roadcut on Highway 39 about 0.4 mi south of intersection with Highway Highway 160W in southwestern Missouri. Cave in the Burlington-Keokuk limestone filled with cross-stratified sandstone. The carbonate roof of the cave here has been eroded, leaving an isolated mass of sandstone within the Mississippian limestone.

Figure 4 - Newly-formed sinkhole within an oil field near Denver City, Texas.



Finally, a newly-formed sinkhole within an Occidental Permian Inc. oil field in the Permian Basin of west Texas is shown in Figure 4. The sinkhole opened up overnight on July 28, 2009 just two miles northeast of Denver City (which is a few miles south of Plains in Yoakum County). The sinkhole measured about 200 feet in diameter and is 50 feet deep.

It likely formed as a result of dissolution of underlying Permian evaporites, which shows that karstification is not always related to dissolution of carbonate rocks. The host rock in this occurrence is thick caliche (calcrete – carbonate-replaced soil) that mantles the area. Occidental shut down production as a cautionary move after the sinkhole formed. Such evaporate-related sinkholes also are present around Hutchinson, Kansas.

Submitted by Sal Mazzullo and Brian Wilhite

Free To Good Home (or office)

Geophysical Journals
 AAPG Bulletins
 Economic Geology
 Mining Engineering
 Journal of Sedimentary Petrology
 Shale Shakers

Contact: Library 316-265-8676

Microfiche Logs For Sale

The **Kansas Geological Foundation** is offering electric logs and other information on microfiche for sale. This data is from 10 western states. The microfiche will be sold as is, in bulk, by state (no cherry picking).

Prices are proportionate to the number of fiche available (~ 45,000 fiche Wyoming, 20,000 fiche for Montana, Utah, and N. Dakota.)

Prices are firm, you haul or pay for shipping

- Wyoming—\$250.00**
- North Dakota—\$200.00**
- Montana—\$200.00**
- Utah—\$200.00**
- Colorado—\$50.00**
- South Dakota—\$50.00**
- New Mexico—\$50.00**
- Idaho—\$25.00**
- Arizona—\$25.00**
- Oklahoma—\$25.00**

Interested parties call: 316-265-8676



ADVERTISER'S DIRECTORY

	<i>page</i>
Allied Cementing Company, Inc	18
Duke Drilling	18
GeoCare Services AAPG	13
Kansas Geological Foundation	24
Kansas State University	20
Lockhart Geophysical	18
LogSleuth-MJ Systems	25
MBC Well logging	18
Murfin Drilling Company, Inc	18
Oneota Resources	22
PARAGON Geophysical Services, Inc	13
Professional Directory	19
Sunrise Oilfield Supply	18
TGS-NOPEC Geophysical Company	2
Trilobite Testing	6
Tucker Wireline Services	13
Walters Digital Library	8
Weatherford	27
Well Enhancement Services, LLC	8

ADVERTISER'S RATES: 2009

Full Page	B&W	Color
6 issues	\$2,000	\$2,500
3 issues	\$1,080	\$1,325
1 issue	\$480	\$525
1/2 Page		
6 issues	\$1,000	\$1,500
3 issues	\$540	\$825
1 issue	\$225	\$350
1/4 Page		
6 issues	\$600	\$900
3 issues	\$325	\$525
1 issue	\$150	\$250
1/8 Page		
6 issues	\$300	\$500
3 issues	\$175	\$325
1 issue	\$75	\$185
Professional Ad (Business Card)		
6 issues	\$90	\$180

For one-time ads, call Rebecca at 316-265-8676

WESTERN KANSAS
SOUTHERN NEBRASKA



EASTERN COLORADO
OKLAHOMA & TEXAS PANHANDLES

10 Drilling Rigs

For contract information, please contact:
Blaine Miller / Drilling Department
316-858-8607 (Direct) or 316-267-3241

250 N. Water #300—Wichita, KS 67202

**10 Well Service Rigs &
Roustabout Services**

For contract information, please contact:
Alan Hays, Well Service Sprvsr.
785-421-2103 or 785-567-8739 (cell)

East Highway 24—Hill City, KS 67642

DUKE



DRILLING COMPANY

ROTARY DRILLING CONTRACTOR

620 Hubbard PO Box 823
Great Bend, KS 67530
Phone 620-793-8366

100 S. Main, Ste. 410,
Wichita, KS 67202
Phone 316-267-1331
Fax 316-267-5180

**Advertise in the Society's
Bulletin**

Great Bend (620) 793-5861 Ness City (785) 798-3843 Medicine Lodge (620) 886-5926

**ALLIED
CEMENTING CO., INC.**

Acidizing Available at Medicine Lodge District

Russell (785) 483-2627 Oakley (785) 672-3452

Lockhart Geophysical Company

Call (303) 592-5220 FAX (303) 592-5225
Or E-mail lockden@xpert.net

2D & 3D Seismic Acquisition
Vibroseis Specialists



JAPEX GDAPS-4 Distributed System

We'll give you seismic excellence

MBC

*WELL LOGGING & LEASING
UNMANNED GAS DETECTORS
MUD LOGGING
CERTIFIED INSTRUMENT TECH
SERVING THE KAN-O-TEC AREA SINCE 1990*

AUSTIN GARNER **MARLA GARNER**

**24-HOUR PHONE (620) 873-2953
MEADE, KANSAS**



STORES

Ness City, KS
800-589-5733

El Dorado, KS
316-321-9323

Garden City, KS
877-976-1700

Spivey, KS
316-532-5261

McCook, NE
308-345-1542

FULL LINE SUPPLY STORE

With Pump Shop
Offering New & Used
Pipe, Equip. & Fittings
Employee Owned

SALES OFFICES

Wichita, KS
800-777-7672

Great Bend, KS
316-792-3130
Mob: 316-786-4255

New Office
Hugoton, KS
620-428-6604

PROFESSIONAL DIRECTORY

Kirk Rundle
Consulting Geophysicist

3D Seismic Design, Acquisition to Processing QC.,
Interpretation and Analysis, Subsurface Integration
7340 W. 21st. N., Ste. 100
Wichita, Kansas 67205

Office: 316-721-1421 Fax: 316-721-1843
Home: 316-721-8962 Email:krundle@swbell.net

DON V. RIDER
Consulting Petroleum Geologist
Well Site Supervision
Geological Studies
Completions

8910 W. Central Park Ct.
Wichita, KS 67205

Office PH: 316-729-4445 Cell PH: 316-706-7199

Tel.: (972) 712-9036
Fax: (972) 712-0258
Cell: (214) 223-1784

LANG J. FUQUA
Certified Petroleum Geologist

4201 Tanglewood Ln.
Frisco, Texas 75035

WESLEY D. HANSEN
Consulting Geologist

Well site Supervision
Geologic Studies
212 N. Market, Ste 257
Wichita, Kansas 67202
Off: (316) 263-7313
Mobile: (316) 772-6188



KEVIN L. KESSLER

INDEPENDENT/CONSULTING PETROLEUM GEOLOGIST

WELLSITE SUPERVISION • GEOLOGIC RESEARCH
OIL & GAS PROSPECTS
KANSAS & EASTERN COLORADO

MAILING ADDRESS PHONE
1199 N. PONDEROSA RD. RES.: (316) 522-7338
BELLE PLAINE, KS 67013 MOBILE: (316) 706-6636
EMAIL: KKESSLER1199@AOL.COM

KGJ ENTERPRISES

Contract Oil & Gas Accounting &
Office Management

Kathryn G. James, MBA (316) 775-0954
4278 SW 100th ST. (316) 250-5989
Augusta, KS 67010 kgjames@onemain.com

ROGER L. MARTIN

Independent Petroleum Geologist

501 W. 9th • Winfield, Kansas 67156

Office 316-833-2722 Cell: 316-250-6970

KS Field Cell: 316-655-1227

Home/Fax: 620-402-6301

Email: rogermartingeo@yahoo.com

ALFRED JAMES III

Petroleum Geologist

Kansas - Colorado - Alaska

SIPES #1111

Wichita, Kansas 67202

Off: (316) 267-7592

M. Bradford Rine

Honorary Life Member—Kansas Geological Society

Licensed Geologist—KS. #204

Registered Professional Geologist—Wyo. # 189

Certified Geologist—A.A.P.G. # 2647

S.I.P.E.S. # 1584 S.P.E. #109833-4

PROSPECT EVALUATION • PROSPECT GENERATION
WELLSITE SUPERVISION • EXPERT TESTIMONY • OPERATIONS
PROPERTY EVALUATION • RESERVOIR STUDIES

Suite 415
100 S. Main
Wichita, KS 67202

DRLG./COMP. CONSULTATION

Office: (316) 262-5418
Fax: (316) 264-1328
Cell: (316) 772-6829



Paul Gunzelman
President/Geologist

Wichita, Kansas 316.634.6026

email p.gun@sbcglobal.net

ROBERT J. GUTRU

Geologist

300 Farmers & Bankers Bldg.

200 East First Street

Wichita, Kansas 67202

Off: (316) 265-3402

MELLAND ENGINEERING

Petroleum Engineering & Geological Consulting

James E. Melland, P.E.

Owner

Office: (620) 241-4621 Fax: (620) 241-2621

Cell Phone: (661) 319-5950

Email: jemelland@sbcglobal.net

Jamesm@mellandengineering.com

P.O. Box 841, McPherson, KS 67460

 **GeoCertified, LLC**

**Professional Geological Services
Hydrocarbon Detectors and Geologist Onsite 24/7**

Phone: (913) 441-2311 • Cell: (913) 544-7527
www.geocertified.com

BRUCE GOLOB

Geophysical Consultant

- ◆ 3D Seismic Interpretation, Mapping & Depth Conversion
- ◆ Well Log-to-Seismic Integration, Phase Matching
- ◆ Processing / Re-Processing Guidance & QC
- ◆ World-Wide Experience, Kansas Focus

Cell: 303-618-0972 Email: BruceGolob@yahoo.com



KANSAS STATE UNIVERSITY

**GEOLOGY
DEPARTMENT**

PROUDLY ANNOUNCES

NEW GRADUATE COURSES

APPLICABLE TOWARD GRADUATE CERTIFICATES
(pending) and M.S. DEGREE in GEOLOGY

Winter Intersession 2010:

GEOL 7xx: Death Valley Geological Field Trip (3 credit hrs.)

Dates TBA, but late December/early January.

Drs. Oviatt and Brueseke, leaders. 5 1/2 days, 4 nights
(campouts) in the field; trip begins and ends in Las Vegas.
Final report required.

GEOL 8xx: 4D Seismic Interpretation: Unconventional Workflows

(3 credit hrs.). Dr. Raef, instructor. Rock physics modeling and
4D seismic interpretation for geologic carbon sequestration and
EOR. Case studies & field data acquisition included. Three days
on KSU campus and take-home project. Enrollment limited.

Information:

KSU Continuing Education: www.dce.ksu.edu

KSU Geology Department: www.ksu.edu/geology

KSU Graduate School: www.ksu.edu/grad

or e-mail George Clark, interim dept. head: <grc@ksu.edu>

Robert F. Walters
Digital Library News

On the opposite page, please see a preview of the new software for the digital library. Bullet points highlight some of the changes you will see in this new version. This is a preliminary version and there may be some changes yet to the look and feel.

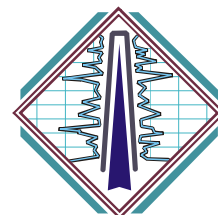
When you have conducted a search, you will see the database of wells. Please notice that you can search for digital documents only or paper and digital well records. We have combined the two databases and therefore, you will be able to see all records in the Kansas Geological Society's paper library, whether or not there is a scanned image. Once you click on a well, you will see the available documents below in thumbnails.

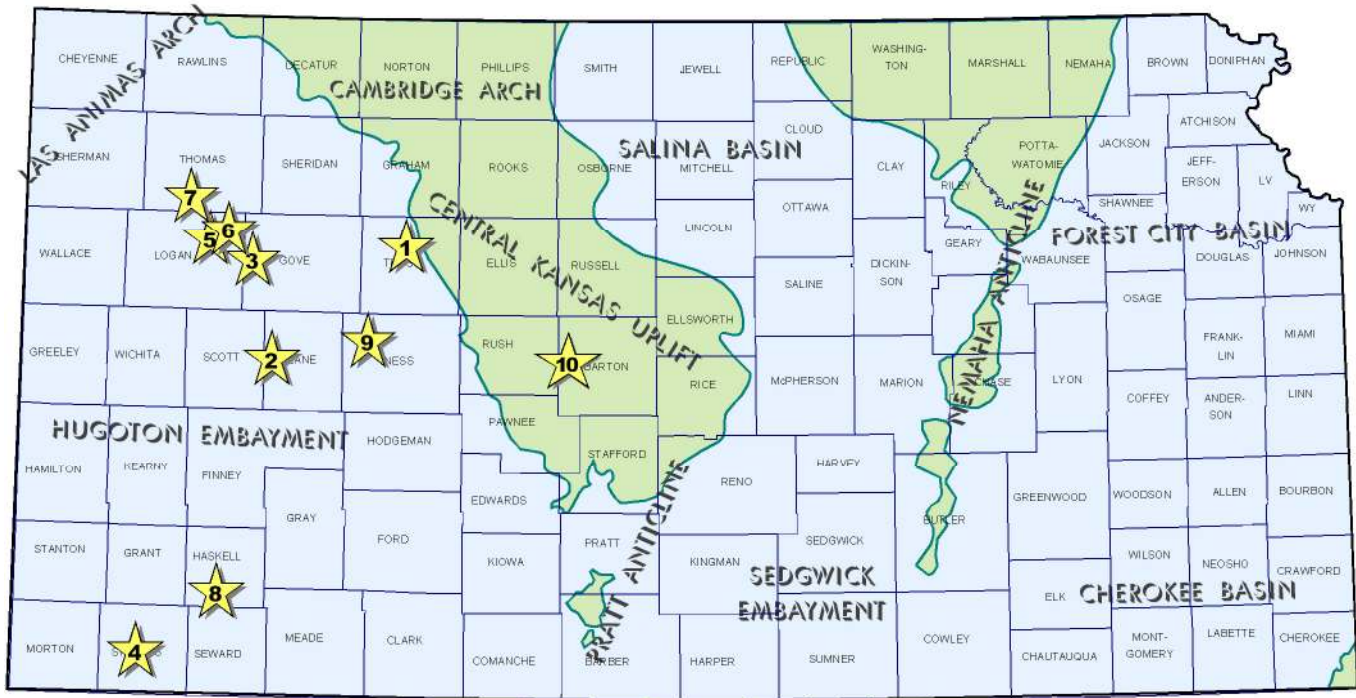
You will notice that the thumbnails are only the header portion of the log. Once you click on the thumbnail, the complete log will load in the window at the right. You will be able to scroll and see the complete log rather than pages of the log.

You will have the option to purchase the entire log as a TIFF file or you can purchase pages. When purchasing pages, you will be able to see the exact part of the log and where the page breaks are. You will also be able to add the header and then go down the log and attach whichever pages you need. This will be downloaded as a PDF or a TIFF file.

You will also be able to open a log or any document in a new window. That will allow you to "park" that window and then go to another document or even to another well and bring up other documents in separate windows.

This is still a work in progress and we will keep updating the information as it develops.





(1) Downing-Nelson Oil Company has recovered oil from three zones in the Lansing-Kansas City at the #1-23 Riedel Brothers, SE/4 of section 13- T12s- R23W, in Trego county. Operator has perforated the LKC 'C' zone from 3738 to 3740 ft., 'D' zone from 3753 to 3757 ft., and 'J' zone from 3877 to 3882 ft. The well is completed for 23 barrels of oil and 5 barrels of water per day. Another LKC zone from 3954 to 3990 ft. also tested promising shows but remains behind pipe. The well was drilled to a total depth of 4196 ft. Well site is located nearly three-quarters mile southeast of the Newcomer field, or three miles southeast of WaKeeney, Kansas.

(2) Larson Operating Company has discovered Cherokee oil reserves at the Whiting #2-31, SE/4 of section 31- T18s- R30W, in Lane county. The wildcat well was completed at an unknown rate on May 20, 2009. Operator found the deposits over one and one-quarter miles west of the Goering field that has produced oil since 1979 from the Lansing-Kansas City, Marmaton and Cherokee zones. Larson's new Whiting field lies about four and one-half miles southwest of Amy, Kansas.

(3) Mississippian oil deposits have been discovered by Grand Mesa Operating Company at the Hess #1-32, spotted in the SE/4 of section 32- T13s- R31W, Gove county. The Gaeland Township pool opener was completed on May 20, 2009 at an undisclosed rate. Royal Drilling tools bottomed the well at a total depth of 4700 ft. discovery site is located over two miles east of the established Maurice (Marmaton oil) field, and is twenty miles southwest of Gove, Kansas.


(4) EOG Resources, Inc. has opened the new Center West Mississippian oil field in Stevens county. The Bane #28-1 was completed on May 15, 2009 for an unknown amount of oil at site located in the SW/4 of section 28- T33s- R37W, one and three-

quarters miles south of Hugoton town site. The well was drilled to a total depth of 6610 ft. by Kenai Mid-Continent tools.

(5) Murfin Drilling Company has discovered new pay horizon within the recently established Funky Town West oil field in Logan county. Murfin opened the previously all Mississippian oil field with the completion of their #1-25 Gary, located in the SW/4 of section 25- T12s- R33W. The pool opener has produced over 9,000 barrels of oil since being placed on the pump in mid November last year.

(6) In February this year, Murfin drilled the #1-25 Stoecker Unit as a northeast stepout in the NE/4 of section 25. The well is on pump making an estimated 30+ barrels of oil per day from undisclosed depth in the Johnson Zone formation of the Cherokee. Rotary total depth is 4715 ft. Field area is located about nine miles southeast of Monument, Kansas.

(7) In Thompson county, Murfin Drilling Company has expanded Lansing-Kansas City oil production in the Towns field. The #1-21 L. R. Frahm, spotted in the SE/4 of section 21- T10s- R34W, was drilled to a total depth of 4830 ft. at site located nearly one-half mile south of infield producers. The stepout well has produced over 3,074 barrels of oil since February this year,



Oneonta Resources, LLC

Michael Bradley
518 17th Street, Ste 1000
Denver, Colorado 80202

Kansas 3-D Projects

Phone: 970-222-7530
Fax: 303-374-7912
lonetree9@earthlink.net

and is averaging 50+ barrels of oil daily. The well lies ten miles northwest of Monument, Kansas.

(8) Additional information has been released on Presco Western LLC's #3-C (14-30-33) Tice Cattle which discovered Morrow gas reserves and established the new Tice field earlier this year. Located in Haskell county, in the NW/4 of section 14- T30s-R33W, the pool opener was completed as flowing 361 Mcf gas and 12 barrels of water daily from Morrow perforations at 5391 to 5396 ft. Log top of the Morrow was called at 5249 (-2304 kb). The new field lies over one and one-half miles northeast of the multipay Victory field, and is four and one-half miles east of the city of Satanta, Kansas.

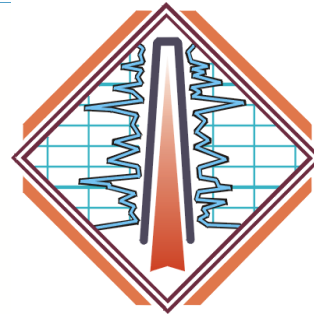
(9) Palomino Petroleum, Inc. is pumping 105 barrels of oil with only a trace of water at the Dixon Trust #1, located in the NE/4 of section 20- T17s- R25W, in Ness county. The Lazy 17 East field stepout and development well found new source of oil supply in the Marmaton (Fort Scott) formation at a depth from 4337 to 4341 ft. Top of the zone was logged at 4336 (-1851 kb). Logger's total depth reached 4572 ft. The field was originally established by Red Oak Energy last year when oil deposits were discovered in the Mississippian formation. Field area lies about six miles southwest of Arnold, Kansas.

(10) In Barton county, just south of the city limits of Olmitz, Mai Oil Operations has discovered Lansing-Kansas City oil deposits at the Hildreth #1. The new Hildreth pool opener was completed in mid-June at an undisclosed rate in the SW/4 of section 1- T18s-R15W. Site lies over three-quarters mile southeast of known production in the Olmitz South field.

***INTERESTED IN
BUYING CARD SETS,
CABINETS, ETC.??***

***Larry Friend and Ted Jochems
invite you to submit your e-mail ad-
dress to an automatic notification list
when such things come up for sale.***

***Contact: KGS Library
265-8676***



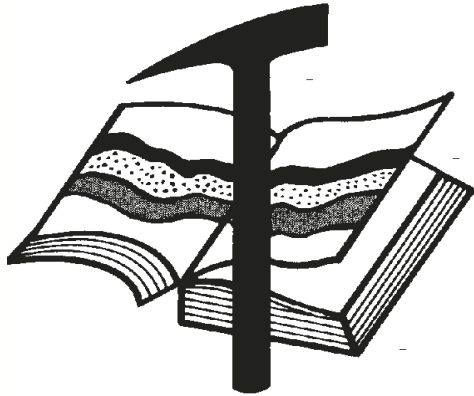
**Robert F. Walters Digital Library
www.waltersdigitallibrary.com**

**Help Wanted!
Integration Project**

**If you have *any* time you could give to the Library, we have projects that
could move a little faster with some Expert Professional Geologists**

Just a few hours a week would make such a difference.

*To volunteer, please contact Ted Jochems
or Rebecca at the Library
265-8676*



Kansas Geological Foundation

Web Site: www.kgfoundation.org

**212 North Market
Wichita, Kansas 67202**

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:

Century Club	\$ 100 to \$ 499
\$500 Club	\$ 500 to \$ 999
Millennium Club	\$1000 to \$5000
President's Club	\$5000 and over



M.J. SYSTEMS
LOG



Sleuth
SOFTWARE

RASTER IMAGE WELL LOGS

**OVER
5 MILLION
LOGS
AVAILABLE**

**SEE THE
CATALOGUE AT:
WWW.mjlogs.com**

1-800-310-6451

SALES@MJLOGS.COM

CALGARY • DENVER

**U.S.A.
LOGS FOR:**

**ALABAMA
ALASKA
ARKANSAS
ARIZONA
CALIFORNIA
COLORADO
FLORIDA
IDAHO
ILLINOIS
INDIANA
KANSAS
LOUISIANA
MICHIGAN
MISSOURI
MISSISSIPPI
MONTANA
NEBRASKA
NEVADA
NEW MEXICO
NORTH DAKOTA
OKLAHOMA
OREGON
SOUTH DAKOTA
TEXAS
UTAH
WASHINGTON
WEST VIRGINIA
WYOMING**

**CANADIAN
LOGS FOR:**

**ALBERTA
BRITISH COLUMBIA
SASKATCHEWAN
MANITOBA
FEDERAL AREAS**

Kansas Geological Foundation Memorials

KGS Member	Date Deceased	Memorial Established	KGS Member	Date Deceased	Memorial Established
Dan Bowles	09/89	1990	Floyd W. "Bud" Mallonee	10/00	2000
John Brewer	10/89	1990	Ralph W. Ruuwe	09/00	2000
George Bruce	08/89	1990	Robert L. Slamal	02/01	2001
Robert Gebhart	01/90	1990	Jerold E. Jespersen	06/01	2001
Ray Anderson, Jr.	11/90	1990	William A. Sladek	06/01	2001
Harold McNeil	03/91	1991	Harlan B. Dixon	06/01	2001
Millard W. Smith	08/91	1991	Edward B. Donnelly	08/01	2001
Clinton Engstrand	09/91	1991	Richard P. Nixon	02/02	2002
M.F. "Ted" Bear	10/91	1991	Robert W. Frensley	12/01	2002
James & Kathryn Gould	11/91	1991	Gerald W. Zorger	01/02	2002
E. Gail Carpenter	06/91	1993	Don L. Calvin	03/02	2002
Benton Brooks	09/92	1992	Claud Sheats	02/02	2002
Robert C. Armstrong	01/93	1993	Merle Britting	2002	2002
Nancy Lorenz	02/93	1993	Harold Trapp	11/02	2002
Norman R. Stewart	07/93	1993	Donald M. Brown	11/02	2003
Robert W. Watchous	12/93	1993	Elwyn Nagel	03/03	2003
J. George Klein	07/94	1994	Robert Noll	09/03	2003
Harold C.J. Terhune	01/95	1995	Benny Singleton	09/03	2003
Carl Todd	01/95	1995	Jay Dirks	2003	2003
Don R. Pate	03/95	1995	J. Mark Richardson	02/04	2004
R. James Gear	05/95	1995	John "Jack" Barwick	02/01	2004
Vernon Hess	06/95	1995	Richard Roby	03/04	2004
E. K. Edmiston	06/95	1995	Ruth Bell Steinberg	2004	2004
Jack Rine	07/95	1995	Gordon Keen	03/04	2004
Lee Cornell	08/95	1995	Lloyd Tarrant	05/04	2004
John Graves	10/95	1995	Robert J. "Rob" Dietterich	08/96	2004
Wilson Rains	10/95	1995	Mervyn Mace	12/04	2004
Heber Beardmore, Jr.	09/96	1996	Donald Hoy Smith	04/05	2005
Elmer "Lucky" Opfer	12/96	1996	Richard M. Foley	06/05	2005
Raymond M. Goodin	01/97	1997	Wayne Brinegar	06/05	2005
Donald F. Moore	10/92	1997	Jack Heathman	05/06	2006
Gerald J. Kathol	03/97	1997	Charles Kaiser	09/06	2006
James D. Davies	08/88	1997	Rod Sweetman	08/06	2006
R. Kenneth Smith	04/97	1997	Karl Becker	10/06	2006
Robert L. Dilts	05/97	1997	Frank Hamlin	10/06	2006
Delmer L. Powers	06/72	1997	Marvin Douglas	12/06	2006
Gene Falkowski	11/97	1997	Robert W. Hammond	04/07	2007
Arthur (Bill) Jacques	01/98	1998	Eldon Frazey	04/07	2007
Bus Woods	01/98	1998	Pete Amstutz	05/07	2007
Frank M. Brooks	03/98	1998	Charles Spradlin	05/07	2007
Robert F. Walters	04/98	1998	Donald R. "Bob" Douglass	09/07	2007
Stephen Powell	04/98	1998	Vincent Hiebsch	11/07	2007
Deane Jirrels	05/98	1998	Glen C. Thrasher	03/08	2008
William G. Iversen	07/98	1998	Peg Walters	06/08	2008
Ann E. Watchous	08/98	1998	Theodore "Ted" Sandberg	07/08	2008
W.R. "Bill" Murfin	09/98	1998	James Ralstin	11/08	2008
Donald L. Hellar	11/98	1998	Earl Brandt	04/09	2009
Joseph E. Rakaskas	01/99	1999	Walter DeLozier	05/09	2009
Charles W. Steincamp	02/99	1999			
Robert and Betty Glover	10/96	1998			
Howard E. Schwerdtfeger	11/98	1999			
W. W. "Brick" Wakefield	03/99	1999			
V. Richard Hoover	01/00	2000			
Warren E. Tomlinson	01/00	2000			
James A. Morris	01/00	2000			
Eric H. Jager	03/00	2000			
Kenneth W. Johnson	03/00	2000			
Dean C. Schaake	03/00	2000			
Fred S. Lillibridge	05/00	2000			
Jerry A. Langrehr	07/00	2000			
Clark A. Roach	07/00	2000			



Weatherford®



All Around You

**Weatherford has always
been driven by your needs.**

Now, with the addition of Precision Energy Services we're continuing to build a world of skills, services and technologies that revolve – and evolve – around you.

The result?

An expanded global network of 25,000 people, 730 service bases and 87 manufacturing facilities in 100 countries.

This increased local knowledge and service is there to support you anywhere, anytime. From midday in the Middle East to midnight in the middle of nowhere.

And with greatly strengthened capabilities in the critical evaluation skills of directional drilling and wireline logging, we can do even more to improve the profitability and productivity of your wells.

To see how our sphere of services can work for you, visit www.weatherford.com or contact either your Weatherford or former Precision Energy Services representative.

Drilling | Evaluation | Completion | Production | Intervention

© 2006 Weatherford International Ltd. All rights reserved. Incorporates proprietary and patented Weatherford technology.


CHANGE SERVICE REQUESTED

KGS BULLETIN
 September—October 2009

September 2009

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7 <i>Library closed</i>	8 KGS <i>Board Mtg.</i>	9 KG <i>Foundation Board mtg.</i>	10	11	12
13	14	15 <i>Tech Talk</i>	16	17	18	19
20	21	22 <i>Tech Talk</i>	23	24	25	26
27	28	29 <i>Tech Talk</i>	30			

October 2009

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5 KGS <i>Shooting Tournament</i> 	6 <i>Tech Talk</i>	7	8	9 <i>Energy Library Conf.—Tulsa</i>	10
11 <i>AAPG Mid-Continent in Tulsa</i>	12	13	14 KGS <i>Board mtg.</i>	15	16	17
18	19	20 <i>Tech Talk</i>	21	22	23	24
25	26	27 <i>Tech Talk</i>	28	29	30	31