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ON THE COVER:

View of the red shales and the Shimer Gypsum Member in the Blaine Formation in Roman Nose State Park in Blaine County Oklahoma.

See Geo Scenes on page 16

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 website at http://www.kgslibrary.com
**Spring 2012 Schedule**

Mar. 6—Dr. Lynn Watney, “Evaluating CO2-EOR and CO2 Storage Capacity in Kansas”
Mar. 20—Brian David— “Applications and Benefits of Using Borehole Images in a Horizontal Well; How the Information Obtained Could Be Used To Aid in Well Completions”
Mar. 27—Kurt Rottmann, “Stratigraphic Architecture of the Kinderhookian to Meramecian Series in North Central Oklahoma and Southern Kansas”

Apr. 3—Ft. Hays Geology Students
Apr. 17—Charlie Smith, Halliburton— “A New, Systematic approach to Achieve Effective completions in Horizontal Reservoirs”

May 1—Dr. Jim Puckette’s OSU class
May 15—WSU Students—Larry Richardson’s class
May 22—Bob Workman, “Flint Hills Story (with emphasis on geology)”
May 29—Paul Ramondetta— “Effects of Karstification on Arbuckle Oil Production”

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**A Deserving Group**

A group of individuals to whom we all need to express our appreciation are those that year after year are our presenters at the technical programs. Their only rewards for making the journey to Wichita are: an appreciative audience, a free lunch and a gift of bookends of questionable value.

Kansas-wise some of our speakers are local, but others come from Lawrence, Emporia, Hays and other areas of the state. We have many speakers from Oklahoma and in the past speakers from Nebraska, Denver and Houston all at their own expense.

There are several ways in which all of us may show our appreciation, first by attending, but also by expressing to the individual presenters our thanks for making the journey to Wichita to make the fine presentations that they make.

Bob Cowdery

---

**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.
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A.A.P.G. DELEGATES

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Come On People….Someone must know this critter!

Bulletin committee members and PhD’s in Paleontology are prohibited from entering.
Dear Members,

On behalf of our membership, I offer our thanks to Bob Bayer for serving as the Chairman of the Annual Banquet. Ernie Morrison was inducted as an Honorary Member of our society. The food and fellowship were outstanding.

I have thoroughly enjoyed the technical talks set up by Bob Cowdery so far this year. I appreciate the variety of speakers he brings in to present to us. I look forward to the rest of the lineup for this spring.

I plan to attend the AAPG National Convention this April in Long Beach, California. I hope to see several of you there. It appears that it will be fun and informative. I have not attended this event since it was held in Los Angeles, California in 1987. Rob Dietterich and I flew there together, experienced the technical presentations, then headed to the shore and marveled at the wonders of Venice Beach. We were perplexed at the strange “inline skates” seen on the feet of many of the people zooming by on the paved paths. As they say, we weren’t in Kansas anymore! Speaking of feet, I had inexplicably forgotten to pack even a single pair of dress shoes for the trip, so we zipped around L.A. looking for a semi-normal pair of them before attending the Convention.

Looking ahead, I recently received notice of the AAPG Mid-Continent Biennial Field Conference sponsored by the Panhandle Geological Society headquartered in Amarillo, Texas. The theme is “On the Rocks - Palo Duro Canyon – an Exploration of Fluvial Systems and their Application to the Subsurface”. The event will be October 5-7, 2012. I have not been on the ground in the Palo Duro Canyon, but once made a low-level pass in a private jet over the canyon, courtesy of my former employer’s pilots on a return flight from Amarillo (the Boss wasn’t along…!).

Well, enough confessions for now—happy hunting!

Respectfully,

Kent Scribner
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Dear Members,

Are we going to have a winter? Well, I guess if you have been in western Kansas you got some winter but we sure haven’t had much here in Wichita this year. Hope I’m not jinxing it by mentioning it here in this article!

At any rate, by the time you read this, we will be heading towards spring and all that brings with it. The AAPG annual convention is in Long Beach, California this April. The Society will not have a booth this year but we will have plenty of members going to the convention.

The Wichita State University Geology Club has a fund raiser going on. They have some new t-shirts that they are selling (two styles/colors) and we have them on display down here at the library. They are selling them for $20.00 each so if you are an alumni, or even if you are not a WSU alumni, and want to support the geology club, order a shirt OR they also have koozies for sale for $3.00 each. We have them at the library also.

Your library remains busy with all the activity going on in our state. We now have over 220 members in the Robert F. Walters Digital Library. As we get more and more information on-line, it is truly becoming THE best method of obtaining data in the state of Kansas. I want to thank all of you who are members and especially thank those operators who send us their released data so that we can add it to our database. This library exists because of you, its members, and it will continue because of you.

We have no special events or activities coming up but we are considering having our Annual Picnic in the spring rather than August. No final decision has been made on this as of yet, but please watch our website for upcoming events.

Respectfully submitted,

Rebecca Radford
Manager
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January 10, 2012  Mr. Scribner called the meeting to order at 11:40 AM.  

A.  **Treasurer’s Report**- Rebecca Radford read Marjorie Noel’s (outgoing Treasurer) Treasurer’s report for December 2011.  CD was mature December 22, 2011 at Kanza Bank, subsequently moved to Meritrust at a better interest rate.  **Doug Davis moved to accept the Treasurer’s report as presented. Tim Hellman seconded the motion and the motion passed unanimously.**

B.  **Manager’s Report**- Mrs. Radford presented the Manager’s Report for December 2011 and Year of 2011.  Monthly income was $81,970.80 and expenses were $62,516.41, making the profit $19,454.39 for the month.  Yearly Income was $840,573.70 and expenses were $674,554.77 realizing a profit of $166,018.93 for Year 2011.  Walters Digital Library Yearly Income was $307,984.92 with expenses of $58,948.95 realizing a profit of $249,035.97 for Year 21011.  Paper Library Membership totaled 298 and Digital Library membership totaled 118.

OLD BUSINESS

A.  Seventeen Geologists were enrolled to participate in John Doveton’s Course

NEW BUSINESS

A.  2012 AAPG Convention in Long Beach, California.  Attendees representing KGS will be: Kent Scribner; Doug Davis; Ernie Morrison; and, Bob Cowdery.

B.  It was decided among the board members that the expected results of having a booth at the 2012 AAPG Annual Convention would not justify expense of travel and cost of booth space.

Respectfully submitted by Robert P. Bayer. Secretary

February 14, 2012- Mr. Scribner called the meeting to order at 11:36 AM.

A.  **Treasurer’s Report**- Rocky Milford presented the Treasurer’s report for January 2012.  Indicated that 5 CD’s will mature in 2012 and we might investigate alternative investments.  **Doug Davis moved to accept the Treasurer’s report as presented. Dave Clothier seconded the motion and the motion passed unanimously.**

B.  **Manager’s Report**- Mrs. Radford presented the Manager’s Report for January 2012.  Monthly income was $65,803.79 and expenses were $55,177.25, making the profit $10,626.54 for the month.

OLD BUSINESS

A.  KGS will have a booth at the Rocky Mountain Section AAPG Meeting in September 2012 at Grand Junction, Colorado.

NEW BUSINESS


B.  2012 AAPG Southwest Regional Section Field Trip is October 5-7, 2012 originates from Amarillo, TX.  The meeting is in Fort Worth, TX - question was posed do we send Rebecca and the booth?

Respectfully submitted by Robert P. Bayer II, Secretary
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Due to the generosity of many individuals and companies, several WSU geology students were able to attend this year’s banquet.

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Geo-Scenes

Permian Gypsum

Roman Nose State Park is 81 miles northwest of Oklahoma City in Blaine County, Oklahoma. The park was named after Cheyenne Chief Roman Nose, baptized Henry Caruthers Roman Nose, who lived in the area (after earlier incarceration at Fort Marion in St. Augustine, Florida) from 1887 until he died in 1917. The park is one of the original seven state parks in Oklahoma, and was established in 1937. The geology of the park was summarized by Fay (1959). Exposures of red shales and siltstones in the upper Permian (Guadalupian) Blaine Formation, which overlie the Flowerpot Shale, are present throughout the park. Within the Blaine Formation are four prominent gypsum beds. From oldest to youngest they are the Medicine Lodge, Alabaster, Nescatung, and Shimer Gypsum Members. The Shimer Member is shown in Figure 1. Except for the Alabaster Member, which is the thinnest gypsum in the section, all of the gypsums overlie thin beds of fossiliferous and presumably marine dolomite. The gypsums in the Blaine stratigraphically overlie the older Permian (Leonardian) Stone Corral Gypsum/Anhydrite, which is a prominent structural marker bed in subsurface Kansas. The Blaine Formation gypsums are largely recrystallized, although locally, there are remnants of original thin bedding. These rocks likely were deposited in hypersaline, shallow coastal lagoons during relatively brief sealevel highstands during overall late Permian second-order (global) regression.

Precambrian-Cambrian Contact

The Precambrian-Cambrian unconformity is one of the major unconformities on the planet. Along high arches and domes such as the Ozark Uplift and Transcontinental Arch, the Precambrian commonly is overlain by Lower Ordovician rocks. In the area around Rolla, Missouri on the edge of the Ozark Uplift, however, the Precambrian is overlain by the Cambrian Lamotte Sandstone (Figure 2), otherwise known elsewhere as the Reagan Sandstone (such as in subsurface Kansas). At the locality about an hour east of Rolla shown in Figure 2, the Precambrian comprises an erosionally-truncated section of thick rhyolites slightly older than 1 billion years (Ga). Behind the photographer who shot Figure 2, on the other side of the road, the top of the rhyolite rises rapidly to about 35-40 ft above road level, suggesting that what is shown in Figure 2 was on the edge of a steep, buried hill during Cambrian time. The rhyolite breccia mantling the Pre
Cambrian Rhyolite shows little evidence of transport, and it has been variously interpreted as braided stream deposits or more-or-less in-situ colluvium. The overlying Lamotte Sandstone is very coarse-grained (in parts a conglomerate) and cross-stratified, and at least at this exposure the rocks are unfossiliferous. The sandstones are interpreted to be fluvial deposits.

Cambrian Reefs

Early Paleozoic “reefs” are dramatically unlike modern reefs. In fact, some scientists argue that such buildups should not be considered true reefs, but rather, that they be referred to variously as “buildups”, or “mounds”, or “bioherms”. Nonetheless, the “reef” shown in Figure 3 is in the Cambrian Davis Formation about an hour east of Rolla, Missouri. These rocks stratigraphically overlie the Cambrian Lamotte Sandstone shown in Figure 2. The Davis Formation here is a cyclic section of shallow-water carbonates (mostly all dolomitized) and deeper-water shales. The reef here is referred to as a *thrombolite* because of its clotted internal texture. Such deposits are of microbial origin and were constructed by communities of algae, bacteria, and other microorganisms. Thrombolites are known throughout the geological record and are present in some Holocene marine deposits as well. The dolomitized thrombolite pictured here has intercrystalline and some vuggy porosity, and also some late-state sphalerite. Thrombolites of Jurassic age locally are oil reservoirs in the US Gulf Coast and elsewhere in the world (the focus of current research by Will Parcell at Wichita State University).

Respectfully submitted,

Sal Mazzullo

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(1) Grand Mesa Operating Company, Wichita (KS), has discovered Mississippian oil deposits in Scott County at the Doornbos No. 1-15, located in approximately NW NW NE in section 15- T16s- R33W. The 4,850 ft. deep well establishes the new Outlook pool twelve and one-half miles northwest of Scott City, Kansas. Daily production rate is unknown. Discovery site lies over five miles northeast of the Radnor field which produces oil from the Marmaton and Cherokee zones.

(2) Samuel Gary Jr. & Associates, Denver (CO), has stepped over one and one-quarter miles southeast of the Herl field in Ellis County and discovered new oil reserves (formation unknown) at the No. 1-34 Herl. The wildcat well was drilled to a total depth of 3,617 ft. at site located in approximately NW NE SE in section 34- T14s- R17W, about two and one-half miles southeast of Munjor, Kansas. Lansing-Kansas City, Pennsylvanian Conglomerate and Arbuckle zones all produce in nearby fields. The new field has been named Herl Southeast.

(3) Roberts Resources, Inc., Wichita (KS), has established the new King James oil field in Barber County with the completion of its No. 1-11 Bible-Hoss in approximately NW NE SE of section 11- T30s- R15W. The well was drilled to a total depth of 4,700 ft. by Landmark Drilling tools. Producing formation is unknown. Site lies nearly two miles east of the Moffett gas field (Pennsylvanian Conglomerate), or four and one-half miles north of Sun City, Kansas.

(4) CMX, Inc., Wichita (KS), has completed its first horizontal well in Barber County. The No. 1-7H Scrooge is producing an undisclosed amount of oil from the Mississippian formation at surface location 150 ft. from south line and 330 ft. from west line of section 7- T35s- R11W. The well is a development well within the Stratman field. True Vertical Depth is 4,807 ft. Curve-end True Measured Depth was 5,119 ft. Lateral-1 was drilled in a northerly direction to a True Measured Depth of 9,402 ft. (estimated 4,730 ft. of lateral hole). No details have been released regarding production. Well is located four miles west of Kiowa, Kansas.

(5) Deutsch Oil Company, Wichita (KS), is producing an undisclosed amount of oil at the No. 1-35 Anchor 'D', spotted in the C NE SE of section 35- T29s- R16W, in Kiowa County. The well establishes the new Betzer East pool, about three miles northeast of Belvidere, Kansas. The Arbuckle formation was intended target zone, however, the Wabaunsee, Cherokee and Mississippian zones all produce oil and gas in the vicinity. The well was drilled to a total depth of 5,000 ft.

(6) Brito Oil Company, Wichita (KS), and Carmen Schmitt, Inc., Great Bend (KS), have jointly drilled and completed the No. 1-11 Ostmeyer as a Marmaton oil producer, resulting in the establishment of the Albers Southwest oil field in Thomas County. The well is producing an unknown amount of oil from the Pawnee limestone formation at site located in approximately NE SW SE of section 11- T10s- R32W. Brito instructed WW Drilling tools to bottom the well at a total depth of 4,698 ft. before turning operations over to Schmitt for completion. The new reserves were found nearly two miles southwest of the Albers field.

(7) Murfin Drilling Company, Wichita (KS), has a new multiple zone oil discovery in Thomas County. Oil deposits were
discovered in the Lansing-Kansas City zones and the Johnson Zone member of the Cherokee formation at the No. 1-14 Soucie Seele Unit. Company rotary tools drilled the well to a total depth of 4,900 ft. at site spotted in about the SW SW NE of section 14- T10s-R34W. The well opens the Jimmy Northeast pool, almost three and one half miles northwest of Monument, Kansas.

(8) Chesapeake Operating, Oklahoma City (OK), has completed two horizontal wells in southern Kansas. Both wells are completed in the Mississippian limestone formation with undisclosed potentials. These are the first two of ten horizontal prospects the company has permitted and completed in the State this year.

(9) In Sumner County, Chesapeake’s #1-H Schmidt (3-34-4) has established a new unnamed oil field about eight miles northwest of Caldwell, Kansas. New reserves were found nearly two miles from the one-well Charlie field which was established by Oklahoma-based Union Valley Petroleum Corporation in 2005 and also produced Mississippian oil and gas. The #1-H Schmidt well was drilled at surface location 180 ft from the north line and 660 ft from the east line in section 3- T34s- R4W. Lateral-1 extended in a southerly direction to approximately 330 ft from the south line and 660 ft from the east line in the same section. True measured depth of the hole was stopped at 8,670 ft. True vertical depth at lateral end was measured at 4,363 ft completion and production details remain confidential.

(10) Elsewhere in Comanche County, the #1-H York (31-31-17) was drilled to a true vertical depth of 5,112 ft at surface site located 200 ft from the south line and 760 ft from the west line of section 31- T31s- R17W, about three and one-half miles south of the town of Wilmore, Kansas. The horizontal lateral-1 extended in a northerly direction to a bottom hole location 968 ft from the north line and 786 ft from the west line in section 31. True measured depth of the well is 8,919 ft. True vertical depth at lateral-1 end was 5,112 ft. The well extends production in the Yorklaw field where Mississippian reserves were discovered in 1962.

(11) Ritchie Exploration, Inc., Wichita (KS), has discovered Lansing-Kansas City oil reserves at their #1 Ninemire 31-AD, spotted in approximately SE NE SE in section 31- T5s- R24W, Norton County. The wildcat well was drilled to a total depth of 3,825 ft by Southwind Drilling tools. Discovery site is located one mile southwest of the Slipke field, which also produced oil from the LKC zones, or is about three and one-half miles southwest of Lenora, Kansas.

(12) American Warrior, Inc., Garden City (KS), has found oil deposits in the Cherokee sands at the #1 Triple M, spotted in approximately NW NW SW in section 15- T18s- R21W, Ness County. The new discovery establishes the Mantz Southeast field three and one-half miles northeast of Bazine, Kansas. Operator used Petromark Drilling tools to cut the well to a total depth of 4,262 ft. Closest production in the vicinity lies over three-quarter miles to the northwest in the Mantz East field where the Mississippian formation produces. Cherokee oil production is noted in the Mantz field in section 9.

(13) Pelican Hill Oil & Gas, San Clemente (CA), has discovered new pay from the Marmaton lime within their recently established Stratton Northeast field in Trego County. The company’s #2-4 Parks, located in approximately SW NE SW in section 4- T11s- R21W, was completed for 47 barrels of oil per day, no water, from perforations shot between 3,699 to 3,700 ft. The well topped the Marmaton zone at 3,675 ft (-1519) on its way to a total depth of 3,816 ft. Pelican Hill opened the Stratton Northeast field in July last year when their #1-8 Nelson discovered Arbuckle oil reserves in the NE/4 of section 8. To date the field has yielded seven oil producers for Pelican Hill.
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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  - $ 100 to $ 499

- **$500 Club**
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  - $5000 and over

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.
Dear reader,

One of the missions of the Kansas Geological Foundation is to preserve data to be used now and for the future. Thanks to a group of our pioneers a huge step was taken with the Robert Walters Digital Library. With that we continue to address the backlog of data that has been donated to the Foundation. This past year Ted Jochems implemented a plan to organize and integrate the data. This accelerated integration project made tremendous progress. The boxes of logs and geological reports have been filed and incorporated into a married set by Section, Township, and Range. During this past year approximately 5,572 logs that the Society did not have are now available. An amazing 27.4% of the donated documents processed were not previously in the library. Great progress has been made but there is still data in the basement that needs to be scanned and included in the Library’s database. The Accelerated Integration Project is an ongoing project and we are asking the members to continue their support.

The Foundation has continued to award scholarships at all our state universities, including a total of $6500 this spring semester and last year we were able to award several grants. We receive tremendous support from our members and we will continue to carefully steward your donations. There has been concern about the decline of young geologists. The dedication that the KGF has in providing scholarships and the ability to work with the state universities to promote geological professions in Kansas is remarkable and we will continue this support. The Foundation is not only involved on the university level in promoting the geosciences, but also is active on the elementary and high school levels through the Speaker’s Bureau, the DVD/Videotape Library, and through our members contribution of time and materials.

The Kansas Geological Foundation was founded to preserve data to be used now and in the future. Additionally we continue to reach out and support students in developing their knowledge of the geosciences. We thank the current members and would ask for support and membership from you the reader.

Sincerely,
Debra D. FitzGerald
Kansas Geological Foundation President, 2012
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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 midnight 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

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### March 2012

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**AAPG Long Beach**