KANSAS GEOLOGICAL SOCIETY

Established 1925

BULLETIN

Volume 80 Number 5 September-October 2005

IN THIS ISSUE

BOARD OF DIRECTORS

EDITOR

Kimberly Dimmick-Wells: Editor
kdw11@cox.net 650-4514

Sal Mazzullo: Technical Editor
salvatore.mazzullo@wichita.edu 978-7211

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

ON THE COVER

Light, thicker layers are dolomites that grade upward from shallow subtidal to intertidal deposits, and dark, thinner layers are unfossiliferous red silty shales inferred as initially terrestrial deposits. Together, these contrasting lithologies define stacked, high frequency, transgressive-regresssive cycles, and the silty shales may have been reworked somewhat in the shallow-marine environment during early transgression. The sequence-stratigraphic framework of such cyclic deposits can be related to predicting reservoir occurrence in, for example, sandstones of Cherokee age deposited in fluvial to shallow-marine environments in Kansas; see related paper in this issue. Photo from Upper Permian (Gaudalupeian) Seven Rivers Formation, Gaudalupe Mts. New Mexico, courtesy of S.J. Mazzullo

STAFF

ADVERTISING
Kent Scribner
Stelbar Oil Corp. 264-8378

PROFILES/MEMORIALS
Robert D. Cowdery
Consultant 267-9030

EXPLORATION HIGHLIGHTS
John H. Morrison, III
Independent O&G 263-8281

STATE SURVEY
Rex Buchanan
KS Geological Survey (785) 864-3965

SOCIETY NEWS
KGS Library 265-8676

EDITOR EMERITUS
Wes Hansen 263-7313

A. A. P. G. Delegates

Ernie Morrison 2008
Robert Cowdery 2006
Alan DeGood 2006

TABLE OF CONTENTS

KANSAS GEOLOGICAL SOCIETY TECHNICAL PROGRAMS

September 8	TBA
September 14	Joint meeting with SEG—Bob Miller "TBA"
September 16	Joint meeting with SIPES—Mike Pollok & Mike Austin "Comanche County" (Abstract pg. 6)
September 22	TBA
October 13	Doug Strickland— "Structural Architecture, Petroleum Systems, and Geological Implicatons For the New Hydrocarbon Province Of The Covenant Field Discovery, Sevier County, Utah" (Abstract pg. 21)
October 19	Ken Warren— Land Institute, "New Routes For Agriculture Through Perennial Roots" (Abstract pg. 21)
October 27	TBA
November 3	Tim Carr, Kansas Geological Survey— "Mississippian Reservoirs in Knasas: New Techniques Applied to Old Targets"; co-authors Susan Nissen and Lianshuang
November 10	Dr. Matt Totten, KSU, TBA
November 17	TBA
December 1	TBA
December 8	TBA
December 15	TBA

All KGS technical meetings are held at 12:30 p.m. in the Bank of America Auditorium 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.

◆ ◆

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

PRESIDENT'S LETTER

NEW IDEAS – MORE OIL AND GAS

This is the theme for the September 2007 MidContinent Regional AAPG Convention here in Wichita. Ernie Morrison is Convention Chair and Bob Cowdery is Technical Program Chair for what promises to be a first rate meeting. The theme is very timely. Business as usual won't find the big reserves of the future. The production from old concepts has largely been found. How many more oil and gas fields are hiding in e-logs in our libraries, and in the minds of explorationists, as new ideas?

As an example, what has been called the largest onshore discovery in the USA in the past ten years may be the Covenant Field, Sevier County, Utah, announced last December. At the AAPG Convention in Calgary last June, Douglas K. Strickland, Exploration Manager of Wolverine Oil Co., a Michigan independent, told a standing room only crowd about this discovery. At 7000 feet, they found 487 feet of oil bearing Navajo Sandstone, net to gross 87%, 40 gravity oil, no gas. The trap is derived from late Cretaceous to early Tertiary compressional tectonics developing thrust faults and associated hanging wall anticlines in a system that extends to Wyoming and Alberta. Wolverine has drilled thirteen wells on 160 acre spacing so far on two drillsites, directional wells. When I visited the site in July, the rig was on drillsite two, all wells were apparently flowing,

and a huge tank farm was under construction. All oil is trucked, hence limited production of 1,600 BOPD presently, with a cumulative from May 04 to May 05 of 290,000 BO. Operator expects 20,000 BOPD by year end. They estimate reserves of 285 million bbl for this field, expect many more like it, a multi billion barrel play potentially!

In October 2003, Bob Cowdery brought Dr. Alan Chamberlain to KGS to talk on "Elephant Hunting in Nevada", one of the most fascinating I have heard. The Covenant Field seems to prove his theories, as this geological province extends into eastern Nevada. Chamberlain feels this is all oil country with world class reservoir and source rocks, and huge undrilled traps. He feels the Great Basin is compressional, not extensional as earlier theories, hence preservation of hydrocarbon traps. The big oil fields are therefore likely to be under mountain ranges of layers of thrusts in sedimentary rocks, virtually untested because to date conventional thinking has drilled in the valleys, resulting in a few small but
prolific fields which Chamberlain calls "seeps". This theory is about to be tested by a few independents like Fasken Oil, and Eden Energy. Could this be a key…for instance, are compressional tectonics at work in other unexpected places dominated so far by "conventional wisdom"? What other new ideas need to be uncovered? Ernie's theme for the convention is so timely. Let's help him make this a great event. In the last bulletin, the quote from George Will should have extended all the way to "including ourselves." I am not capable of such erudition.

——Alfred James, III

Sept. 16th Joint KGS-Sipes Technical Presentation
Where the Buffalo Roam

An Exploration Success Utilizing Regional Subsurface Mapping with 3D Seismic on the Pratt Anticline in Barber County, Kansas

By

Michael A. Pollok and Michael N. Austin

This paper describes the exploration process used to discover a multiple pay zone field on the southern end of the Pratt anticline. Regional subsurface mapping identified a key show well drilled in the 1950's that was believed to be on the flank of a structure. 3D seismic identified the crest of the feature and resulted in discovery of pays zones in the Lansing-Kansas City, Marmaton, and Mississippian. Fracturing of the Mississippian dolomite has changed during development in recent years.

Obstacles encountered included buffalo, a high mineral owner royalty for the area, a high profile environmentalist surface owner, and limited and expensive gas gathering access. Persistence pays, time tells if you are successful or not

Kansas Geological Society's
Annual Shooting Tournament
See page 31 for details

AAPG Annual Meeting

The AAPG Annual Meeting was held in Calgary Canada from June 19 thru June 22. There was excellent attendance this year with over 7600 registrants in all categories. The Kansas Geological Society was well represented with a group headed by President Fred James and members of the House of Delegates Alan DeGood and Ernie Morrison. Alan DeGood made a short presentation to the House of Delegates as a candidate for Chairman of that body.

Other KGS members attending were: Joe Moreland, Orvie Howell, Dave Barker, Tim Carr, Lynn Watney, Joel Alberts, John Hastings, Marty Dubois, John Doveton and David Newell.

EDITOR'S LETTER

I sincerely apologize for the mistakes in the July-August bulletin. A personal apology goes to Dean Seeber and the family of Jim Guinotte. You will find Dean's profile and Jim's memorial reprinted in this bulletin. There have been some obvious bugs in our attempt to reorganize and change editorial hands. Procedures have been implemented to hopefully avoid any future problems. I am asking that all comments, submissions, and complaints go to myself or Sal Mazzullo. You can find our contact information on page 3 of the bulletin. I look forward to serving our geological community and putting out a much better bulletin in the future. I need submissions for upcoming bulletins, so if you have something you would like to share with the society, you can find the guidelines for papers on page 47. I look forward to hearing from you.

Kimberly Dimmick-Wells

FROM THE MANAGER'S DESK

Dear Members,

Last issue I told you all about tearing down a wall and converting the "scanning space" back to an employee break room and another office. If you are in the area, please come by and see the updated look we now have in the library. It is amazing what a little paint will do! Thank you to **Marj Crane, Linda McCune & Sherri** for staying late and making this project happen. We had a good time and I think we improved the place!

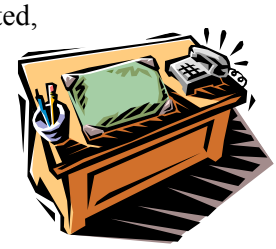
We had a very good turn out at the KGS Annual Picnic on Friday, August 12th. 174 came out to enjoy the evening in spite of the thunderstorms and torrential downpours! See photos on page 38 and 39. The next KGS event will be the **Shooting Tournament on October 4th**, a Tuesday. It will again be at the Lynbrooke Sporting Clays Range east of Augusta. Such a wonderful
facility and it always seems to be a perfect fall day when we have the shooting tournament. See the enclosed flyer/entry form for all of the details. The entry form is also available on our web site under "events".

Once again the Society & Foundation had a booth at KIOGA. It is a nice opportunity to see a lot of people we don't otherwise get to see. Sherri helped me with the booth this year and we had quite a few people stop by, looking at the digital library but also picking up literature on KGS membership and the Foundation's Video Tape Library (although, most came by once they found out we had Junior Mints & Tootsie Rolls.)

Our next "booth time" will be in Oklahoma City September 11, 12, 13 at the AAPG Mid-Continent meeting. If you are going down there, come by the booth – I always have chocolate!

Respectfully submitted,

Rebecca Radford



COMMITTEE CHAIRMEN

Advertising	Kent Scribner
Advisory	Jon Callen
	Derry Larson
Annual Banquet	Chellie Mazzullo
Bulletin	*Editor*
	Kimberly Dimmick-Wells
	Technical Editor
	Sal Mazzullo
Computer	
Continuing Education	Robert Cowdery
Distinguished Awards	Thomas Hansen
Directory	Larry Richardson
Environmental	Steve Murphy
Field Trip	Larry Skelton
Fishing Tournament	Randy Teter
Future Plans	Paul Gunzleman
Golf	Jon T. Williams
Historian	Larry Skelton
Investment	Bryce Bidleman
Legislative	Richard Moberly
Library	Roger Martin
	Ted Jochems
Membership	Larry Friend
Nomenclature	John H. Morrison, III
Picnic	Chellie Mazzullo
Public Relations	Robert Cowdery
Shooting Tournament	Larry Richardson
Technical Program	Robert Cowdery
Ticket Sales	Bill Shepherd

ATTENTION !!!!!

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

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

Contact: KGS Library: 265-8676

ADVERTISERS' DIRECTORY

ADVERTISERS' RATES

Personal Ads of Items for Sale: $15.00 per Month

1/8 Page Ad: 6 Issues - $300; 3 Issues - $175;
1 Issue - N/A

1/4 Page Ad: 6 Issues - $600
plus **KGS *Directory*** Ad

3 Issues - $325
1 Issue - $150

1/2 Page Ad: 6 Issues - $1000
plus **KGS *Directory*** Ad

3 Issues - $540
1 Issue - $225

Full Page Ad: 6 Issues - $2000
plus **KGS *Directory*** Ad

3 Issues - $1080
1 Issue - $480

Professional Ad $90 per year

RELATING THE SEQUENCE STRATIGRAPHY OF BASAL CHEROKEE STRATA (BASED ON TWO CORES FROM BARBER COUNTY) TO THE EXPLORATION FOR CHEROKEE SANDSTONE RESERVOIRS IN KANSAS

S. J. Mazzullo

Department of Geology
Wichita State University
Wichita, KS 67260

INTRODUCTION

It is a well-accepted principle that the sequence-stratigraphic development of any given stratal section exerted fundamental control on depositional facies and facies architecture within that section. Conversely, knowledge of the sequence-stratigraphic history of a stratigraphic section is a powerful exploration tool for predicting reservoir occurrence within such sections. In this paper I examine some fundamental aspects of the sequence-stratigraphic framework of the basal Cherokee section (Middle Pennsylvanian, Desmoinesian) in Kansas based on examination of two cores from Barber County and their comparison to some published studies of the equivalent stratigraphic section elsewhere in the state. The reason this part of the stratigraphic section was chosen for study is because basal Cherokee sandstones directly above the unconformable top of the Mississippian are prolific oil reservoirs in many parts of the state (Merriam, 1963; Zeller, 1968), and yet, they are notoriously difficult to locate in the subsurface based on currently assumed depositional models. It is the multi-storied nature of these sands, and particularly the lithologic character of intervening strata, that are the focus of the present paper because they define the sequence-stratigraphic history of this part of the section which, in turn, lends some predictability to inferred models of sandstone deposition, facies architecture, and occurrence.

DESCRIPTION OF BASAL CHEROKEE STRATA IN CORES

The cores described in this study are from the Continental Oil #15 Harbaugh (SW SE NW, Section 32 T33S-R11W) and the Continental Oil #10 Harbaugh (SW SW SE, Section 29 T33S-R11W) wells, both of which are within the Rhodes (Mississippian) Field in Barber County, Kansas. These particular wells, and the field, produce from Mississippian rocks. The lithologic character of the basal Cherokee sections in these two cores is illustrated in Figure 1.

Continental #10 Harbaugh - the basal 1'6" of the basal Cherokee section in this well (unit A) comprises bedded, grain- to matrix-supported, chert-clast breccia to conglomerate in a matrix of dark green shale. Clasts are rounded and clast size ranges from 0.75-1" and decreases upward, and many clasts have peripheral weathering rinds. This section is overlain by 1'7" of yellow-

---

Sal Mazzullo is professor of geology at Wichita State University, where he's been since 1987. Prior to that time he was Manager of Stratigraphic Exploration for Union Texas Petroleum Corp. in Midland and Houston, Texas, and thereafter consulting petroleum geologist and exploration geologist. He is an AAPG-certified petroleum geologist. He can be reached at his university address above or via e-mail at salvatore.mazzullo@wichita.edu.

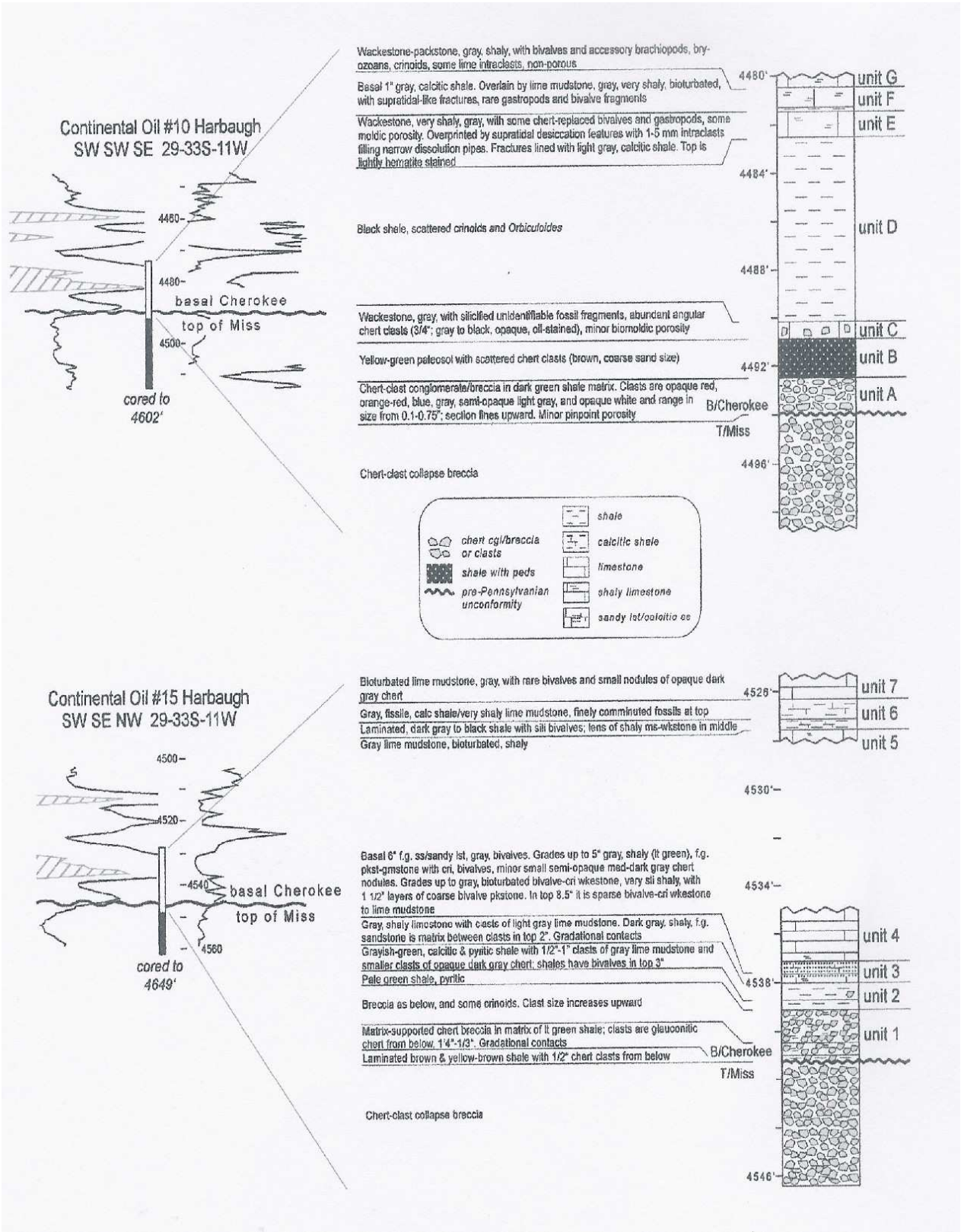


Fig. 1. Lithologies of uppermost Mississippian and basal Cherokee sections in cores from the Continental #10 and #15 wells in Rhodes Field, Barber County, Kansas. Core depths corrected for log depths.

green (siliciclastic) mudrock (unit B) with well-developd ped structures and scattered small, highly weathered chert clasts; clay minerals in the shale essentially explode upon contact with water, and hence, are mostly swelling clays. This section is abruptly overlain by 8" of lime wackestone with blackened skeletal fragments and fine pebble-size, angular chert clasts (unit C). Overlying are ~8 ft of black shale (unit D) with scattered crinoids and *Orbiculoides*, and this section is abruptly overlain by 9" of very shaly lime wackestone (unit E), with some bivalves and gastropods, that is overprinted by soft-sediment desiccation features, including shrinkage cracks filled with limestone intraclasts and light gray shale. Overlying this section is 1" of gray shale and then 12" of very shaly lime mudstone that similarly contains desiccation features and shrinkage cracks, also with bivalves and gastropods (unit F). This section is overlain by 5", to the top of the core, of shaly lime wackestone to packstone (unit G) with some intraclasts of limestone from below and an open-marine biota of bivalves, brachiopods and crinoids. The shales in units E, F and G are composed of swelling clays.

Continental #15 Harbaugh - the basal 3" of the Cherokee section is unfossiliferous, laminated brown to yellow-brown shale with chert clasts, overlain by 1'10" of bedded, matrix-supported, chert-clast breccia to conglomerate in a matrix of light green shale. Many of the chert clasts are glauconitic and most are rounded, and the matrix shale is composed of swelling clays. Clast size ranges from 0.25-1.5" and increases upward, and many clasts have peripheral weathering rinds. Together, the basal shale and overlying breccia/conglomerate represent unit 1 in this core. Overlying unit 2 comprises 6" of pale green, pyritic shale overlain by 8" of grayish-green, calcitic and pyritic shale with small (1/2-1") clasts of lime mudstone and dark gray chert. The shales are composed of swelling clays, and the top 3" of this unit contains some bivalve fragments. Unit 3 comprises: (a) a basal 4" of lime mudstone with partings of gray shale (composed of swelling clay) and clasts of lime mudstone; dark gray, shaly, fine-grained quartz sand is the matrix between the limestone clasts in the upper half of this section; and (b) a gradationally overlying 6" of calcite-cemented, fine-grained sandstone to sandy limestone with finely comminuted, blackened bivalve fragments. This section is overlain by unit 4 (total 2'2" thick), which is 5" of shaly, fine-grained lime packstone to grainstone (shale occurs as thin partings and is composed of swelling clay) with crinoids and bivalves overlain by 1' of slightly shaly, bioturbated bivalve-crinoid wackestone with thin (1.5") layers of coarse bivalve packstone and then 9" of sparse bivalve-crinoid wackestone to mudstone. There was no core recovery in 4535''0"-4528'0". Unit 5 consists of 5" of bioturbated, shaly lime mudstone. The basal 5" of unit 6 are dark gray to black shale with silicified bivalves and a thin lense of shaly lime mudstone-wackestone in the middle. The top 9" of this unit are light gray, calcareous shale to very shaly lime mudstone with finely comminuted fossils at the top of the unit. Last, unit 7 is 1' of bioturbated lime mudstone with rare bivalve fragments and small chert nodules.

INFERRED DEPOSITIONAL ENVIRONMENTS AND SEQUENCE STRATIGRAPHY

The basal chert-clast conglomerates/breccias in the two cores (unit A and unit 1) could be interpreted as transgressive, nearshore-marine lag deposits of basal Cherokee age. As such, they would be analogous to similar conglomeratic strata described in cores from

Ness County by Nodine-Zeller (1981, 1985). Alternatively, they could be interpreted as fluvial deposits of high-competency streams. Where such conglomerates are thinner or absent in Kansas, this stratigraphic horizon usually is occupied by terrestrial red and yellow shale, hence, I currently favor the interpretation that the conglomerates/breccias are basal Cherokee transgressive deposits. Regardless, component chert clasts ultimately were derived from subjacent Mississippian rocks, which immediately beneath the pre-Pennsylvanian unconformity here are chert-clast collapse breccias. Presumed post-Mississippian but pre-Cherokee (i.e., Morrowan and/or Atokan) as described from elsewhere in Kansas as "Pennsylvanian basal conglomerates" (e.g., Nodine-Zeller, 1981, 1985) were not present in the cores. In the Continental #10 core, the yellow-green shale with peds comprising unit B is interpreted as a paleosol, which suggests a sea-level fall after deposition of parent shales in unit B (Fig. 2). An equivalent paleosol above the basal conglomerate/breccia is not present in the Continental #15 core, although the upper shale in unit 2 includes limestone clasts that may represent a subtle unconformity or a conformity equivalent temporally to the unconformity at the top of unit B in the #10 core. Unit C in the #10 core is an inferred nearshore marine limestone that includes blackened skeletal fragments, the latter feature which are common in basal transgressive deposits immediately above unconformities (Shinn & Lidz, 1988). Seemingly equivalent strata in the #15 core include the limestone of unit 3, which contains limestone clasts, siliciclastic sand as the matrix between clasts, and also blackened grains. Such deposits are common within basal transgressive, nearshore marine deposits immediately above unconformities or their correlative conformities.

Continued sea-level rise is indicated by unit D in the #10 well, which is interpreted as progressively deeper-water, anxoic deposits; and by fining-upward units 4 and 5 and the lower black shale in unit 6 in the #15 well, which are interpreted as progressively more offshore and relatively deep, low-energy marine to deeper-water, anoxic deposits, respectively (Fig. 2). These black shales ostensibly would be the "core shales" of typical Pennsylvanian cycles (Heckel, 1977), and somewhere within this deepening-upward cycle in the #10 and #15 wells is a maximum flooding surface ("mfs": Fig. 2). In the #15 well the section then shallows upward from gray shale/very shaly limestone to offshore-marine lime mudstone. The equivalent section in the #10 well also shallows upward from black shale to a section of limestone, but in contrast, component units E and F contain desiccation features and shrinkage cracks (e.g., Roehl, 1967) that are indicative of two separate periods of sea-level fall and concomitant subaerial exposure (Fig. 2).

RELATIONSHIP TO BASAL CHEROKEE SANDSTONE RESERVOIRS

Basal Cherokee sandstone reservoirs in Kansas typically are multi-storied, that is, commonly there are several sandstone horizons in the section, and locally some conglomeratic sandstones, wherein successively younger sands are either separated from older sands variously by shales, coals, and/or limestones, or they locally are directly superposed vertically as a consequence of erosional down-cutting of younger deposits into older strata. In central to western Kansas, for example, these sands generally are referred to as "Cherokee sands" (e.g., Walters et al., 1979; Cuzella et al., 1991, 1994) that locally include two or more discrete sands (e.g., in ascending stratigraphic order, the Cherokee "C", "B"and "A" or the

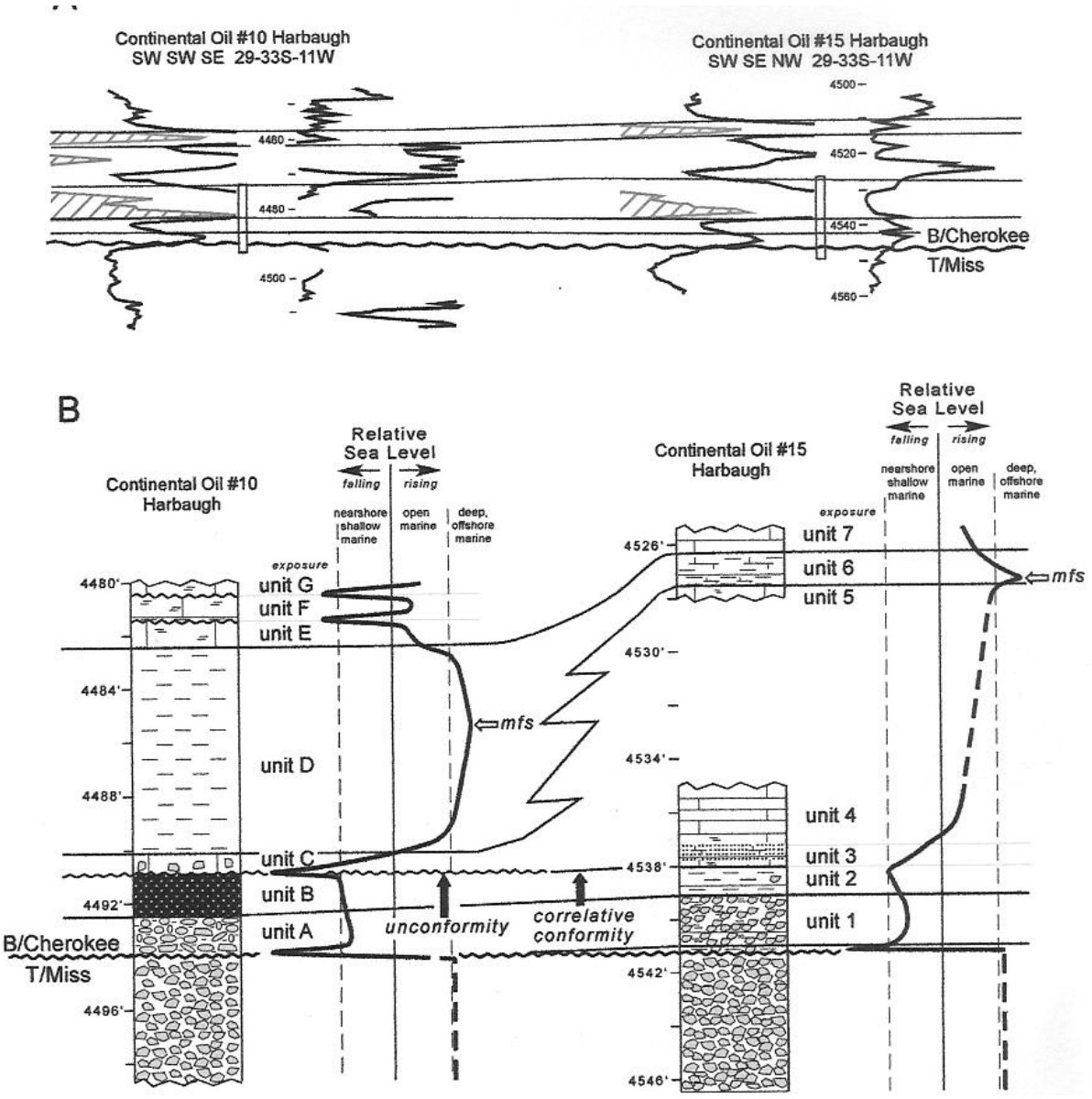


Fig. 2. A - Cross section including the two cores showing that they are from equivalent basal Cherokee sections. B - Inferred depositional environments and sequence stratigraphy of the basal Cherokee section in the cores. See Figure 1 for legend.

lower and upper Cherokee sands, depending on location; and locally also the Johnson and Kutina sands). In south-central and eastern Kansas such strata variously include, also in ascending order, the Burgess, Bartlesville and Burbank sands (e.g., Bass, 1934, 1936; Bass et al., 1937; Hulse, 1979; Brenner, 1989; Knapp et al., 1995; Walton, 1996).

The cored-well section examined in this paper that illustrates the highest level of stratigraphic "tuning", that is, which records the most relative sea-level information in terms of falls and rises, is the Continental #10 Harbaugh (Fig. 2). The lithologic and sea-level information from this well (Fig. 2) -- that is, its sequence-stratigraphic record -- is used as the basis for constructing a Lower Pennsylvanian "Wheeler diagram" (Fig. 3), which illustrates time as the vertical axis and periods of time for which sediment was not deposited as vertical bars. The longer the vertical bars, the longer the duration of time for which sediment was not deposited, ostensibly as a result of subaerial exposure. Stratigraphic information from Nodine-Zeller (1981, 1985) was incorporated in the construction of Figure 3, which shows a long period of post-Mississippian--pre-Cherokee exposure (Morrowan to Atokan) for which there are no deposits in the Continental #10 (or the #15) Harbaugh well. The pronounced unconformity at the top of the paleosol (unit B) defines a high-frequency transgressive-regressive cycle, and that unconformity may be equivalent temporally to the unconformity illustrated by Nodine-Zeller (1981, 1985) at the 4430 ft level in the Midcontinent #1 Collins well in Ness County (her figure 2 in both publications). The next cycle is thicker and is a relatively lower-frequency event that encompasses units C, D and E and it includes a relatively major transgressive event that is reflected in the deposition of deep-water black shales. Following are thinner, presumed higher-frequency cycles that include units F and G and their bounding unconformities.

In the sequence-stratigraphic paradigm, it is during sea-level lowstands (LST in Fig. 3) that streams incise valleys into newly-exposed terrains, and such incisement extends downward into underlying highstand deposits or even deeper. It is also during lowstands that previously-deposited sediments can be pedogenically altered, and the longer the exposure the more pedogenically "mature" a soil can become. In contrast, it is during the early stages of ensuing marine transgression (TST in Fig. 3) that incised valleys can be filled with sands and other sediments that ideally may grade upward from fluvial to estuarine to perhaps even marine deposits. In such cases -- perhaps as a result of relatively rapid sea-level rise combined with moderate antecedent topographic relief -- there typically is mappable coincidence between incised valleys and valley-filling sands and gravels because the previously-deposited sands are quickly removed from nearshore zones of periodic sediment exhumation and redeposition. Such coincidence clearly is present in some Burgess and Bartlesville sands in south-eastern Kansas, the Indian Cave Sandstone (see paper in last issue of the Bulletin by this author), and in some basal Cherokee sands in central Kansas. However, such deposits can be reworked by currents in shallow-marine environments during early transgression, particularly if the rate of transgression is relatively slow and antecedent topographic relief is low, in which case previously-deposited sediments can remain in the active nearshore zone of sediment exhumation and re-deposition for considerable periods of time. Where such reworking occurs there is limited to no coincidence between incised valleys and valley-filling deposits, which may explain why so many Cherokee sands in Kansas are present on the

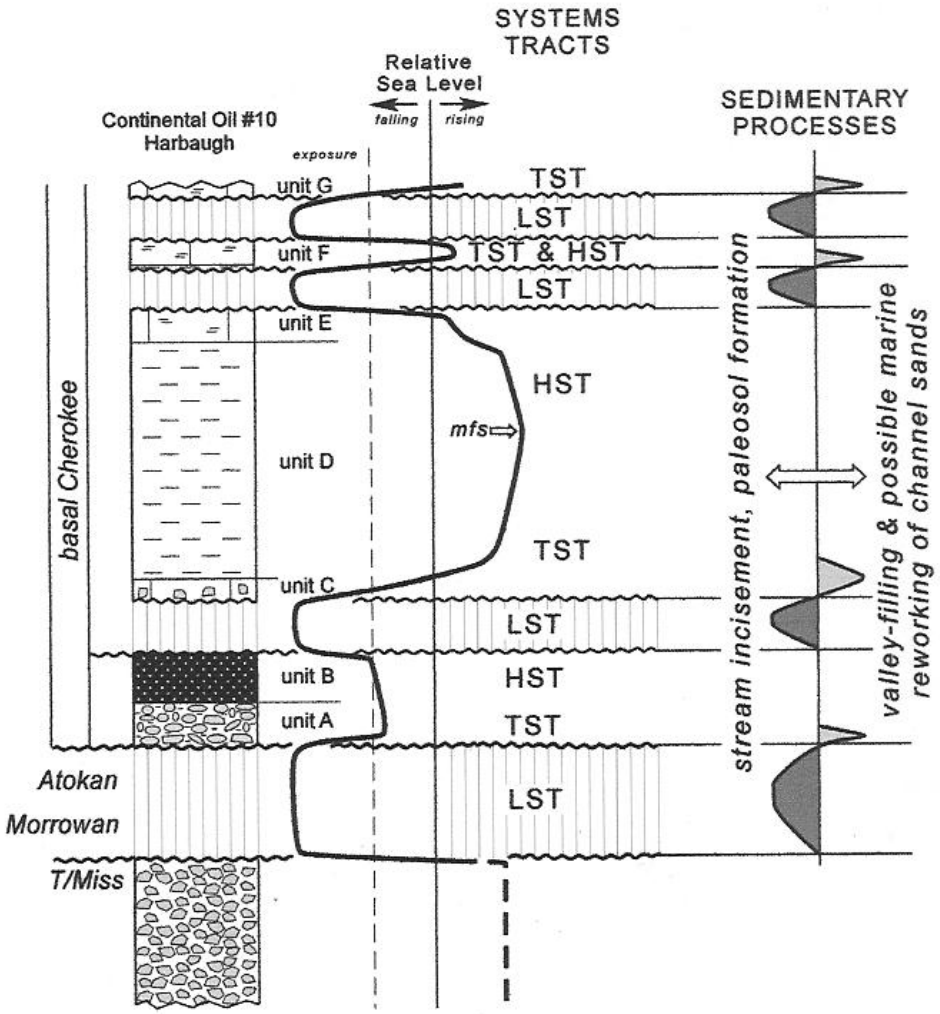


Fig. 3. Wheeler diagram illustrating the sequence stratigraphy of the basal Cherokee section based on the record from the Continental #10 Harbaugh well, and major processes of paleosol formation and stream incisement versus valley-filling mostly by sand and locally gravel and later reworking of such deposits in the shallow marine environment shown relative to when they occur. The vertical axis in such diagrams represents time, and the vertical extent of gray lines represents periods of time for which there is no corresponding sediment deposition. LST = lowstand systems tract, TST = transgressive systems tract, HST = highstand systems tract. This diagram also incorporates Lower Pennsylvanian stratigraphic information from Nodine-Zeller (1981, 1985).

flanks of Mississippian highs (buried hills) up-hill of valleys incised into the Miss. The stratigraphic resolution of sea-level fluctuations illustrated in Figures 2 and 3 is not finely-tuned enough -- because the diagram is based on only two cored wells -- to readily identify TST sections representative of slow versus faster rates of sea-level rise or presumed topographic relief on the buried Mississippian surface. But it is exactly this type of stratigraphic information that is necessary in order to evaluate likely trends of sand and petroleum reservoir occurrence in basal Cherokee strata in Kansas. What Figure 3 does predict, however, is that there may be as many as four sands in the section wherein there was channel incisement during the four lowstands and valley-filling and perhaps also marine reworking during the ensuing early transgressive phases of cycle development that are indicated. The basal Cherokee section illustrated in Figures 1-3 is only 14-15 ft thick in the #10 and #15 wells, and accordingly, within this section it is likely that we are dealing with only the Burgess and perhaps the lower Bartlesville sands if we were in eastern Kansas; and the lower and upper Cherokee sands or the Cherokee “C” and “B” sands if we were in central Kansas.

CONCLUSIONS

Core studies of basal Cherokee strata in Kansas can define the sequence-stratigraphic history of Cherokee deposition which, in turn, can be used as a predictive template with which to explore for basal Cherokee sand reservoirs in the subsurface. Such a predictive approach must involve definition of relative sea-level cycles and also reconstructed topographic relief along component unconformities in the section. It is these two factors that likely exert fundamental control on whether reservoir sands are contained within incised valleys as valley-filling deposits or they are reworked by marine currents and removed from confining valleys during early transgression.

REFERENCES

Bass, N.W., 1934, Origin of Bartlesville shoestring sands, Greenwood and Butler counties, Kansas; AAPG Bull., v. 18, p. 1313-1345.

Bass, N.W., 1936, Origin of the shoestring sands of Greenwood and Butler counties, Kansas; Kansas Geol. Survey, Bull. 23, 135 pp.

Bass, N.W., Leatherock, C., Dillard, W.R. & Kennedy, L.E., 1937, Origin and distribution of Bartlesville and Burbank shoestring oil sands in parts of Oklahoma and Kansas; AAPG Bull., v. 21, p. 30-66.

Brenner, 1989, Stratigraphy, petrology, and paleogeography of thr upper portion of the Cherokee Group (Middle Pennsylvanian), eastern Kansas and northeastern Oklahoma; Kansas Geol. Survey, Geol. Series 3, 70 pp.

Cuzella, J.J., Gough, C.P & Howard, S.C., 1991, Depositional environments and facies analysis of the Cherokee Group in west-central Kansas, in A.J. Lomando & P.M. Harris, eds., Mixed Carbonate-Siliciclastic Sequences; SEPM Core Workshop No. 15, p. 273-307.

Cuzella, J.J., Gough, C.P & Howard, S.C., 1991, Depositional environments and facies analysis of the Cherokee Group in west-central Kansas; Kansas Geol. Soc. Bulletin, v. 70, no. 4, p.16 and 30-31.

Heckel, P.H., 1977, Origin of phosphatic black shale facies in Pennsylvanian cyclothems of Mid-Continent North America; AAPG Bull., v. 61, p. 1045-1068.

Hulse, W.J., 1979, Depositional environment of the Bartlesville Sandstone in the Sallyards Field, Greenwood County, Kansas, in N. J. Hyne, ed., Pennsylvanian Sandstones of the Mid-Continent; Tulsa Geol. Soc., Spec. Publ. 1, p. 327-336.

Knapp, R.W., Anderson, N.L. & Youle, J.C., 1995, Cherokee sandstone reservoir, southeastern Kansas, in Anderson, N.L. et al., eds., Geophysical Atlas of Selected Oil and Gas Fields in Kansas; Kansas Geol. Survey, Bull. 237, p. 158-161.

Merriam, D.F., 1963, The Geologic History of Kansas; Kansas Geol. Survey, Bull. 162, 317 pp.

Nodine-Zeller, D.E., 1981, Karst-derived Early Pennsylvanian conglomerate in Ness County, Kansas: Subsurface Mississippian-Pennsylvanian boundary delineated in well core; Kansas Geol. Survey, Bull. 222, 30 pp.

Nodine-Zeller, D.E., 1985, "Pennsylvanian basal conglomerate", Ness County, Kansas, in W.L. Watney et al., eds., Core Studies in Kansas; Kansas Geol. Survey, Subsurf. Geol. Series 6, p. 40-47.

Roehl, P.O., 1967, Stony Mountain (Ordovician) and Interlake (Silurian) facies analogs of Recent low-energy marine and subaerial carbonates, Bahamas;AAPG Bull., v. 51, p. 1079-2032.

Shinn, E.A. & Lidz, B.H., 1988, Blackened limestone pebbles: fire at subaerial unconformities, in N.P. James & P.W. Choquette, eds., Paleokarst; Springer-Verlag, New York, p. 117-131.

Walters, R.F., Gutru, R.J. & James, A., 1979, Channel sandstone oil reservoirs of Pennsylvanian age in northwestern Ness County, Kansas, in N. J. Hyne, ed., Pennsylvanian Sandstones of the Mid-Continent; Tulsa Geol. Soc., Spec. Publ. 1, p. 313-326.

Walton, A.W., 1996, Depositional framework and representative oil reservoirs of the Cherokee Group (Atokan-Desmoinesian, Middle Pennsylvanian), eastern Kansas, in Johnson, K.S., ed., Deltaic Reservoirs in the Southern Midcontinent; Oklahoma Geol. Survey, Circ. 98, p. 168-187.

Zeller, D.E., ed., 1968, The Stratigraphic Succession in Kansas; Kansas Geol. Survey, Bull. 189, 81 pp.

For Guidelines to submitting technical papers please refer to page 43

Oct. 13th KGS Technical Presentation

Structural Architecture, Petroleum Systems, and Geological Implications for the New Hydrocarbon Province of the Covenant Field Discovery, Sevier County, Utah.

by
Doug Strickland

Education
Masters of .Science, Geology, University of Wisconsin, 1975;
Bachelor of Science, Geology, University of Southern Colorado, 1973;

Positions
Exploration Manager, Wolverine Gas & Oil, Grand Rapids, Michigan, 1998 to the present:

Vice President of Exploration, W. R. Grace, 1981 to 1998:
Began as exploration manager and was promoted to Vice President of Exploration.
Geologist, Chevron, U.S.A., 1978 to 1981:
Responsible for exploration of western thrust belt plays.

Publications 8 in Rocky Mountain-Great Basin Province

Synergistic Activities: Member of AAPG, RMAG, GSA< OKC Geological Society, Wyoming Geological association Utah Geological Society. Professional Geologist in Wyoming, Texas, Utah.

Structural analysis, seismic interpretation, and organic geochemistry are all part of the petroleum systems synthesis that contribute to the Covenant Field discovery in Central Utah by Wolverine Gas and Oil Corporation. The Kings Meadow Ranch 17-1 penetrates a highly porous and permeable reservoir in the Jurassic Navajo sandstone which contains a 450 foot oil column. The Covenant Field is located along a frontal structural uplift to the Central Utah thrust belt, where Late Cretaceous-Early Tertiary compressional deformation resulted in the development of thrust faults and associated hanging wall anticlines buttressed against the ancestral Ephraim extensional fault. The traps are charged from Mississippian foreland basin sediments to the west of the discovery, and hydrocarbon generation was driven by the initial sedimentary loading (oil generation) followed by tectonic loading (gas generation) associated with the evolving thrust belt. Evaporite deposition in the overlying Arapien formation provides a highly effective seal for the accumulations. Jurassic extensional faults may be critical in defining the location of thrust faults and antiformal stacks, which in turn define structural traps along this newly discovered onshore hydrocarbon province.

◆ ◆

Oct. 19th KGS Technical Presentation

New Routes for Agriculture Through Perennial Roots.

by
Ken Warren

For almost 30 years The Land Institute, a non-profit research and development organization located in Salina, Kansas has been looking at an entirely new way to grow our food. This method, called Natural Systems Agriculture, is a mimic of the prairie ecosystem and thus utilizes perennial grain crops grown in mixtures as opposed to the current agronomic system which relies on annual plants grown in single crop fields. The benefits of such a nature-based system would be multifold; saving soil and water, reducing petroleum usage, and greatly reducing or eliminating the need for herbicides and pesticides. Natural Systems Agriculture, now in the research and development phase, would not only be more sustainable but would allow greater economic return/ possibilities for the farmer.

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 to Wes Hansen at 316-263-7313 or via e-mail at bulletin@kgslibrary.com

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

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

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

ROGER L. MARTIN
Independent/Consultant
Petroleum Geologist
200 East First Street, Ste. 405
Wichita, Kansas 67202
Office 316-267-0032/Cell: 316-250-6970
Fax: (316) 264-8686
Email: rogermartingeo@sbcglobal.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

ALFRED JAMES III
Petroleum Geologist
Kansas - Colorado - Alaska

200 West Douglas
Suite 525
Wichita, Kansas 67202
Off: (316) 267-7592

THE Rosel COMPANY

"Specialist in Wire Line Completion & Digital Open-Hole Logging"

♦**Open Hole** ♦**Cased Hole**
♦**Production Logging** ♦**Pipe Recovery**
Liberal, KS 620-624-4941 Enid, OK 580-544-0552

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

Office: (316) 262-5418
Fax: (316) 264-1328

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
1199 N. PONDEROSA RD.
BELLE PLAINE, KS 67013

PHONE
RES.: (316) 522-7338
MOBILE: (316) 706-6636

EMAIL: KKESSLER1199@AOL.COM

ROBERT J. GUTRU

Geologist

300 Farmers & Bankers Bldg.
200 East First Street
Wichita, Kansas 67202
Off: (316) 265-3402

Promote Yourself!

Buy an AD space in our Bulletin

Memorial: Richard "Dick" Foley

With the passing of Dick Foley, at the age of 79, on June 23, 2005, the industry and the profession lost a member who although had pursued a career in other fields of endeavor, remained a "geologist" at heart. He will be missed by all those who knew him professionally and personally.

Dick was born in El Dorado, Arkansas where his father was employed as a geologist with Pure Oil Co.. The family, which besides Dick included his brother Michael and sister Ruth Krueger, moved Midland, Texas before moving to Wichita in 1929.

Dick attended Blessed Sacrament Elementary school through the 8th grade and then Cathedral High School where he graduated in 1943.

After one year in Chemical Engineering at the University of Wichita., his interest in Geology was aroused. After a couple of summers at the University of Missouri Field Camp, he enrolled at University of Missouri and graduated in 1947. Dick spent one year in graduate school, and then commenced his career as a Petroleum Geologist with Koch Oil.

In 1949, he joined Sinclair Oil, working in Wichita and Oklahoma City. In 1951, after completing a well near Laverne, Oklahoma, he received a call from Thornton Anderson asking whether he would be interested in returning to Wichita to work for Lion Oil, which he subsequently did.

Dick married Sue Pearl in 1942, and he is survived by Sue and their five children: C. Matt, Michelle Cocking, Melinda, and Mary Pat Elpers, all of Wichita, and Maureen Dime of Del Mar, California.

In 1953, Dick terminated his employment with Lion and became an Independent. He was subsequently contacted by Harry Connelly of Harbor Drilling and went to work for Harbar. Following his employment with Harbar, he and George Dent formed Black Dot Oil Company.

A change in his career occurred when in 1971 he and Sue started "Food for Thought" . In 1985. Dick commenced working personally in the business. The family continues to operate this business. Dick had previously been involved in the food business, operating with his brother, Mike, the Taco Grande chain in the 1960's.

Both the Rosary service and the Funeral Memorial Mass were held at Blessed Sacrament, where Dick had been a member of the parish for 75 years. The family has designated that memorials be established with Blessed Sacrament School, The Lord's Diner. and the Wichita-Sedgwick County Historical Museum A memorial has also been established with the Kansas Geological Foundation.

See page 10
For Advertising Rates!

Memorial: Jim Guinotte

With the passing of Jim Guinotte, the oil industry lost one of its respected members and a veteran prospector in the mid-continent with particular emphasis on Eastern Kansas and the Kansas Geological Society lost a 53-year member who was honored in 1975 for his 50-year membership. Jim was a charter member of the Kansas Geological Foundation.

Jim was born in Kansas City, Missouri in 1925. He attended schools in Westport, Missouri culminating in his graduation from Westport high School in 1942. Jim had two sisters who survive: Mary Francis of Kansas City, Missouri and Maude Stawn of Santa Fe, New Mexico. Following high school graduation, Jim served in the US. Navy from February 1943 until October of 1944 when he received an honorable discharge.

Jim then enrolled at the University of Kansas and graduated from that institution in 1946. While at KU, he was member of Phi Kappa Psi fraternity and Sigma Gamma Epsilon, honorary geological fraternity. In 1947-48 he was on the Engineering Dean's Honor Roll.

In 1949 he married Allson Jones in Lawrence Kansas. Allson died in 2003. Allison and Jim had ten children and j Jim had ten children: Jim, Tucson, John, Joe, Tim Richard, Mary, Almee, Allison and Nancy. All except Richard are survivors. There are also 22 grand children and 2 great-grandchildren.

Jim commenced his professional career as an Assistant Geologist with the State of Kansas in Russell, Kansas following graduation In November 1948 he moved to Chanute as District Geologist for the Oil Field Section of the State of Kansas where his work involved direction of subsurface disposal and secondary recovery for 22 counties in Eastern Kansas. After his marriage, Allison joined him in Chanute. He joined Skiles Oil Corporation in 1954 as an engineer in charge if drilling, completion and production from 1955 until 1958 he performed essentially the same duties with Sterling Grace and Company. He became an independent consultant and producer in 1958 and continued in that capacity until his death.

He as active in community affairs, serving on Chanute City Commission from 1995 until 1999. Jim was also a fifty-year member of the Elk's Lodge and American Legion Post # 170. He was very active in industry and professional organizations. Jim joined the American Association of Petroleum Geologists (AAPG) as a Junior member in 1948 and 50 years later he achieved Emeritus membership status. He has served the Eastern Kansas Oil and Gas Association (EKGOA) as President and had been a director of the Kansas Independent Oil and Gas Association. Jim had also been a member of the Society of Petroleum Engineers (SPE).

His recreational activities included hunting and fishing and his pursuit of fishing had taken him from the Artic to Central America.

Memorials have been established by his family to the Dick Guinotte Memorial Scholarship in his name or the St. Patrick School Fund.

KANSAS GEOLOGICAL 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.

Videotape Library - The KGF maintains a 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.

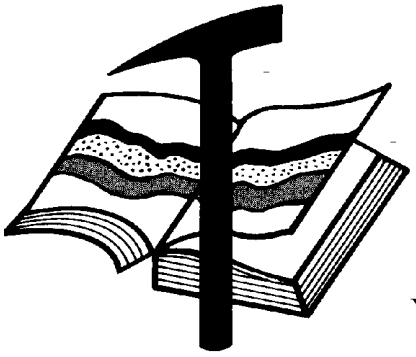
New Slides on Energy from AAPG - 14 slides are available from the Speaker's Bureau on energy. Please contact Bob Cowdery at 267-9030 to check out the slides.

The Kansas Geological Foundation was founded in March of 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



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

MEMBER PROFILE: Dean Seeber

Dean is from a Kansas background and has lived in El Dorado since 1962. Between his birth in Great Bend in 1934 and establishing a career in El Dorado, he has traveled widely and accomplished many things.

Dean's father, Clarence, was a manager and troubleshooter for Halliburton and his mother was a housewife. Dean was the youngest of four children. Oldest brother Glen, played freshman football for Wichita University, but was killed during World War II. Harlan lives between Andover and Wichita, and Shirley, who is married to Richard Green, a consulting geologist, lives in Hays.

The family moved to Wichita in 1940 and Dean attended his first five grades in the Wichita school system at Samuel Adams and Lowell Elementary schools. When his father formed United Oil Well Cementing Company, the family moved to El Dorado and Dean finished his elementary and secondary schooling there, culminating in his graduation from El Dorado High School in 1952. While at the high school, he was on the track team as a cross-country runner.

After high school, Dean enrolled in Petroleum Geology at the University of Oklahoma, which he says was a natural progression for him having literally grown up in the "oil fields" as a result of his father's occupation. While at OU, Dean recalls that two professors exerted some influence over him and his career. He identifies Dr. Phil Chenowith, who presented a course in Stratigraphy in a very interesting manner, and Dr. Reg Harris, from whom Dean took a 1-hour credit course in sample running, involving difficult areas of Oklahoma geology that would prove to serve him well later in his career. He graduated from OU in 1957.

While he was at OU, he was not aware of another student, Wilbur Bradley. However, many years later, he and Wilbur met at a well in Greenwood County. They compared notes and realized they had attended OU during the same period. Since then they have been in numerous drilling deals together.

After graduation, Dean joined Ohio Oil Company in January 1957 and until March 1960, was engaged in mapping in Southern Oklahoma and prospect evaluation. Scott Ritchie was working for Ohio at about the same time, but Dean says that they didn't become acquainted until later. In March he transferred to Oasis Oil and was engaged in doing fieldwork and working as the wellsite geologist in the Sirte Basin, Libya. In Libya he encountered some of the most challenging wells during his career. This was because the tops were picked on the basis of microfossils and Dean had not had a course in Micro-Paleontology in college. Contributing to the challenge was the extremely fast drilling, making considerable footage in a 24-hour period.

In 1962 he returned to El Dorado to work with his father and to commence his consulting career. This career has involved a myriad of activities including wellsite supervision of several thousand wells in Eastern Kansas. He has also been involved in oil exploration and development, and appraised oil and gas properties for estate, condemnation, civil actions including associated testimony as an expert witness in State District Courts as well as U. S. District Court.

Recently he has been involved in horizontal drilling operations. All of his work has been performed for a clientele that includes a number of independent operators and several major oil companies.

As he gained experience in Kansas, Dean was helped by several individuals: Paul Koontz of Rex and Morris, Howard Morris of White and Ellis, and Dan Bowles. When asked who was the biggest character that he had encountered in the oil fields, Dean did not name an individual (well actually he did, but we will hope that it was facetiously) but instead named a group - "the doodlebuggers". Perhaps since the wells are shallower in Eastern Kansas, oil is easier to locate.

As a sideline during his consulting career, Dean started a plastics factory in 1970 with his brother. Harlan managed the daily operations of Seeber Manufacturing until it was sold in 1997.

In 1954 Dean married Alfreda Wright and there were six children from that union: Glen works for the Daily Oklahoman; Anna Marie is an artist and lives in Oberlin married to a rancher; Jennifer was deceased as a child; Michael followed his father's career path and, after serving as Chief Geophysicist for Anadarko, is now in charge of all of their computer operations; Amy is an internist practicing in El Dorado with her husband who is also an internist; and Ron is a lobbyist in Topeka, and was formerly Political Director of the Kansas Republican Party.

In 1991, Dean married Susan Tipton. Susan resigned from a successful banking career as Vice President and Trust Officer. She later served as Mayor of El Dorado and was recently the President/CEO of the Kansas World Trade Center. She volunteers in numerous capacities and serves on the Board of Directors for the Greater Wichita YMCA as well as the El Dorado YMCA. Dean has two stepchildren: Jennifer works for YMCA in Wichita, and Jeff is manager of Scottrade in Kansas City. Dean and Susan have 13 grandchildren.

Dean has been active in his profession as well as community affairs. He has served in the past and is currently serving on the Nomenclature Committee of the Kansas Geological Society. He is a former City Commissioner of El Dorado, and also served on the Building Commission.

He leads a very active life outside of his profession. Dean has done a considerable amount of river rafting, not on the Arkansas, but in such remote areas as Chile, Alaska, Mexico and the Grand Canyon. At 45, he took up running again and has since run in three marathons, including the New York Marathon. One of Dean's favorite pastimes is extensive traveling around the world with Susan.

Looking back at his career, Dean says that he is unable to think of anything else that would be as enjoyable and rewarding. He said if he had it all to do over, he would absolutely be a petroleum geologist. With his great background, he would give this sound advice to young geologists just entering the field, "Study the modern technologies, but don't forget the original disciplines."

Dean doesn't have any plans to retire and plans to continue "looking for oil" as long as he is able.

This has been a somewhat difficult profile to write, not from lack of information, but because there have been so many interesting facets to this fellow member of our profession.

WALTERS DIGITAL LIBRARY

The Robert F. Walters DIGITAL GEOLOGICAL LIBRARY

Subscription Service To Kansas Data!

The Robert F. Walters DIGITAL GEOLOGICAL LIBRARY

Our web address

www.waltersdigitallibrary.com

All West Ranges Are Now Completed

Check Out Our New Pricing Structure & Find What Works Best For You

1-month trial period for $250.00 **(which can apply toward a 1 year subscription)**

3-months for $600.00 **(designed for the person with a project in Kansas but does not necessarily need a full year's membership)**

Regular Pricing of Digital Library Memberships:

- **KGS Library Members = Can subscribe to the Walters Digital Library for $600.00 / year**
- **Non-KGS Library Members = Can Subscribe for $1500.00 / year**

Try the Demo for Free
And learn how easy it is to access data!

Call Now to Sign Up!!

Toll Free: 877-265-7300
Local: 263-2916

ATTENTION KGS MEMBERS!!!!!

TEST YOUR SHOTGUN SHOOTING SKILLS
IN THE
12TH ANNUAL
SEE INSERT FOR DETAILS AND REGISTRATION

Advertise Here !

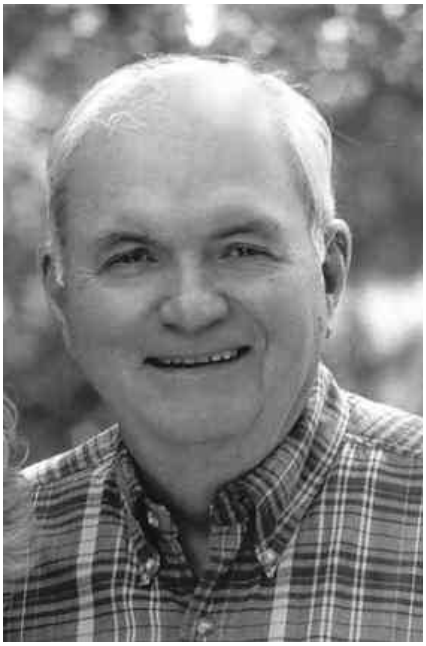
See page 10
For Advertising Rates!

Please, Share Your Photos!!!

We would like to publish any photos that you may have taken that would be of geological interest to our membership. The idea is to share any geology you may have had the opportunity to see that the rest of us could enjoy. Here is an example: 60 miles west of Moab, Utah you can see the hogbacks of Navajo Sandstone of the San Rafael Swell.

Your photo could be on our front cover!!!!

MEMBER PROFILE: Scott Ritchie



This will be an attempt to profile the life and activities of one of our members who has been an activist in professional and community affairs in the best sense of the word.

Scott was born in Wichita on November 14, 1932. His mother was from Medford, Oklahoma. His father Andy Ritchie was from Pennsylvania and was very well known in the oil industry community in Kansas. Scott's brother Bill was four years younger. He died in 1947.

Andy had worked for the Marland Oil Co. in Ponca City, Oklahoma as Production Superintendent for the Northern District. Scott's parents moved to Wichita in 1929 when his father accepted a position with Derby Oil Co. In the late 30's Andy Ritchie, Al Derby Sr. and Gene Moriarity formed DRM Oil Co. and McPherson Drilling. The company pursued exploration in central Kansas. DRM sold its production to Sohio Oil Co. in 1946 and Andy continued activity by participating in a few drilling prospects after this sale.

Scott attended College Hill Elementary School, Robinson Junior High and graduated from Wichita East High School in 1950. Attending East High during this period were KGS members Ted Sandberg and Dick Smith.

After graduation, Scott enrolled at the University of Kansas with the intent of majoring in business. Since he had long exposure to the "oil business" including work in the oilfields in the summer and needed a science elective, he enrolled in General Geology. His enjoyment of this course led to enrollment in Historical Geology and after this course he made the decision to become a geology major.

At KU he encountered several outstanding professors including Dr. Cecil Lailacker and Dr. Dan Merriam whose class in subsurface methods provided Scott with some good practical information that he was later to use in his professional career. Among his classmates were Innes Phillips, Don Malone and Hank Zoller.

He graduated from KU in 1954 and in June of that year married Carol Swanson. Carol and Scott have three children. A. Scott III is president of Ritchie Exploration; Tom manages Highland Ranch and oversees other family agricultural interests; and Ann, a homemaker, rides and shows cutting horses. They have eight grandchildren.

After graduation, Scott worked for the Ohio Oil Co. from 1954 until May of 1955 when he was called to active duty in the service as a result of his ROTC commission. He served at Forbes Field, Topeka as Base Petroleum Officer and as adjutant in an A&E squadron until May 1957 when he was discharged.

He elected not to return to employment at Ohio Oil and joined Rocket Drilling Co. where Bill Petersen, a KGS member was also employed. His first wellsite job for Rocket Drilling was a rank wildcat in Brown County that was 5 miles from the nearest control hole. He was told to not penetrate the Mississippian, Hunton, Viola or Simpson more than five feet before circulating for samples. He believes that he probably set a Kansas record for circulating time.

With the demise of Rocket Drilling in December 1958, Scott was left without a job and at that period prospects for finding employment were poor. Bud Derby allowed Scott to occupy an office in return for keeping Rocket's maps and scout cards up to date. Later he acquired his own set of cards, opened a home office and pursued his career as an independent geologist. In order to pay the bills he spent several years doing wellsite geology. One large independent seemed to hire him to watch wells that would be drilling over a holiday. He said he often spent Thanksgiving, Easter, Fourth of July and New Year's Eve holidays on wells drilling in western Kansas.

As his career progressed, Scott found that several local geologists provided mentoring and help. One was Bob Watchous. Though Bob and Scott had not worked for Rocket Drilling at the same time, if Scott needed help Bob would provide that help. Another was J. Paul Jennings who worked with and provided help in understanding seismic records. Don Hellar also exerted a strong influence on Scott.

The first exploration prospect that he sold was a two well farmout from Al Siemens at Pure Oil Co., which he eventually sold to Milt Glickman. Even though it resulted in two dry holes, this sale gave him the wherewithal to continue and he gives full credit to Milt. Later Paul Jennings, who worked for Birmingham and Bartlett, made Scott a farmout that resulted in production in Barton County. In 1963 he started his own independent oil producing company.

Scott recounts an experience that he had with a "doodlebugger" out of Haven, Kansas, who used a welding rod with a spark plug on the end. The doodlebugger learned that Scott was going to drill 6 tests from the first reports. The man then preceded to doodlebug all 6 locations. He called Scott to let him know that he had a problem - the doodlebugging indicated 3 producers and 3 dry holes. The test wells were drilled. Soon after Scott encountered the doodlebugger and told him that he wanted to buy his doodlebug because 3 of the wells he predicted to be oil were dry and the 3 he predicted would be dry holes were oil. Scott told him his machine was 100% right – the problem was the doodlebugger was reading its data upside down. Scott said the man left in a huff.

Scott has been a Pizza Hut franchisee since 1968 and was chairman of the franchise board in 1993. He also has built up a Flint Hills ranching operation south of Emporia and spends much of his free time there.

It is in the field of professional and community activities that Scott really stands out. Among several of the offices he held in the Society of Independent Professional Earth Scientists is the national presidency in 1985-86. He was also president of Kansas Independent Oil and Gas Association from 1985-87. He has been a member of the Kansas Geological Survey Advisory Committee from 1984 to present, serving as chairman from 1987 to 1990. At the University of Kansas, he has been on the KU Endowment Board of Trustees from 1994 to present. He served on the KU First Steering Committee from 2000 to 2005. Service to his fraternity, Phi Delta Theta, includes membership on the Board of Trustees of the Education Foundation.

Community-wise his service is also very impressive: Audubon Society of Kansas, Trustee 1999 to present; Wichita Art Museum, Board of Trustees, 2000-present; Wichita Community Foundation, Board of Directors, 1992-98. Wichita Petroleum Club Board of Directors, 1977-80; Heartspring Board of Directors, 1997-98; Wichita Chamber of Commerce, Board of Directors 1990-95.

Scott has received special recognition from the University of Kansas Dept. of Geology by receiving the Erasmus Haworth Award for Distinguished Alumni Honors in Geology. Looking back on his career,

Cont. on page 34

Cont. from pg. 33

Scott says without hesitation if he had it to do over he would still be a petroleum geologist. He does not believe that anyone would be able to find a better mix of opportunity and fulfillment. For a young geologist entering the field today he has some very pertinent advice: you cannot spend too many hours prospecting and always be ready to "think outside the box"; study existing oil fields to find a unique signature; learn the business side and prospect in areas that will be economic at current prices; and always guard your professional reputation.

Although in earlier years he enjoyed tennis and skiing now his recreational activities are bird-hunting and fishing, particularly on his Flint Hills ranch.

As he looks to the future, Scott plans to continue the excitement of an active exploration program and carry on his recreational interests. He and Carol plan to spend considerable time on the ranch, but they also plan to travel to places of interest in the U.S. and overseas.

This fellow professional has had a wide and varied and very successful career with considerable emphasis on service to the profession and the community.

.

THE ON-LINE BULLETIN IS NOW IN PDF FORMAT

Check out the complete KGS Bulletin on our web site www.kgslibrary.com

A simple way to help your Society save money would be to let us know if you like viewing the Bulletin on line. This would allow us to reduce our mailing & printing costs of sending the Bulletin to every member.

We are glad to keep mailing it to you but if you are satisfied with reading on-line, please just let us know.
316-265-8676

Kansas Geological Foundation
Items for Sale

Several sets of geological data and publications
AAPG Bulletins Shale Shakers
Mountain Geologist Mining Engineering
Economic Geology

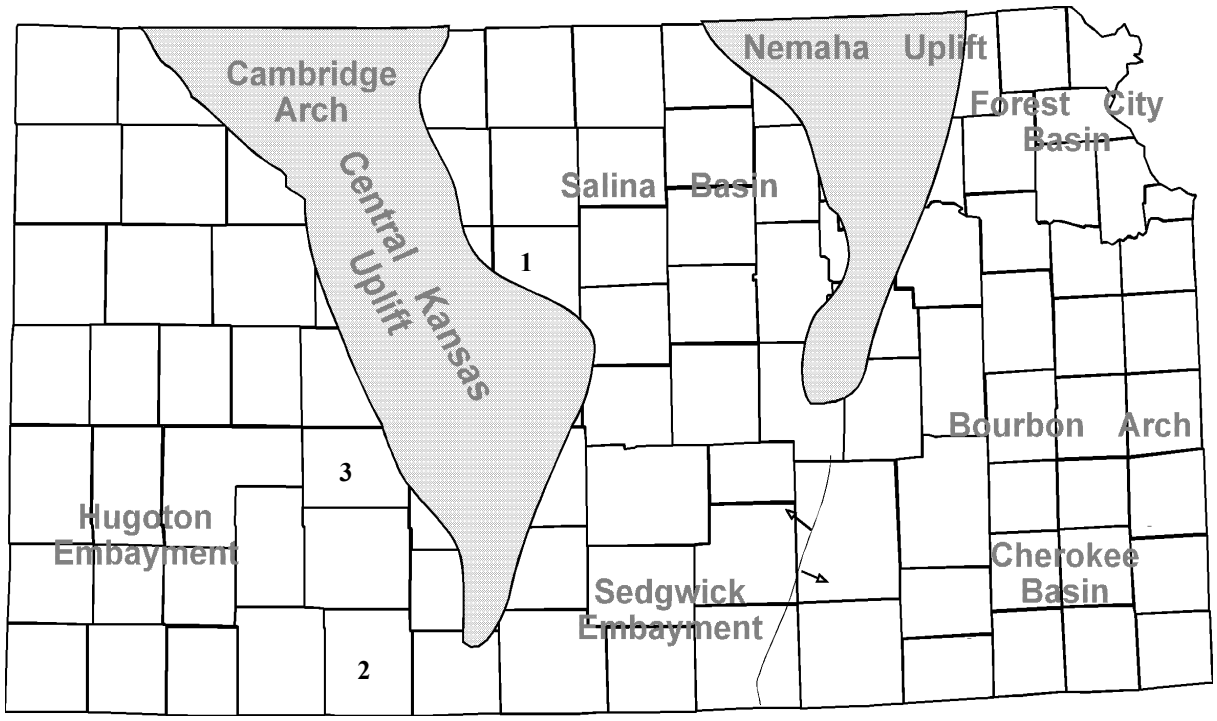
- **Kansas Completion Card Sets**
- **Completion Card File Cabinets**
- **Completion Card Cabinets**
- **Microfiche Readers**
- **Geology Books**
- **Blue Line Printer**
- **Logs & Data from several other states**
- **Framed Pool Maps**
- **Much More**

KGF MEMORIALS

Name	Dc'd Dte	M'l Est.
Dan Bowles	09/89	1990
John Brewer	10/89	1990
George Bruce	08/89	1990
Robert Gebhart	01/90	1990
Ray Anderson, Jr.	11/90	1990
Harold McNeil	03/91	1991
Millard W. Smith	08/91	1991
Clinton Engstrand	09/91	1991
M.F. "Ted" Bear	10/91	1991
James & Kathryn Gould	11/91	1991
E. Gail Carpenter	06/91	1993
Benton Brooks	09/92	1992
Robert C. Armstrong	01/93	1993
Nancy Lorenz	02/93	1993
Norman R. Stewart	07/93	1993
Robert W. Watchous	12/93	1993
J. George Klein	07/94	1994
Harold C.J. Terhune	01/95	1995
Carl Todd	01/95	1995
Don R. Pate	03/95	1995
R. James Gear	05/95	1995
Vernon Hess	06/95	1995
E. K. Edmiston	06/95	1995
Jack Rine	07/95	1995
Lee Cornell	08/95	1995
John Graves	10/95	1995
Wilson Rains	10/95	1995
Heber Beardmore, Jr.	09/96	1996
Elmer "Lucky" Opfer	12/96	1996
Raymond M. Goodin	01/97	1997
Donald F. Moore	10/92	1997
Gerald J. Kathol	03/97	1997
James D. Davies	08/88	1997
R. Kenneth Smith	04/97	1997
Robert L. Dilts	05/97	1997
Delmer L. Powers	06/72	1997
Gene Falkowski	11/97	1997
Arthur (Bill) Jacques	1/98	1998
Bus Woods	1/98	1998
Frank M. Brooks	03/98	1998
Robert F. Walters	04/98	1998
Stephen Powell	04/98	1998
Deane Jirrels	05/98	1998
William G. Iversen	07/98	1998
Ann E. Watchous	08/98	1998
W.R. "Bill" Murfin	09/98	1998
Donald L. Hellar	11/98	1998
Joseph E. Rakaskas	01/99	1999
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
Floyd W. “Bud” Mallonee	10/00	2000
Ralph W. Ruuwe	09/00	2000
Robert L. Slamal	02/01	2001
Jerold E. Jesperson	06/01	2001
William A. Sladek	06/01	2001
Harlan B. Dixon	06/01	2001
Edward B. Donnelly	08/01	2001
Richard P. Nixon	02/02	2002
Robert W. Frensley	12/01	2002
Gerald W. Zorger	01/02	2002
Don L. Calvin	03/02	2002
Claud Sheats	02/02	2002
Merle Britting		2002
Harold Trapp	11/02	2002
Donald M. Brown	11/02	2003
Elwyn Nagel	03/03	2003
Robert Noll	09/03	2003
Benny Singleton	09/03	2003
Jay Dirks		2003
J. Mark Richardson	02/04	2004
John “Jack” Barwick	02/01	2004
Richard Roby	03/04	2004
Ruth Bell Steinberg		2004
Gordon Keen	03/04	2004
Lloyd Tarrant	05/04	2004
Robert J. “Rob” Dietterich	08/96	2004
Mervyn Mace	12/04	2004
Donald Hoy Smith	03/05	2005
Richard M. Foley	06/05	2005

EXPLORATION HIGHLIGHTS

By John H. Morrison, III
Independent Oil and Gas Service



(1) Castle Resources Pumps Discovery Well for 80 BOPD:

(Wichita, KS - IOGsi News Service 7/25/2005) - Castle Resources, Inc., of Schoenchen (KS), is producing 80 barrels of oil and 20 barrels of water per day at their Driscoll #1 new pool discovery well in Russell County. Located in approximately NW SE NE in section 8- T15s- R14W, the wildcat well found Lansing-Kansas City oil deposits on separated feature almost one-half mile east of the Arbuckle oil-producing Kennebec Field. Operator used WW Drilling tools to drill the well to a rotary total depth of 3349 ft. Perforations were shot with 4 holes per foot in five, four-foot intervals beginning at 3038, 3060, 3076, 3186 and 3283 ft. All zones were acidized. Jerry Green, President/geologist, called the log top of the Lansing at 3037 (-1192 KB). The new oil field, unnamed at this time, lies about 8 miles south-southwest of Russell, Kansas.

(2) EOG Resources Completes Clark County Wildcat:

(Wichita, KS - IOGsi News Service 8/22/2005) - EOG Resources, of Oklahoma City (OK), has established a new unnamed oil field in Clark County, near the city of Englewood. The Gardiner #2-11 has tested commercial amounts of crude oil from the Mississippian Chester formation at site located in C N/2 NE NW in section 11-T34s- R24W. The exploratory well was drilled to a total depth of 5904 ft last June. Production began on July 13, 2005. No other details have been released. This new oil discovery lies about 1-1/2 miles northeast of EOG Resources Gardiner #1-15 in section 15- T34s- R24W, which is also producing natural gas at an undisclosed rate from the Mississippian Chester Sands. The well was completed in June this year as a northerly stepout and extension of the Color Field.

(3) Palomino Petroleum Confirms New Obee SE Field:

(Wichita, KS - IOGsi News Service 7/25/2005) - Palomino Petroleum, of Newton (KS), has successfully confirmed Cherokee oil production in their newly established Obee Southeast Field in Ness County. The #1 Stum-Kerr, spotted in approximately SE SE SW in section 7- T19s- R23W, has been completed for 100 barrels of oil per day, no water. The well is producing crude from Cherokee Sand through perforations shot between 4276 to 4278 ft. Total depth is 4370 ft. The well was drilled as a southeast offset to Palomino's #1 Stum, that has produced over 3,200 barrels of oil from the Cherokee since completed in January this year. Field area is located 2-1/4 miles south of Ness City, Kansas.

Looking For Donations

To The KGS Core Hole Library

If you have core hole drilling data or seismic data that you would like to donate to this project, please contact Gus Messinger or Rebecca Radford at the Kansas Geological Society Library.

316-265-8676

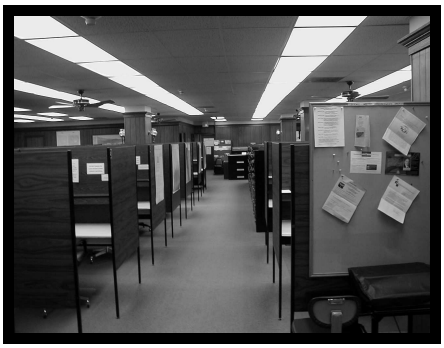
This collection of data could prove to be of great value to those who are looking at prospects in Kansas.

KGS Library Open Late on Thursday Nights

until 9:00 pm

This is an added benefit for :

- **Geologists who have left the business to work elsewhere during downturns in the oil business**
- **Out of town members will now be able to maximize a trip to our library to do research, perhaps cutting a full day off of their visits**



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***

KGS Annual Picnic Highlights

A big "*thank you"* to Chellie Mazzullo for heading the picnic committee this year.

Brian Wilhite challenged us with the "know your rocks" contest.

Marjorie Crane and Kimberly Dimmick-Wells give a hand as guests arrive for fun and food.

Hamburgers and hotdogs with all the "fix'ins" and sides were plentiful and tasty.

The turnout was great, even though the weather promised to keep us indoors.

It was a good evening to catch up with people and chat.

KGS Annual Picnic Highlights

Don't we all wish we had young Simon Woolsey's energy and flexability?

Family and friends gather to enjoy the evening.

Many great gifts were donated by local businesses for the bingo games.

Participants gathered at the watering hole for beer, wine and soda.

The stories flew as the crowd gathered for yet another great get-together.

Thanks again for another successful KGS annual picnic!!!!!

KGS ANNUAL PICNIC CASH DONATIONS

Abercrombie Energy, LLC
Acid Services, L.L.C.
Allied Cementing Co., Inc.
American Energies Corp.
Big "A" Drilling, LLC
Brito Oil Company, Inc.
Alan DeGood
Deutsch Oil Company
Diamond Testing
Eagle Creek Corporation
Edmiston Oil Company, Inc.
E.L.I. Wireline Services
Falcon Exploration
Grand Mesa Operating Co.
Gressel Oilfield Service, Inc.
Halliburton Energy Services
J. Fred Hambright, Inc.
Wesley D. Hansen
Hartman Oil Company, Inc.
Gerald D. Honas
Independent Oil & Gas
Ted Jochems, Jr.
Landmark Resources, Inc.
Lario Oil & Gas Company
Log-Tech, Inc.
Lotus Operating Co., L.L.C.
Roger L. Martin
Sal & Chellie Mazzullo
McCoy Petroleum Corporation
McGinness & McGinness
Mull Drilling Company, Inc.
National Oilwell
NCRA
Northern Lights Oil Company
Palomino Petroleum, Inc.
Pauly & Company
Petroleum Management, Inc.
Phillips Exploration Company
Innes Phillips
Pickrell Drilling Company, Inc.
Range Oil Company, Inc.
Raymond Oil Company, Inc.
Red Oak Energy, Inc.
J. Mark Richardson Family Trust
Brad Rine
Kirk T. Rundle
Sandberg Oil Company, Inc.
Bill Shepherd
Sterling Drilling Company
Sunrise Oilfield Supply Co.
Trilobite Testing
Val Energy, Inc.
Vess Oil Corporation
Vincent Oil Corporation
Wild Horse Resources, LLC
Woolsey Petroleum Corporation

KGS ANNUAL PICNIC BINGO PRIZE DONATIONS

Allstar Sports
The First Place
Harry's Uptown
Holy Cow Design (Linda McCune)
Koontz Florist
Nifty Nut House
Old Chicago
Petroleum Club
Rebecca Ray Jewelry

CONGRATULATIONS TO:
LARRY FRIEND
WINNER OF THE
'KNOW YOUR ROCKS'
CONTEST

GEOPHYSICAL SOCIETY OF KANSAS NEWSLETTER

September 2005

We are pleased to announce that, as of June 2005, a group of geophysicists has called for the formation of a Society which is seeking new members desiring a greater exposure particularly to the geophysical aspects of the greater Kansas region.

Among others, this new Society has one major goal and purpose:

- To provide a venue focused on bringing specific geophysical applications to the practicing geoscientist so that we can better utilize our multiple toolsets of today and tomorrow.

The Society will meet regularly in a Technical Luncheon forum which will highlight speakers and instructors who will bring particular expertise and insight relevant to a variety of surface and subsurface issues of importance to the practicing geoscientist.

Our technical program for the 2005-06 calendar year will be notably initiated by a presentation entitled "Exploring in Kansas with Small Prospect Specific 3D Surveys", to be given by highly regarded Denver consulting geophysicist Bill Miller. Please plan ahead to join us for his talk to be held at the Bank of America Auditorium on Wednesday, September 14, 2005 at 12:30 PM.

In advance of the technical program, we invite members and prospective members to join us for Mexican buffet lunch at the South Room of the Petroleum Club, commencing at 11:30 AM. Please call Kirk Rundle at 316-721-1421 in order to assist us in planning and to secure a reservation.

Future Technical Programs are being arranged by Rick Saenger, who can be reached at 316-264-6366. If you wish to be considered for an opportunity to present at one of our Technical Luncheons, or if you have been exposed to a presentation which you believe would be of interest to the Society, please contact Rick.

This Society has become affiliated with the Society of Exploration Geophysicists, and will soon have a website facility accessible at www.gsks.seg.org. Please take the time to browse this site to learn more about our Society and how you may gain membership or participate as An advertising associate, etc. In advance of this web presence coming live, please find downloadable membership applications in the latest edition of the Bulletin of the Kansas Geological Society, located at www.kgslibrary.com, where a link to the form can be found.

We look forward to meeting the needs of those geoscientists and entities who may benefit from this new Society. Please feel free to contact any of the below listed members of our 2005-06 Council.

President: Dennis Hedke, Woolsey Operating Co., LLC, Wichita, KS: dhedke@sctelcom.net 316-267-4379, x 117
1st Vice-President: Rick Saenger, Mull Drilling Co., Inc., Wichita, KS: rsaenger@mulldrlg.com 316-264-6366
2nd Vice-President: Kirk Rundle, Consultant, Wichita, KS: kirk@rundlegeo.com 316-721-1421
Secretary: Michael L. Crouch, Consultant, Wichita, KS: segmike@mlcinc.kscoxmail.com 316-264-4334
Treasurer: Susan Nissen, Kansas Geological Survey, Lawrence, KS: snissen@kgs.ku.edu 785-864-3965
Editor: Rick Miller, Kansas Geological Survey, Lawrence, KS: rmiller@kgs.ku.edu 785-864-3965

AAPG MID-CONTINENT SECTION MEETING

This year Oklahoma City Geological Society is hosting the Mid-Continent Section meeting September 8th – 13th, in Oklahoma City at the Cox Business Services Convention Center. Kansas Geological Society will be in booth 14. The trade show portion of the meeting will be Sunday, Sept. 11th – Tuesday, Sept. 13th. If you plan to attend, please stop by the booth to say hello. In 2007, our Society will be hosting this meeting in Wichita.

KANSAS GEOLOGICAL SOCIETY MEMBERS WITH 50 + YEARS IN AAPG

The Kansas Geological Society would like to recognize and honor those members who have been in AAPG for 50 or more years.

Mr. George Angle – 50 years
Mr. Paul Hamlin – 50 years
Mr. Orvie Howell – 50 years
Mr. Donald Malone – 50 years
Mr. Max Merrill – 50 years

KGF 2005 FALL SCHOLARSHIPS

ANDREW L. HANER	*750.00*
JESSICA E. LUDWIG	*750.00*
JAMIE L. LAMBRECHT	*750.00*
MICHEL T. RUNNION	*750.00*
STEVEN D. SLOAN	*750.00*
MONICA TURNER-WILLIAMS	*750.00*

New CD's – June 2005

GAS

Natural Gas Resources of the Unita Basin, Utah and the Deep Anadarko Basin, Oklahoma and Texas National Energy Technology Laboratory

Natural Gas Resources of the Greater Green River and Wind River Basins of Wyoming – National Energy Technology Laboratory

Total Petroleum System and assessment of Coalbed Gas in the Powder River Basin Province, Wyoming and Montana USGS

Coalbed Natural Gas – National Energy Technology Laboratory May 2005

Meeting Future Demands for Natural Gas in South Central Alaska – National Energy Technology Laboratory June 2004

COAL

National Coal Resource Assessment – 1999 Resource Assessment of Selected Tertiary Coal Beds and Zones in the Northern Rocky Mountains and Great Plains Region (Two Disc's) – USGS

Alaska Coal Geology, Resources, and Coalbed Methane Potential – USGS

National Coal Resource Assessment – 2000 Resource Assessment of Selected Coal Beds and Zones in the Northern and Central Appalachian Basin Coal Regions – USGS

National Coal Resource Assessment – Resource Assessment of the Springfield, Herrin, Danville, and Baker Coals in the Illinois Basin (Two Disc's) - USGS

Geologic Assessment of Coal in the Colorado Plateau: Arizona, Colorado, New Mexico, and Utah – 2 Disc's – USGS -2000

EXPLORATION

Stratigraphic Framework, Structure and Thermal Maturity of Cretaceous and Lower Tertiary Rocks in Relation to Hydrocarbon Potential, Crazy Mountain Basin, Montana – USGS

Play Analysis and Digital Portfolio of Major Oil Reservoirs in the Permian Basin – Analysis of 1,339 reservoirs – National Energy Technology Laboratory

Maps Showing Geology, Oil and Gas Fields, and Geologic Provinces of the Arctic

Australian Oil and Gas – A compilation of Geoscience Australia's key petroleum publications and Products -2005

Western Australia Petroleum Explorers Guide – Geological Survey of Western Australia

Australia – Release of Offshore Petroleum Exploration Areas – 2005 – Australian Government – Department of Industry, Tourism, and Resources

STRATIGRAPHY

Facies Analysis and Sequence Stratigraphic framework of Upper Campanian Strata (Neislen and Mount Garfield Formations, Bluecastle Tongue of the Castlegate Sandstone and Mancos Shale), Eastern Book Cliffs, Colorado and Utah.

SEISMIC, GRAVITY AND MAGNETICS

"3-D Seismic Exploration Project, Ute Indian Tribe Uintah and Ouray Reservations, Uintah County, Utah" – National Energy Technology Laboratory – 4 Disc's

All Basins – Proprietary Surveys – Echo Geophysical Corporation

Gravity and Magnetics – International Non-Exclusive Data and Interpretations – May 2005 – Fugro Robertson Inc.

ENVIRONMENT

Environmental Benefits of Advanced Oil and Gas Exploration and Production Technology – Department of Energy

PRODUCTION

Produced Water Geochemistry Database, Greater Green River and Wind River Basins, Wyoming – National Energy Technology Laboratory

Oil Recovery Field Demonstration Class I, II, III & Revisit
Class I Oil Recovery Projects:

1. **University of Tulsa** (DE-FC22-93BC14951) Glenn Pool Field, Oklahoma
2. **Utah Geological Survey** (DE-FC22-93BC14953) Increase Oil Production and Reserves from Improved Completion Techniques in the Bluebell Field, Utah
3. **Diversified Operating Corp.** (DE-FC11-93BC 14954) Advanced Secondary Recovery Project for the Sooner "D" Sand Unit, Colorado
4. **University of Oklahoma** (DE-FC22-93BC14956) Identification and Evaluation of Fluvial Deltaic Reservoirs, Oklahoma
5. **University of Kansas** (DE-FC22-93BC14967) Improved Oil Recovery in Fluvial-Dominated Deltaic Reservoirs, Kansas
6. **Lomax/Inland Resources, Inc.** (DE-FC22-93BC14958) Green River Formation Waterflood, Utah
7. **Bureau of Economic Geology, University of Texas at Austin** (DE-C22-93BC14959)Revitalizing a Mature Oil Play, Texas
8. **Texaco E&P** (DE-FC22-93BC14960) Post Waterflood COxMiscible Flood in Light Oil Fluvial-Dominated Deltaic Reservoirs, Texas
9. **Columbia University** (DE-FC22-93BC14961)Dynamic Enhanced Recovery Technologies, Louisiana
10. **Hughes Eastern Corp.** (DE-FC22-94BC14962) Utilization of Microflora Indigenous to Selectively Plus Porous Zones to Increase Oil Recovery During Water Flooding, Alabama
11. **Amoco Exploration and Production Co.** (DE-FC22-93BC 14963) West Hackberry Tertiary Project, Louisiana

Class II Oil Recovery Projects

1. **Laguna Petroleum Corp** An integrated study of the Grayburg/San Andres Reservoir, Foster and South Cowden Fields, Ector, Co, Texas
2. **Michigan Technology University** Recovery of Bypassed Oil in the Dundee Formation Devonian) of the Michigan Basin Using Horizontal Drains
3. **Luff Exploration Co. (**DE-FC22-94BC14984) Improved Recovery Demonstrations for Williston Basin Carbonates
4. **Texaco E&KP** (DE-FC22-95BC14986) CO2 Huff-n-Puff Progress in a Light Oil Shallow Shelf Carbonate Reservoir
5. **University of Kansas Center for Research Inc.** J(DE-FC22093BC14987) Improved Oil Recovery in Mississippian Carbonate Reservoirs of Kansas-Near Term
6. **Utah Geological Survey** (DE-FC22-95BC14988) Increased Oil Production and Reserves Utilizing Secondary/Tertiary Recovery Techniques on Small Reservoirs in the Paradox Basin, Utah
7. **Total Fina** (DE-FC22-94BC14989) Application of Integrated Reservoir Management and Reservoir Characterization
8. **Oxy USA, Inc.** (DE-FC22-94BC14990) Application of Reservoir Characterization and Advanced Technology to Improve Recovery and Economics in a Lower Quality Shallow Shelf San Andres Reservoir
9. **Phillips Petroleum Co.** (DE-FC22-94BC14991) Design and Implementation of a CO2 Flood Utilizing Advanced Reservoir Characterization and Horizontal Injection Wells in a Shallow Shelf Carbonate Approach Waterflood Depletion

Class III Oil Recovery Projects:

1. **Tidelands Oil Production Company** (DE-FC22-95BC24934) Increasing Waterflood Reserves in the Wilmington Oil Field
2. **Pacific Operators Offshore, Inc.** (DE-FC22-95BC14935) Feasibility of Optimizing Recovery and Reserves from a Mature and Geological Complex Multi Turbite Offshore California Reservoir
3. **University of Texas at Austin** (DE-FC22-95BC14936) Application of Advanced Reservoir Characterization, Simulation, and Production Optimization Strategies to Maximize Recovery in Slope and Basin Clastic Reservoirs, West Texas
4. **University of Utah** (DE-FC2295BC14937) Reactivation of an Idle Lease to Increase Heavy Oil Recovery
5. **Chevron USA Production Company** (DE-FC22-95BC14938) Advanced Reservoir Characterization in the Antelope Shale to Establish the Viability of CO2 Enhanced Oil Recovery in California's Monterey Formation Siliceous Shales
6. **City of Long Beach** (DE-FC22-95BC14939) Increasing Heavy Oil Reserves in the Wilmington Oil Field
7. **ARCO** (DE-FC22-95BC14940) Economic Recovery of Oil 'Trapped at Fan Margins Using High Angle Wells and Multiple Hydraulic Fractures
8. **Strata Production Company** (DE-FC22-95BC14941) Advanced Oil Recovery Technologies for Improved Recovery from Slope Basin Clastic Reservoirs, Nash Draw Brushy Canyon Pool Eddy County, New Mexico
9. **Pioneer Natural Resources** (DE-FC22-95BC14942) Advanced Reservoir Characterization and Evaluation of CO2 Gravity Drainage in the Naturally Fractured Spraberry Trend Area

Class Revisit Oil Recovery Projects:

1. **Ensign Operating Co/Ensign Oil & Gas, Inc.** (DE-FC26-008C14120) Advanced Reservoir Characterization and Development through High Resolution (3C3D Seismic and Horizontal Drilling Eva South Morrow Sand Unit, Texas County, Oklahoma
2. **Binger Options (DE-**FC26-00BC15121) Improved Miscible Nitrogen Flood Performance Utilizing Advanced Reservoir Characterization
3. **Michigan Technological University** (DE-FC26-00BC15122) Using Recent Advances in 2-D Seismic Technology and Surface Geochemistry to Economically Redevelop a Shallow Shelf Carbonate Reservoir Vernon Field, Isabella County, MI
4. **Luff Exploration Company** (DE-FC26-00BC15123) Intelligent Computing System for Reservoir Analysis and Risk Assessment of the Red River Formation

5. **University of Kansas Center for Research, Inc.** (DE-FC26-00BC15124) Field Demonstration of Carbon Dioxide Miscible Flooding in the Lansing Kansas City Formation, Central Kansas
6. **University of Tulsa** (DE-FC26-00NT15125) Exploitation and Optimization of Reservoir Performance in Hunton Formation, Oklahoma
7. **Venoco, Inc.** (DE-FC26-00NT15127) An Advanced Fracture Characterization and Well Path Navigation System for Effective Re-development and Enhancement of Ultimate Recovery from the Complex Monterrey Reservoir of the South Ellwood Field, Offshore California
8. **Utah Geological Survey** (DE-FC26-00BC15128) Heterogeneous Shallow-Shelf Carbonate Buildups in the Paradox Basin, Utah and Colorado: Targets for Increased Oil Production and Reserves Using Horizontal Drilling Techniques
9. **University of Alabama** (DE-FC26-00BC15129) Improved Oil Recovery from Upper Jurassic Smackover Carbonates through the Application of Advanced Technologies at Womack Hill Oil Field, Choctaw and Clarke Counties, Eastern Gulf Coastal Plain

Basin Oriented Strategies for CO2 Enhanced Oil Recovery –Department of Energy – March 2005 This CD contains information on Oklahoma Fields

Greater Green River Basin Production Improvement Project – National Energy Technology Laboratory

DRILLING

Microhole Technology – Changing Your Perspective –National Energy Technology Laboratory

The Facts About Open Hole Drillstem Testing – Northstar Drillstem Testers Inc.

True Underbalanced Drilling with Coiled Tubing – BJ Services Company

MISCELLANEOUS

Oil and Gas Industry Software – National Energy Technology Laboratory May 2005

Abstracts – AAPG Annual Meeting, Calgary, Canada – June 2005

Newsletters – National Energy Technology Laboratory – May 2005 This CD contains various Department of Energy Newsletters from 1995 to Present

The Delaware FEE ("Fuzzy Expert Evaluation) Tool"– Reservoir Evaluation and Advanced Computational Technologies April 2005

GIS Solutions for Petroleum and Pipeline – ESRI Petroleum User Group

HDS 2000 The Ultimate Petrophysical Tool - Free Water Resistivity Solution Tool - HDS

Information on Software and Services – Digital Formation Software solutions for log analysis and log presentations

Software for Petroleum, Mining, Digitizing, Geology, GIS, CAD and Stats(Two Disc's) - Rockware

Courtesy of Bob Cowdery

GUIDELINES FOR MANUSCRIPT SUBMISSION TO KGS BULLETIN

Each issue of the Bulletin is published both as a hard copy and in electronic format on the KGS web site (http://www.kgslibrary.com). Most questions on formatting manuscripts for submission to the Bulletin can be answered by referring to recently published articles. The following topics also provide specific guide-lines to authors regarding manuscript preparation:

Cover Letter: include a cover letter with your submission that states: (i) that the manuscript has not been published elsewhere nor has it been submitted for publication elsewhere; and (ii) the name of the corresponding author in the case of multiple authors, and his/her contact information (e-mail address, fax and phone numbers).

Paper Length: maximum length of published papers is 5 Bulletin pages. As a general guide, double-spaced manuscript length (including text, references, all figures and/or tables & figure captions) should not exceed 7 pages of text and 2 full pages of figures and/or tables.

Color versus Black & White: All illustrations for the hard-copy of the Bulletin will be published only in black & white. Authors are encouraged to submit color versions of these same illustrations, however, for the on-line version of the Bulletin.

Organization:

- hard-copies of manuscripts ***and*** electronic versions of only the text (formatted in Word) must accompany each submission. Submitted manuscripts must be written in English;
- title should be in capital letters and centered. All first-order headings (e.g., INTRODUCTION, PURPOSE OF STUDY) should be centered and fully capitalized; second-order headings also should be centered, but only the first letter of each word should be capitalized (e.g., Previous Studies);
- manuscripts need not include an ABSTRACT, but must include INTRODUCTION and CONCLUSIONS sections;
- in referring to figures outside of parentheses in the text, use the full word – e.g*., Figure 1*. In referring to figures within parentheses in the text, abbreviate the word – *(Fig. 1; Figs. 1 & 2)*;. Figure captions must be included with manuscripts and be on a page separate from actual figures. They should be written as, for example*: FIG. 1. Location of study area in…*
- text reference to published papers should be abbreviated as: (i) two authors -- *Smith & Jones (1969*) *or (Smith & Jones 1969)*; and (ii) more than two authors – *Smith et al. (1969)* or *(Smith et al. 1969*). In the text and REFERENCES section, cite references in terms of date from oldest to youngest. In a REFERENCES section, follow citation style as in published articles in the Bulletin. Full references must be cited, including authors' names with initials only, date of publication, title of paper, where the paper was published (e.g., *AAPG Bull*.), volume number, and pages;
- prepare figures or tables so that all lettering is legible if the figure or table is reduced; avoid "crowded" figures/tables. Put each figure/table on a separate page and include the figure/table number in the upper-right corner of that page.
- interesting black & white images from your paper or study area that can be used for the hard-copy cover of the Bulletin, and the same image but in color for the digital version, are encouraged.

Policy on Reprints and Copyright Ownership of Published Papers: the KGS Bulletin can not at this time arrange for or otherwise provide reprints of papers published in the Bulletin. Unless indicated otherwise, however, ownership of the copyright of published papers is retained by the author(s).

Send manuscripts to: Dr. Sal Mazzullo, Bulletin Technical Editor, Department of Geology, Wichita State University, Wichita, KS 67260

Kansas Geological Society & Library
212 North Market, Suite 100
Wichita, Kansas 67202

PRSRT STD
US POSTAGE
PAID
WICHITA KS
PERMIT NO 923

KGS BULLETIN
September-October 2005

September 2005

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5 Library Closed	6	7	8 TECH TALK TBA	9	10
11 MID CONT. AAPG	12 MID CONT. AAPG	13 MID CONT. AAPG	14 SEG BOB MILLER GSK TALK PG. 41	15	16 SIPES-KGS MIKE POLLOK & MIKE AUSTIN	17
18	19	20	21	22 TECH TALK TBA	23	24
25	26	27	28	29	30	

October 2005

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4 KGS ANNUAL SHOOT. TOURN.	5	6	7	8
9	10	11	12	13 TECH TALK DOUG STRICLAND	14	15
16	17	18	19 TECH TALK KEN WARREN	20	21	22
23	24	25	26	27 TECH TALK TBA	28	29
30	31					