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IN THIS ISSUE

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ON THE COVER

Sand dunes at Great Sand Dunes National Monument, with Sangre De Cristo mountains in the background. Courtesy of Sal Mazzullo. (For more information go to: http://www.nps.gov/grsa)

Share your photos (See page 25 for details)

A. A. P. G. Delegates

Ernie Morrison 2008
Robert Cowdery 2006
Alan DeGood 2006

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KANSAS GEOLOGICAL SOCIETY TECHNICAL PROGRAMS

NO TECHNICAL MEETINGS WILL BE HELD DURING THE SUMMER
WE WILL RESUME TALKS ON SEPTEMBER 8TH

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.

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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

Our thanks go to Bob Cowdery for planning the May 11 ethics discussion, to Phil Knighton for chairing the panel, and Jon Callen and Dr. John Gries for participating on it. The discussion was productive and pointed up the need for KGS to promote and enforce ethics among its members. It was stated that the proper process is to document violations, and to bring these to the Board of Directors for action. Careful documentation minimizes legal retaliation, and it is up to the Board to discipline members. Many of us have seen "boom" times before, and today's oil and gas prices are another one. Inevitably such periods bring undesirables into the industry and it is up to us geoscientists to police our professional societies. We all have a duty here

The Kansas State Board of Education held their evolution "hearings", and because no scientific credentials were present or required, the scientific community boycotted them. In a strange way, it seems almost proper that testimony presented was by lawyers on both sides...proper because the overriding issue is Constitutional, and will ultimately be decided by the courts.

George Will, writing in the May 23 "Newsweek" said: "America is currently awash in an unpleasant surplus of clanging, clashing certitudes". That is why there is a rhetorical bitterness absurdly disproportionate to our real differences. It has been well said that the spirit of liberty is the spirit of not being too sure you are right. One way to immunize ourselves against misplaced certitude is to contemplate - even savor - the unfathomable strangeness of everything, including ourselves. Geologist Marcia Bjornerud, in her book "Reading the Rocks...The Autobiography of the Earth", puts it in perspective: "Arms races in the geologic record always end, but never with victors. Instead, an external referee - a meteorite, an ice age, a methane belch - abruptly changes the criteria for fitness, and all the elaborate armaments and defenses so assiduously stockpiled become as useless as a credit card in the wilderness. Then it is a matter of finding new uses for the specialized machinery developed under the old regime."...unfathomable strangeness, indeed!

——Alfred James, III

Kansas Oil Museums

Hill City Oil Museum

Hill City Oil Museum in Graham County is 12 miles east of Morland. Located beneath an oil derrick on west Highway 24 in Hill City, the museum tells the story of oil from deep formations in northwest Kansas. This Kansas museum opened in May 1958.

Kansas Oil Museum
Director Becky Matticks notes that The Kansas Oil Museum and Hall of Fame, Butler County Historical Society, in El Dorado has artifacts from the first "scientifically discovered" oil wells, which drew the new petroleum geologists who were learning about anticlines and traps and ancient sea beds. Three million years ago the Mid-Continent was in the middle of an ocean.

Norman No. 1 Museum

In eastern Kansas,, the Norman No. 1 Museum at Neodesha is smallest oil museum in the state. The 1892 discovery well is among the nation's earliest. Norman No. 1 Museum, a small indoor and outdoor collection of exhibits that include a replica of the first oil well west of the Mississippi. It is located at First and Main streets in Neodesha.

Oil Patch Museum

The Oil Patch Museum tells the story through the Russell County Historical Society, 331 Kansas Street in Russell. The related Fossil Station Museum, built in 1907, was originally the sheriff's office and county jail. It now houses many artifacts from the early history of Russell County.

Stevens County Gas & Historical Museum

The Stevens County Gas and Historical Museum was established in May 1961 to preserve the heritage of the Hugoton Gas Field and the progressive development of Stevens County. One natural gas well drilled in 1945 is still producing. Well equipment is also on display at the site. It was dedicated on May 16, 1961, "as a memento of the Hugoton Gas Field and the progressive development of Stevens County."

The Kansas Oil & Gas & Hall of Fame Museum

Located on 10th Street past Patton Road in Great Bend, the museum was founded in 1990 by a group interested in preserving the history of the oil and gas industry. The main building of the museum displays various phases of the oil and gas industry, including geology, drilling, well completion, production, refining, and products manufacture with oil. This building also houses the Hall of Fame with biographies and pictures of inductees.

Courtesy of Bob Cowdery

EDITOR'S LETTER

I would like to thank Wes Hansen for this opportunity to serve as editor of the KGS Bulletin. His shoes will be hard to fill, but I plan to do my best. For those of you who have no clue who I am, let me introduce myself. I have been a member of the Kansas Geological Society since 1997, when I was a new geology major at Wichita State University. I've since finished my masters (2002) in geology, and have been working as a petroleum geologist with Woolsey Operating Company for the last two years. I am excited to be a part the Kansas Geological Society for I believe it is a great tool for sharing information and networking within the geological community. I invite anyone who has any suggestions, information, or comments for the bulletin to contact me at: kdw11@cox.net. I will be calling on people to submit technical papers. I know we enjoy Sal Mazzulllo's articles, but I'm sure he would like a break.

Sincerely,
Kimberly Dimmick-Wells

FROM THE MANAGER'S DESK

Dear Members,

Summer at the KGS Library has been very busy indeed! The girls are filling orders like crazy and we are getting new data coming in the door processed and into the files.

We had a wonderful day this year for the KGS Golf Tournament. We had around 110 golfers and in spite of all the rain, it turned out to be a wonderful day on the course. Well there was a little high water in areas (see photos on page **32**.)

We also have finished the scanning project with Net Impact Software, as the funds have been depleted. This has been an enormous project and we kind of got used to having the "scanner guys" around for the past several years. Now they have moved on to other projects and we have once again rearranged the space in the back that they were using. We had a little *"moving the wall"* party a few Thursday nights ago and I want to thank everyone involved: Marj Crane, Sal Mazzullo, Chellie Mazzullo, Ted Jochems, Larry Friend, Paul Ramondetta, Alan Heckel and my husband, Geoff Radford and a colleague of his from Japan, Shinji. Also, prior to moving the wall, Marj Crane, David Bayer & myself worked to clean and dismantle the work stations. Nothing like getting dirty together! And, I want to thank Trenton for finishing the wall for us.

Now we are ready to paint and soon we will have a nice new fresh look! Thanks to all of you.

Our next event this year will be the **KGS Annual Picnic on Friday, August 12th.** Please gather the kids, grandkids, or friends and come join in a fun evening of Bingo, good food and drink and activities for all ages!

Respectfully submitted,
Rebecca Radford

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A Thank-You Note

Thank You to **Reid Atkins of Mud-Co** and **Kim Shoemaker** for going out of their way to bring a donation of data into the library for the Kansas Geological Foundation. The donation was in Oberlin, Kansas and we were having trouble finding a way to get it to Wichita. Thanks gentlemen!

— Rebecca

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OUTCROP OF THE INDIAN CAVE SANDSTONE (LOWER PERMIAN) IN GREENWOOD COUNTY, KANSAS

S. J. Mazzullo [1] Ted McHenry[2], Tyler Sanders[2], Chellie Teal-Mazzullo[2], Brian Wilhite[3] and Marjorie Crane[1]

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INTRODUCTION

What commonly has been referred to as the Indian Cave Sandstone is a locally prolific, shallow-buried reservoir that in Kansas produces mostly along the southern part of the Nemaha Uplift and in the transitional zone between the western Sedgwick Basin and eastern Central Kansas Uplift-Pratt Anticline area (Fig. 1). Most such Indian Cave reservoirs produce natural gas with some associated oil and condensate, and total cumulative production is in excess of 108 BCF (Campbell et al. 1988; Brown 1993). Comprising part of this total production, the Arkansas City Gas field area in Cowley County, for example, has produced 4.95 BCF, and Vetter field in adjoining Chase and Marion Counties has produced 953 MMCF from one sand each in the Admire (referred to as Indian Cave) and Wabaunsee Groups (production data from Kansas Geological Survey). Wilde and Diamond Creek fields in adjoining Morris and Chase Counties have produced 7.5 BCF and 718 MMCF, respectively, from the presumed Indian Cave Sandstone and deeper sandstones (data also from Kansas Geological Survey), so exactly how much produced gas is attributed to the Indian Cave is not certain. In contrast, mostly oil also is produced locally from what is considered by some workers (e.g., Campbell et al. 1988) to be the Indian Cave Sandstone. At El Dorado field in Butler County on the Nemaha Uplift, for example, at least 36 MMBO has been produced from such sands (Campbell et al. 1988).

The type locality of the Indian Cave is in southeastern Nebraska (Moore 1936), and outcrops are present sporadically there (e.g., Harding 1951), in Kansas (Merriam 1963), and in north-central Oklahoma (Campbell et al. 1988). An excellent locality close to Wichita at which to examine what has been referred to as the Indian Cave Sandstone is along a cliff adjoining the South Branch of Otter Creek, in the W/2 SE/4 Section 11 T28S-R9E, to the immediate west of the town of Piedmont in SW Greenwood County (Fig. 1). Here, approximately 60 feet of section are well exposed and fairly

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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.

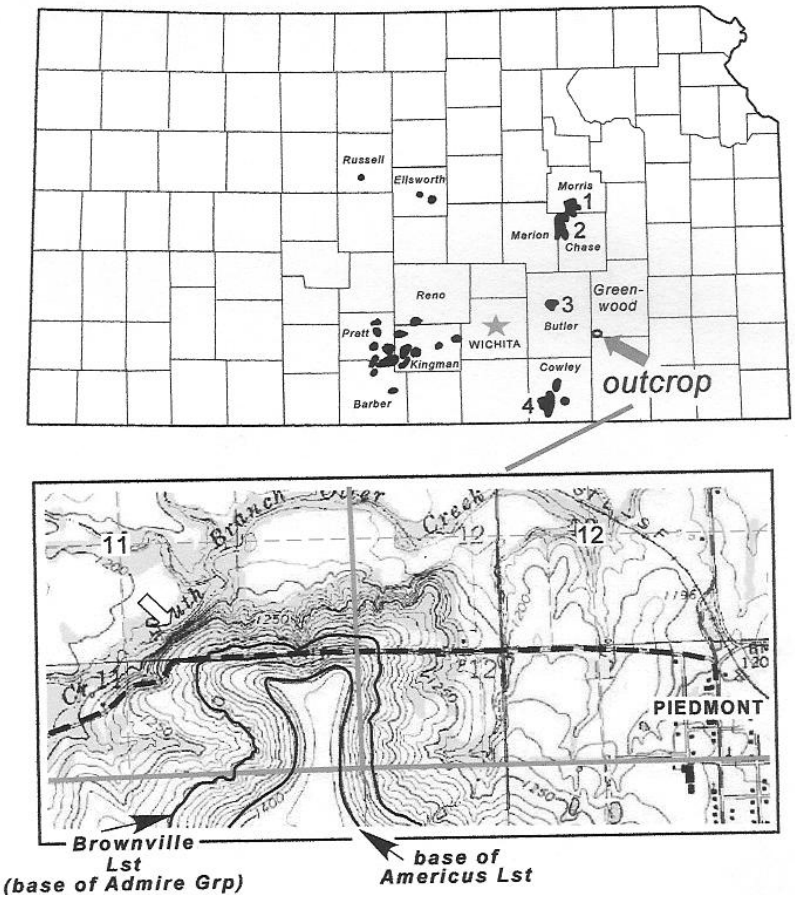

Fig. 1. Top diagram – locations of fields in Kansas that presumably produce from what has been referred to as the Indian Cave Sandstone (modified from Campbell et al. 1988 and Parham 1993). Specific fields mentioned in text are: 1 - Wilde, 2 - Diamond Creek and Vetter, 3 - El Dorado, and 4 - Arkansas City gas area. Bottom diagram – location of outcrop (arrow) in southwestern Greenwood County (11-28S-9E) near the town of Piedmont, and geologic map of the area (from Merriam, 1999). The base of the sandstone along the cliff is at the 1200 ft elevation contour, and its top is at 1260 ft.

accessible for study. The purpose of this paper is to describe this outcrop as one possible field example that illustrates some important aspects of Indian Cave reservoirs in the subsurface. This paper represents continuing field studies of the Indian Cave by the authors, and additional reports on the unit will be forthcoming as our studies progress.

STRATIGRAPHIC POSITION OF THE INDIAN CAVE

The Indian Cave Sandstone sensu stricto is assigned to the Towle Shale Member of the Onaga Formation (Zeller 1968), which is the lowest unit within the Admire Group (Fig. 2) and which currently is regarded as Lower Permian Wolfcampian (Baars & Maples 1998). Although many of the shallow-buried, presumed Admire sandstones in gas fields in Kansas (Fig. 1) have been referred to as Indian Cave (e.g., Campbell et al. 1988; Brown 1993), it is clear that many of these fields actually produce from sands that are stratigraphically higher or lower than the Indian Cave sensu stricto. Bayne (1962, p. 35), for example, believed that gas sands in some fields in Cowley County produce from lower Admire beds slightly younger than the Indian Cave (i.e., in the Hawxby Shale – Fig. 2). My correlations in this area (Fig. 3A) show that gas has been produced from a number of different

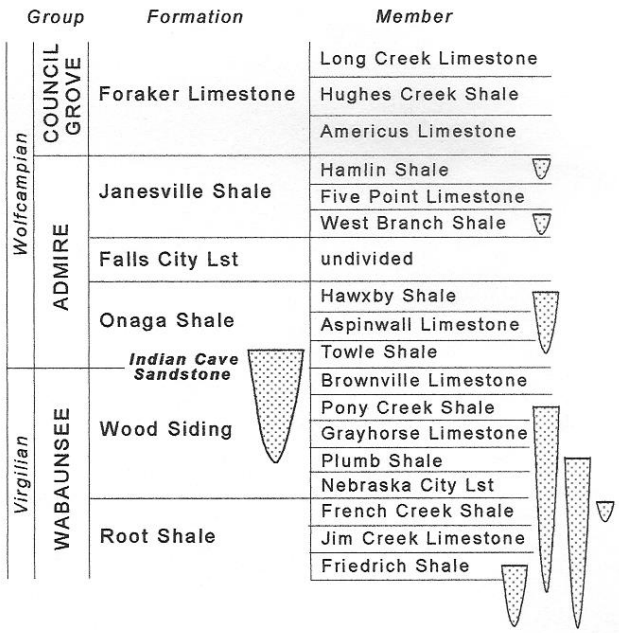

Fig. 2. Stratigraphy of Pennsylvanian-Permian boundary strata in Kansas (from Zeller 1968), and currently-recognized Permo-Penn boundary (from Baars & Maples 1998). The Indian Cave Sandstone is within the Towle Shale. Other channel-like sands that locally are present in the section (see fig. 2 in Mudge 1956) are shown along the right side of the diagram.

sands within the Admire and upper Wabaunsee Groups, including the Indian Cave Sandstone sensu stricto (that is, within at least the Onaga Shale if not in the Towle Shale Member). Whereas productive sands in the El Dorado field were considered by Biedermann (1986) and Tillman & Jordan (1987) to be within the Admire Group, based on log correlations they actually appear to be in the underlying Wabauansee Group stratigraphically below the Admire Group (Fig. 3B). Although the latter authors specifically referred to the producing section in the field as the "Admire 650-ft sand", neither they nor Biederman (1986) actually specified that the sands are Indian Cave. In fact, there are many areally discontinuous, channel-like sandstones across the Pennsylvanian-Permian boundary within the Wabaunsee and Admire Groups (Fig. 2) (Mudge 1956; Mudge & Yochelson 1962; Zeller 1968) that, according to Paul & Beene (1985), in many instances have incorrectly been regarded as Indian Cave. Hence, the "Indian Cave" appears to be a catch-all stratigraphic term that has been used rather loosely in reference to various sands at different stratigraphic levels within the Admire and upper Wabaunsee Groups.

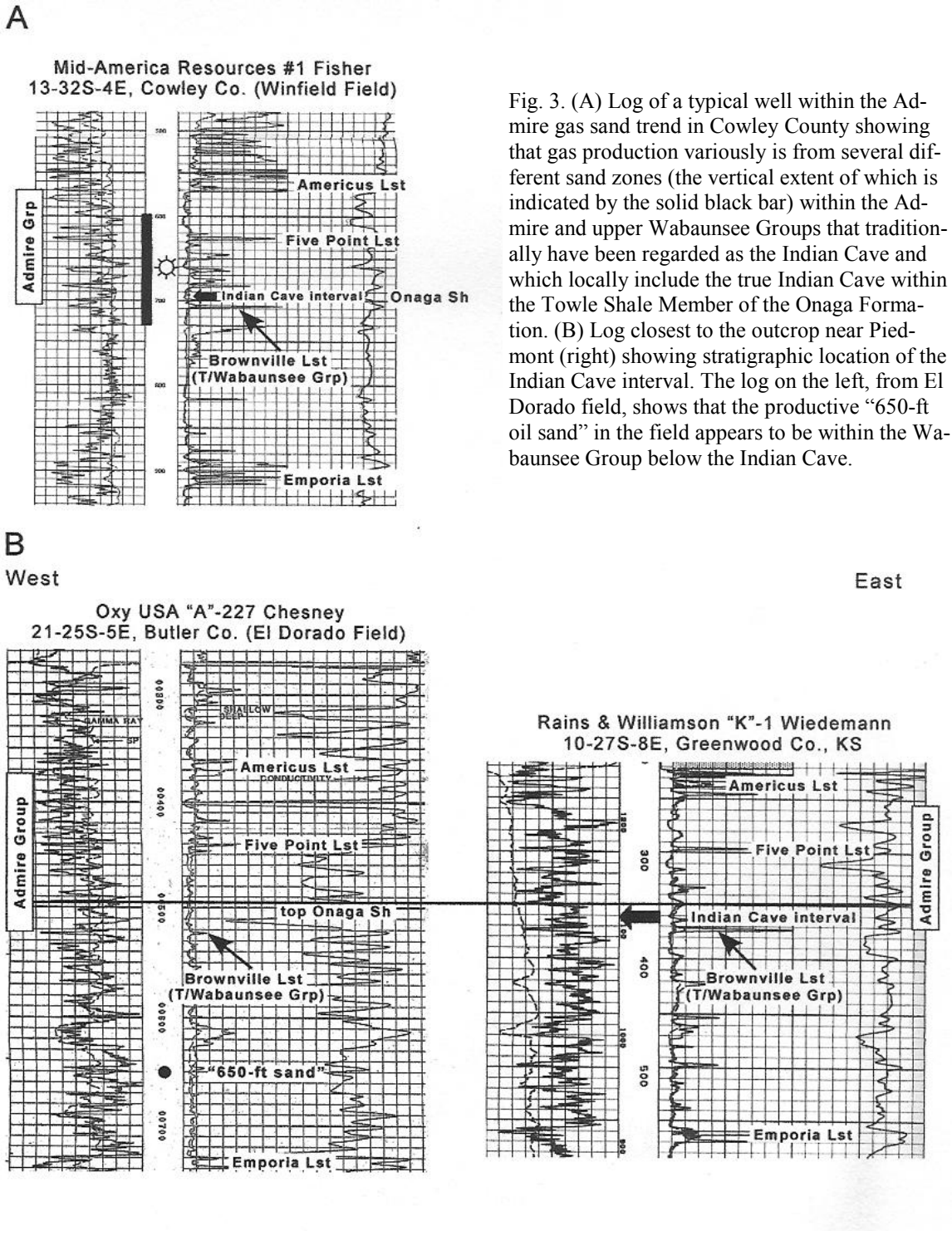

Fig. 3. (A) Log of a typical well within the Admire gas sand trend in Cowley County showing that gas production variously is from several different sand zones (the vertical extent of which is indicated by the solid black bar) within the Admire and upper Wabaunsee Groups that traditionally have been regarded as the Indian Cave and which locally include the true Indian Cave within the Towle Shale Member of the Onaga Formation. (B) Log closest to the outcrop near Piedmont (right) showing stratigraphic location of the Indian Cave interval. The log on the left, from El Dorado field, shows that the productive "650-ft oil sand" in the field appears to be within the Wabaunsee Group below the Indian Cave.

DEPOSITIONAL FACIES OF THE INDIAN CAVE

Whether Indian Cave sensu stricto or not, productive sands in oil and/or gas fields in Pennsylvanian-Permian boundary strata in Kansas mainly are stratigraphic traps (Campbell et al. 1988). In a detailed paleofacies study based on cores, for example, Tillman and Jordan (1987) described the "650-ft sand" in El Dorado field, which as stated above appears to be within the Wabaunsee Group, as comprising deltaic facies that include productive distributary-channel sandstones and associated lignite swamp deposits and interdistributary bay silty to sandy shale and thin limestone. In contrast, according to Biederman (1986), whose study was based on comparison to Holocene deposits in the German sector of the North Sea, productive sandstones and associated rocks here instead represent tidal channel and tidal-flat deposits. Based on typical aerial dimensions of oil or gas fields in Kansas (Fig. 1), it appears that many of the Indian Cave sandstone reservoirs dominantly represent deposits of fluvial and/or fluvial-deltaic origin (e.g., Mudge & Yochelson 1962; Campbell et al. 1988; Richardson 1985; Parham 1993). Ossian (1974) likewise interpreted the Indian Cave exposed in southeastern Nebraska to be of deltaic origin.

OUTCROP STRATIGRAPHY AND FACIES OF THE INDIAN CAVE SANDSTONE

The section exposed just west of Piedmont (Fig. 1) includes ~60 ft of what has been referred to as the Indian Cave Sandstone (e.g., Crouch 1962). According to Merriam's (1999) geologic map of Greenwood County, the Brownville Limestone (top of Wabaunsee Group) is sporadically exposed locally along the E-W road that runs across the hill to the north of the cliff outcrop along the South Branch of Otter Creek, and on the slope to the immediate north of the road, and closely follows the 1300 to 1310 ft elevation contours (Fig. 1). If this map is correct, as our field work in this area suggests, then the sandstone exposed along South Otter Creek appears not to be within the Towle Shale Member of the Onaga Formation (Fig. 2), or even within the Admire Group at all. We suggest such because the base of the sandstone exposure at creek level is at an elevation of 1200 ft and the sandstone is ~60 ft thick, which therefore places its top at an elevation of about 1260 ft – which is approximately 40 ft or so below the Brownville Limestone. Hence, the sandstone appears to be within the upper part of the Wabaunsee Group, seemingly within the Pony Creek Shale, and therefore, it would not be the Indian Cave sensu stricto. Mudge (1956) and later workers indicated that incised sandstones are, in fact, present locally throughout Kansas in the Pony Creek Shale (Fig. 2). Instead, Crouch (1962) believed that the sandstone at this outcrop is within the Towle Shale based on his

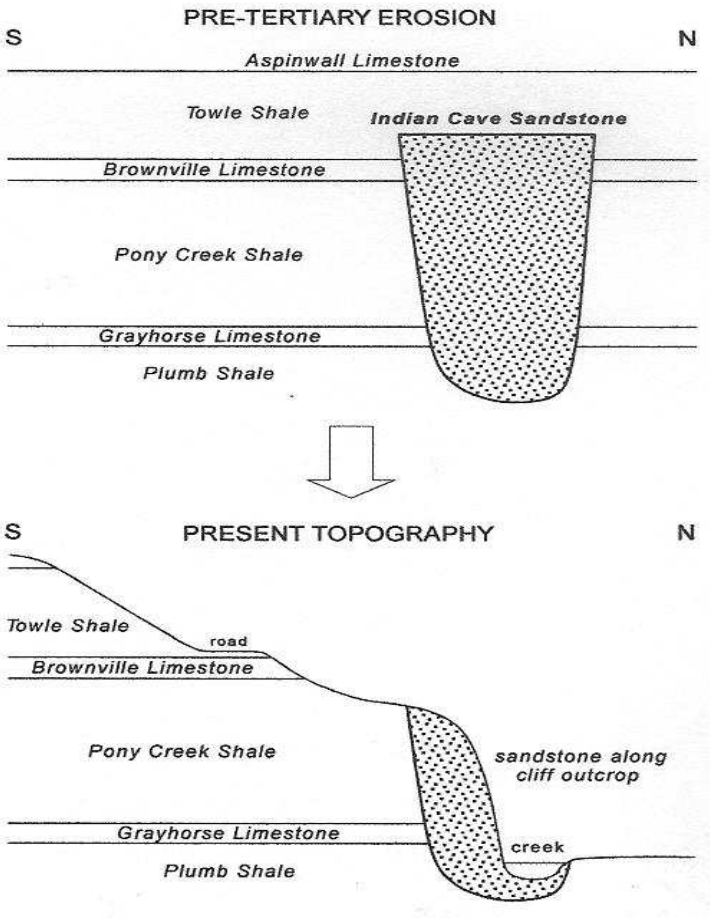

Fig. 4. Scenario whereby the presumed Indian Cave Sandstone at the outcrop described could be within the Towle Shale. The sand could have originated within the Towle and incised downward into subjacent units (top diagram), and then Tertiary erosion resulted in only a remnant of the sand that appears to be below the Brownville Limestone and within the Pony Creek Shale (bottom diagram). If this scenario is correct, then thickness and amount of incisement of the sand would be greater than what is preserved and currently exposed.

identification that the limestone exposed along the 1300-1310 ft elevation contour is in the lower part of the Americus Limestone. We do not agree with this identification because not only is this distinctive yellow-orange weathering limestone that is exposed here typical Brownville lithology, but a similar colored rock is not present in the lower part of the Americus or in the upper part of the subjacent Hamlin Shale in the nearby, well-exposed outcrops of the Americus along US 400 (K-96) in the NE SE Sec 4 T28S R9E. Yet, inasmuch as field relations between the sandstone and surrounding strata are less than readily obvious in the area of sandstone outcrop along South Otter Creek because of limited exposures, we can in fact envision a scenario wherein the sandstone actually may be within the Towle Shale rather than in the Pony Creek Shale (Fig. 4). At this time, however, we can not resolve the exact stratigraphic position of the sandstone.

Regardless, we describe the ~60 ft of sandstone exposed along the cliff (Fig. 5) as follows:

Unit F - 23 feet of poorly exposed, fine to medium grained, porous, tan sandstone, micaceous, thin-bedded (platy), overlain by 16 ft of mostly concealed, thin-bedded (platy) sandstone, micaceous, unfossiliferous. This unit seemingly is overlain by either the Pony Creek or Towle Shale.
Unit E - 5 ft of trough cross-stratifield, micaceous sandstone (dune bedforms, with uniform SW dip of cross-strata) as in Unit B.
Unit D - a 5'4" bed of tan sandstone, porous, fine to medium grained, micaceous, with orange limonite specks on fresh surfaces. The bed is mainly horizontally laminated (plane beds – upper flow regime?), but locally has lenses with climbing ripples and planar cross-stratified dune bedforms (see inset, Fig. 5), the latter with uniform SW dip of cross-strata.
Unit C - is a facies equivalent of Units B-2, B-3, and B-4. The top 13" is equivalent to Unit B-4 and consists of inter-laminated sandstone (fine to medium grained, porous, micaceous) and black, very micaceous, paper-thin shale with small, carbonized wood fragments. These are inferred slackwater-event deposits or distal levee deposits. The underlying 6" is a trough cross-stratified dune bedform that's 5 ft long on the outcrop (uniform SW dip of cross-strata); this bedform passes laterally into, and is underlain by 17" of, horizontally laminated tan sandstone, porous, micaceous, fine to medium grained interpreted as proximal levee deposits. The base of Unit C = the base of Unit B-2.
Unit B - consists of four sub-units:

B-4 -- 12"-thick lens of light brown sandstone, porous, slightly more micaceous than below, fine grained, conspicuous by its ripple-drift cross-stratification, the individual sets separated by very micaceous, paper-thin black shales. Inferred distal levee deposits or ripples superposed on dune bedforms during waning flood stages (i.e., slackwater-event deposits).
B-3 -- 27"-thick bed of light brown sandstone, porous, micaceous, fine to medium grained, trough cross-stratified (inferred dune bedform) with uniform SW dip of cross-strata.
B-2 -- 26"-thick bed of light brown, fine to medium grained sandstone, porous, micaceous, trough cross-stratified (uniform SW dip of cross-strata). The bed thins to 14" thick to the east along the outcrop by depositional thinning of a dune bedform. The basal 1.5-2" of this unit locally contains round-pebble sandstone clasts (diameter 1" or less), which indicates that the unit has an erosional base.
B-1 (basal unit) -- 22"-thick bed of light brown sandstone, porous, slightly finer-grained than Unit A, micaceous, trough cross-stratified (uniform SW dip of cross-strata). Interpreted as a dune bedform, and it thickens slightly to the east along the outcrop as it erodes into underlying unit A.

Unit A - 38"-thick bed. The basal 34" is slightly greenish medium brown sandstone, porous, medium grained, very slightly micaceous, trough cross-stratified (uniform SW dip of cross-strata); base not exposed along the outcrop. The top 4" is inter-laminated sandstone (same color and texture) and carbonaceous black shale (sands are ~1 mm thick, the shales are paper-thin), both very micaceous; and the sandstone is porous; this unit is interpreted as either slackwater-event deposits or distal levee deposits

The characteristic sedimentary features of the section, such as: (1) multi-stored architecture of superposed units, (2) presence and dominance of planar and trough cross-stratified sets that mostly represent dune bedforms (inset, Fig. 5), (3) the erosional bases of most superposed cross-stratified units, (3) presence of upper-flow regime plane beds, (5) possible presence of levee and floodplain deposits, (6) apparent slack-water deposits directly overlying high-energy flow regime events, and (7) the uniform southwest direction of dip of cross-strata within dune bedforms, are typical of many ancient incised-valley fluvial deposits (e.g., Cant 1982; and papers in Dalrymple et al. 1994). There is no evidence of upward transition from fluvial to estuarine deposits, although the true top of the sandstone may not be present at the outcrop (e.g., Fig. 4). The apparent amount of incisement of the

sandstone is 60 ft, although sand thickness and amount of incisement could have been greater prior to Tertiary erosion (Fig. 4). According to Mudge & Yochelson (1962), typical Indian Cave sands are incised from 8-85 ft into underlying deposits and channels are 300 ft to 1 mile wide. According to Harned & Chelikowky (1945), such incised-channel sandstones locally are as much as 100 ft thick. The sandstones are poorly consolidated and have high interparticle porosity. Yet, the ubiquitous presence of detrital mica in the rocks a would result in a gamma-ray log character that appears shaly, and if thicker beds of associated micaeous black shales were present they would be manifested as high-gamma spikes on such logs. Likewise, the mica in the rocks almost certainly would affect the calculated resistivity of the section by possibly indicating a higher degree of water saturation than otherwise may be present.

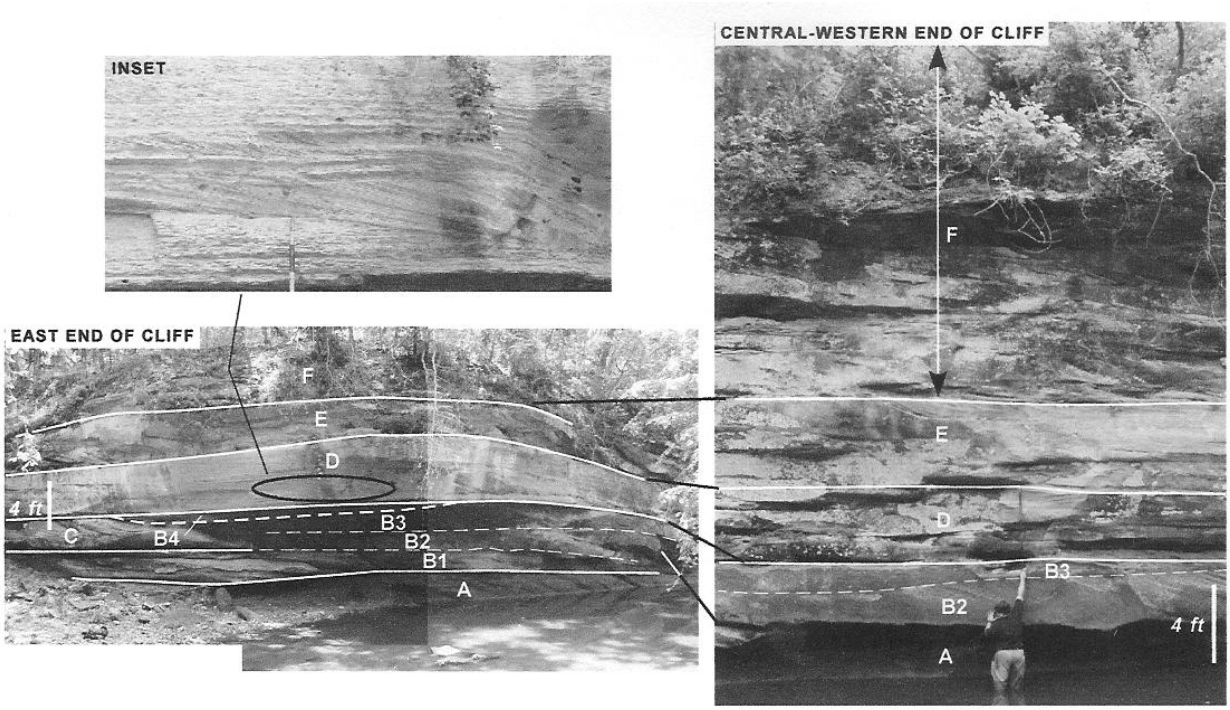

Fig 5. Outcrop photos of the Indian Cave Sandstone, with letter-designated units as described in the text.

CONCLUSIONS

The characteristic sedimentological features of the sandstone section exposed in the study area, including the steep-wall channel (Figure 4) that the sandstones have filled, suggest that the unit represents incised valley-fill deposits. Such a channel was eroded during a sea-level lowstand, and the sandstones filled the channel during the early stages of ensuing sea-level rise. Whether the sandstones are Indian Cave sensu stricto or slightly older (e.g., within the Pony Creek Shale) is uncertain. Such deposits locally are oil and gas reservoirs in the subsurface of Kansas (and Oklahoma), and they are the updip components of depositional systems that include associated downdip deltaic deposits that also are locally productive.

REFERENCES

Baars, D.L. & Maples, C.G., 1998, Lexicon of Geologic Names of Kansas (through 1995); Kansas Geol. Survey, Bull. 231, 271 p.

Bayne, C.K., 1962, Geology and Ground-Water Resources of Cowley County, Kansas; Kansas Geol. Survey, Bull. 158, 219 p.

Biederman, E.W., 1986, Atlas of Selected Oil and Gas Reservoir Rocks From North America; John Wiley & Sons, p. 75-87.

Brown, R.L., 1993, Introduction to Pennsylvanian plays, in Bebout, D.G., White, W.A., Hentz, T.F. & Grasmick, M.K., eds., Atlas of Major Midcontinent Gas Reservoirs; Gas Research Institute (coordinated by Bureau Economic Geology, Univ. of Texas-Austin), p. 15-18.

Campbell, J.A., Mankin, C.J., Schwarzkopf, A.B. & Raymer, J.H., 1988, Habitat of petroleum in Permian rocks of the midcontinent region, in W.A. Morgan and J.A. Babcock, eds., Permian Rocks of the Midcontinent; Midcontinent SEPM, Spec. Publ. 1, p. 13-35.

Cant, D.J., 1982, Fluvial facies models and their application, in Scholle, P.A. & Spearing, D., eds., Sandstone Depositional Environments; AAPG Mem. 31, p. 115-137.

Crouch, T., 1962, Traverse through Lower Permian and Upper Pennsylvanian strata in southwest Greenwood County; unpublished report to Geology Dept., WSU, 14 pp.

Dalrymple, R.W., Boyd, R., Zaitlin, B.A., eds., 1994, Incised-Valley Systems: Origin and Sedimentary Sequences; SEPM Spec. Publ. 51, 391 pp.

Harding, K.S., 1951, The stratigraphy and lithology of the Indian Cave Sandstone in southeastern Nebraska and northeastern Kansas; MS thesis, University of Nebraska-Lincoln, 55 pp.

Harned, C.H. & Chelikowsky, J.R., 1945, The stratigraphic range of the Pennsylvanian-Permian disconformity in Pottawatomie County, Kansas; Kansas Acad. Sci. Trans., v. 48, p. 355-358.

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

Merriam, D.F., 1999, Geologic map, Greenwood County, Kansas; Kansas Geol. Survey, Map M–50.

Moore, R.C., 1936, Pennsylvanian and Lower "Permian" rocks of the Kansas-Missouri region; Kansas Geol. Soc. Guidebook, 10th ann. Field conf., p. 12.

Mudge, M.R., 1956, Sandstones and channels in Upper Pennsylvanian and Lower Permian in Kansas; AAPG Bull., v. 40, p. 654-678.

Mudge, M.R. & Yochelson, E.L., 1962, Stratigraphy and paleontology of the uppermost Pennsylvanian and lowermost Permian rocks in Kansas; U.S. Geol. Survey, Prof. Paper 323, 213 pp.

Ossian, C.R., 1974, Paleontology, paleobotany and facies characteristics of a Pennsylvanian delta in southeastern Nebraska; PhD dissertation, University of Texas-Austin, 393 pp.

Parham, K.D., 1993, Virgilian fluvial-deltaic sandstone - Sedgwick Basin, Kansas, in Bebout, D.G., White, W.A., Hentz, T.F. & Grasmick, M.K., eds., Atlas of Major Midcontinent Gas Reservoirs; Gas Research Institute (coordinated by Bureau Economic Geology, Univ. of Texas-Austin), p. 25-27.

Paul, S.E. & Beene, D.L., 1985, Oil and gas production in Kansas; Kansas Geol. Survey, Energy Res. Series 25, 246 pp.

Richardson, L.J., 1985, Komarek field, in Kansas Oil and Gas Fields; Kansas Geological Society, v. 5, p. 141-147.

Tillman, R.W. & Jordan, D.W., 1987, Sedimentology and subsurface geology of deltaic facies, Admire 650' sandstone, El Dorado field, Kansas, in R.W. Tillman & K.W. Weber, eds., Reservoir Sedimentology; SEPM Spec. Publ. 40, p. 221-291.

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 39

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Established in June 2005, the members of the Executive Committee are pleased to announce the formation of a society of geoscientists dedicated primarily:

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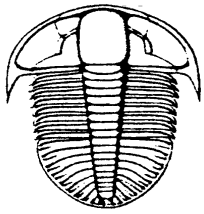

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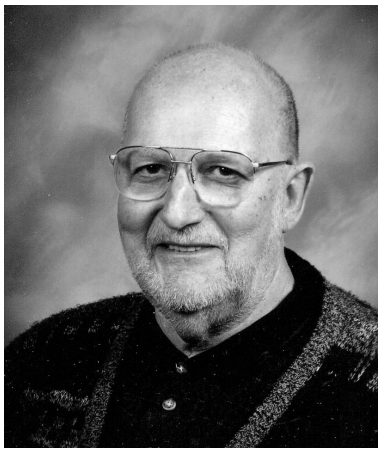

With the death of Wayne Brinegar on June 8, 2005, the industry lost one of its most prominent and in the past, one of its most active individuals. The profession lost a man who had served it well including s term as President of the Kansas Geological Society in 1970.

Wayne was born in Fredonia, Kansas in February 1928 where his father operated a company that had cable tools that drilled all over Eastern Kansas. The "depression" of the thirties put his father out of business and his mother died when Wayne was only four years old. As a result of these circumstances Wayne was raised by an aunt and uncle who owned a drug store in Fredonia. His only sibling, a sister, died in 1997.

All of his schooling was in Fredonia culminating in his graduation from Fredonia High School in 1946. In August of that year he enlisted in the U. S. Army and was assigned to the Corp of Engineers and served until he was discharged in 1948. Overseas service included the Philippines, Okinawa, and the Amani O'Shina Islands.

With a background in the "oil business" and having been involved with topographic mapping in the service, Wayne made the decision to enroll as a geology major at Wichita University. Wayne graduated from Wichita University in 1952. While at the university he had worked for Pure Oil Co. as a draftsman and after graduation he went to work for Pure as an exploration geologist.

In 1953, Wayne married Frances D. Powers, daughter of Delmer and Frances Powers. Delmer was one of the early prominent consulting geologists in Kansas. Wayne and Frances have two daughters: Frances Louise and Deborah who along with their mother are survivors.

Wayne joined K & E Inc. in 1955 where he was to work until his retirement in 1995. At K & E he started primarily as a field and wellsite geologist, but later he was in part responsible for directing the drilling, completion, and production activities of the company. Later K & E was sold to its employees, Paul Jennings, Jim Downing, Glen Gamble and Wayne. They operated the company until it was sold in 1953

Wayne has always been very active in community activities, serving on the City and County Planning Commission and the Traffic Commission. He was also a member and Past- President of two CPO Councils At St. James Episcopal Church, he has served on the Vestry and as Senior Warden. He was also a founding member of St. James Trust, a philanthropic entity of the church.

In the past, Wayne devoted a considerable amount of time serving the Episcopal Social Services (Venture House) where he was board member, President and volunteer. In addition, he has worked with the Girl Scouts, Old Cowtown, and Positive Directions as well as other groups.

As previously noted, Wayne served as President of the Kansas Geological Society where he was a 50-year member. He has also served in several capacities with the American Association of Petroleum Geologists, an organization that he joined in 1954.

When interviewed several years ago, Wayne said that he would still be a Petroleum Geologist if he had it to do over, but that he also enjoyed some of the engineering aspects of his career.

Services were held for Wayne at St, James on Monday, June 13, 2005. A memorial has been established with Kansas Geological Foundation.

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. To find out more geological history go to: www.utahmountainbiking.com/goodies/geology/sanrafael.htm

Memorial: James 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.

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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:

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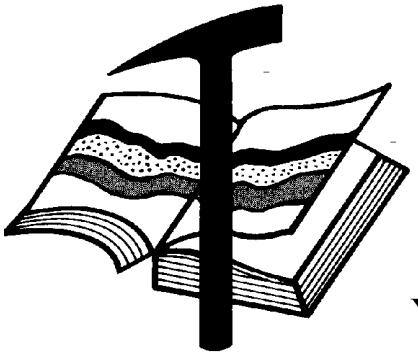

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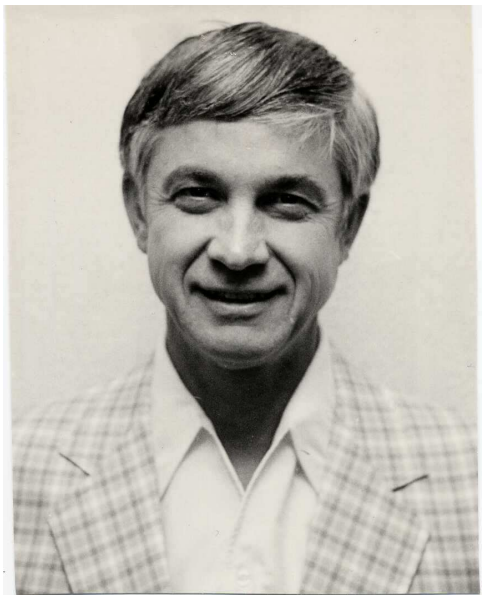
MEMBER PROFILE: Dean Seeber



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 inde-

pendent 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.

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A Visit to the Hutchinson Storage Facility

Bob Williams of Imperial Oil Properties, Inc., arranged a tour of the Underground Vaults & Storage facility in Hutchinson, Kansas on April 22nd. Fred James, Ted Jochems, Rebecca Radford, Bob Williams & Bob's son took a fascinating tour of this underground storage facility which has a natural environment of 68^0 constant temperature and 40% humidity. The Kansas Geological Society was interested in touring this facility in order to consider using storage space for some of the document overflow of the library.

Courtesy of Rebecca Radford

2005 KGS Annual Golf Tournament

Bill Shepherd and team enjoying the lucky break in the weather for the tournament.

“Golf dog” enjoys a much needed break from the storms.

Despite obstacles due to the abundance of rain, the tournament went as planned.

Brian Wilhite receives his award from John T.

Phil Knighton (did it land in the sand Phil?)

Orvie Howell and team after a wonderful day.

2004 KGS GOLF TOURNAMENT

The Kansas Geological Society wishes to express our thanks to the following companies and individuals who made this golf tournament possible:

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KGS Fishing Tournament 2005

The KGS Fishing Tournament was held on May 20th at the Kingman State Fishing Lake. We had 15 fishermen this year with nearly everyone winning a prize. In the Bass Tournament, Sid Yahya took first place, Kent Crisler second place and Mike Maune took third. In the Fishing Derby, Randy Teter took first place, Jamie Hess second and Don Crowder took third. Biggest bass was caught by Eldon Schierling, the biggest Pike by Jamie Hess and the biggest crappie by Sid Yahya.

A special thank-you to Jamie Hess for providing lunch for all and Eldon Schierling for providing the drinks. We also thank all of the sponsors listed below, who made this event possible.

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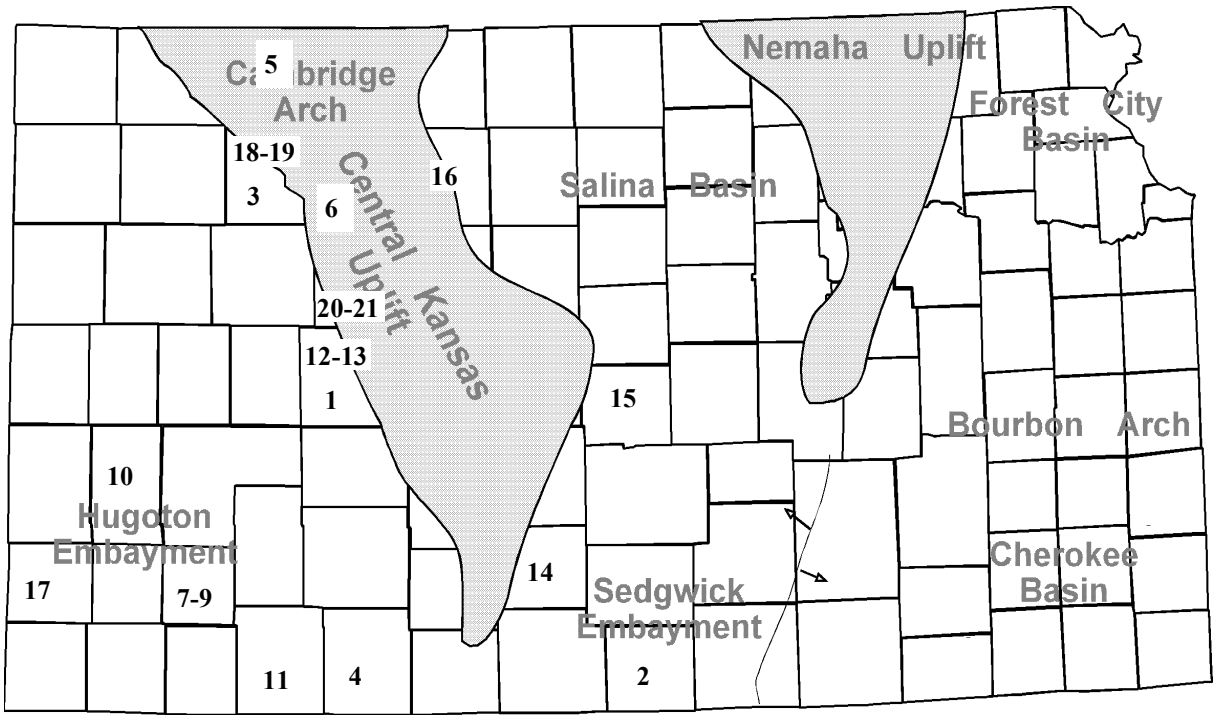
Sunrise Oilfield Supply, Inc.
Sweetman Drilling, Inc.
Trilobite Testing, Inc.

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

EXPLORATION HIGHLIGHTS

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



1) Pintail Petroleum, Ltd Opens New Oil Field (Wichita, KS - IOGsi News Service 4/25/2005) - Wichita-based independent producer Pintail Petroleum, LTD has discovered Marmaton (Fort Scott) oil deposits at its #1-28 Bain-CC, spotted in approximately NE NE SE in section 28- T19s- R24W, Ness County. The new unnamed pool opener is pumping oil at an undisclosed production rate. Well was drilled to a total depth of 4360 ft. No other details have been released. Site lies nearly one and one-quarter miles south of similar production in the Milton Northwest Field. In 1992, Hess Oil Company's Fritzler #1, NE/4 of section 21, produced 30 barrels of oil per day from Fort Scott at a depth of 4280 ft. Pintail's new discovery is located six miles southwest of Ness City, KS.

2) M. E. Klein & Associates Expands Stohrville Field (Wichita, KS - IOGsi News Service /13/2005) - M. E. Klein & Associates, of Norman (OK), is producing 25 barrels of oil, 130 barrels of water and 15 Mcf natural gas per day at the Boomer Gates #1 well in Harper County. The well was drilled as a northerly stepout of the Stohrville Field in approximately C S/2 NE of section 19-T33s-R6W. The well found reserves in the top of the Mississippian formation at a depth perforated from 4464 to 4482 ft. The well started commercial sales on April 23, 2005. Field area is located 1/2 miles east of Anthony, KS.

3) Kansas.L. D. Drilling Opens New Oil Field (Wichita, KS - IOGsi News Service /30/2005) - L. D. Drilling, Inc., of Great Bend (KS), has established a new Mississippian oil field in southwestern Gove County, near the Scott County line. Discovery was made at the Dubh-Fussel #1-A well, located in approximately SE SW NW in section 33-T15s-R30W. Operator drilled the remote wildcat well to a total depth of 4477 ft in March this year. After setting production casing at 4476 ft, the well was perfo-

rated from 4385 to 4414 ft (gross) and was acidized. The well was put on pump on March 28th making 80 barrels of oil per day, no water. The new unnamed field lies nearly 2-1/4 miles southwest of three oil wells in the Sharp Northwest Field in section 26-T15s-R30W. Those wells have produced almost 50,000 barrels of oil from the Lansing-Kansas City formations. Closest Mississippian production lies over 5-1/2 miles away from the new discovery.

18 New Fields Recognized in Kansas

(Wichita, KS - IOGsi News Service 5/2/2005) - The Kansas Geological Society's Nomenclature Committee, in association with the Kansas Corporation Commission (KCC) and the Kansas Geological Survey, has recognized and named 18 new oil and gas fields in Kansas. The new fields were recognized at a meeting this week in Wichita, Kansas.

The 18 new "rank wildcat" discoveries in Kansas brings the total number for this year to 28, compared to only 18 a year ago, up 55.6 percent. The number of new discoveries of all types in 2005 (including infield wildcats) totaled 32, or is 12 more when compared to same period a year ago, up by 50 percent. In addition to naming new pool openers, the KGS Committee also acknowledged 33 field extensions, 8 new pays in established fields, and 2 pool revivals - the Schlegel Field in Bourbon County and the Cummings Field in Elk County.

The new Kansas oil and gas field names are as follows:

County Field Name Operator Well Qtr S-T-R Type Pay Zn

(4) *Clark Glider Port Ritchie Exploration 1 Lang 30C SW 30-30-25W Gas LKC*

(5) *Decatur Prairie Dog Creek Murfin Drilling Co. 1-17 Brantley NW 17-05-29W Oil LKC, Arb*

(6) *Graham Van North John O. Farmer, Inc. 1 Buss C SW 2-09-22W Oil Arb*

(7) *Haskell Santa Fe North Abercrombie Energy, LLC 1-12 Cox NW 12-28-33W Oil Miss*

(8) *Haskell Santa Fe NW Abercrombie Energy, LLC 1-14 Barbee-Granger SE 14-28-33W Gas Marm*

(9) *Haskell Lockport South Strata Exploration 1 Murphy Trust SE 33-29-32W Gas Mrw*

(10) *Kearny Hartland North Presco Western, LLC 1-1128 Miles SW 28-33-37W Oil Miss*

(11) *Meade Mertilla South Quinque Operating Co. 2-19 Koehn SE 19-30-30W Oil Mrw, Miss*

(12) *Ness Obee SE Palomino Petroleum 1 Stum SW 7-19-23W Oil Cher*

(13) *Ness Milton SW Pintail Petroleum, Ltd 1-28 Bain-CC SE 28-19-24W Oil Marm*

(14) *Pratt South Fork Val Energy 1-31 Davidson SW 31-27-11W Oil Viola*

(15) *Rice Cow Creek SE Larson Operating Co. 1-28 Skiles SE 28-18-09W Oil Arb*

(16) *Rooks Boxelder NW Murfin Drilling Co. 1-5 Copher SE 5-09-18W Oil LKC*

(17) *Seward Dry Lake Quinque Operating Co. 1-12 Stanton SE 12-31-31W Oil Cher*

(18) *Sheridan Genie Murfin Drilling Co. 1-14 Eugene NW 14-09-26W Oil LKC*

(19) *Sheridan Popp Up Murfin Drilling Co. 1-14 Popp-Borger Ut NE 14-09-26W Oil Miss*

(20) *Trego Karis Crawford Oil Co. 1-12 Schmidt SE 12-15-22W Oil Cher*

(21) *Trego Karis North Crawford Oil Co. 1-6 Schmidt SW 6-15-21W Oil Cher*

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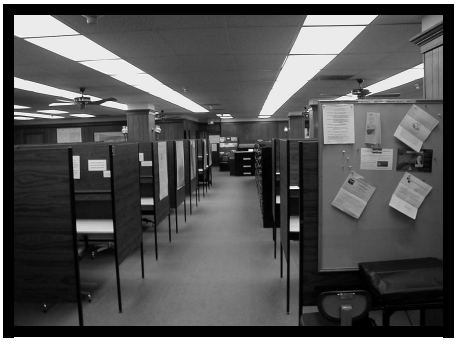

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KGS BULLETIN
July-August 2005

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