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KANSAS GEOLOGICAL SOCIETY

# BULLETIN

Volume 81 Number 4

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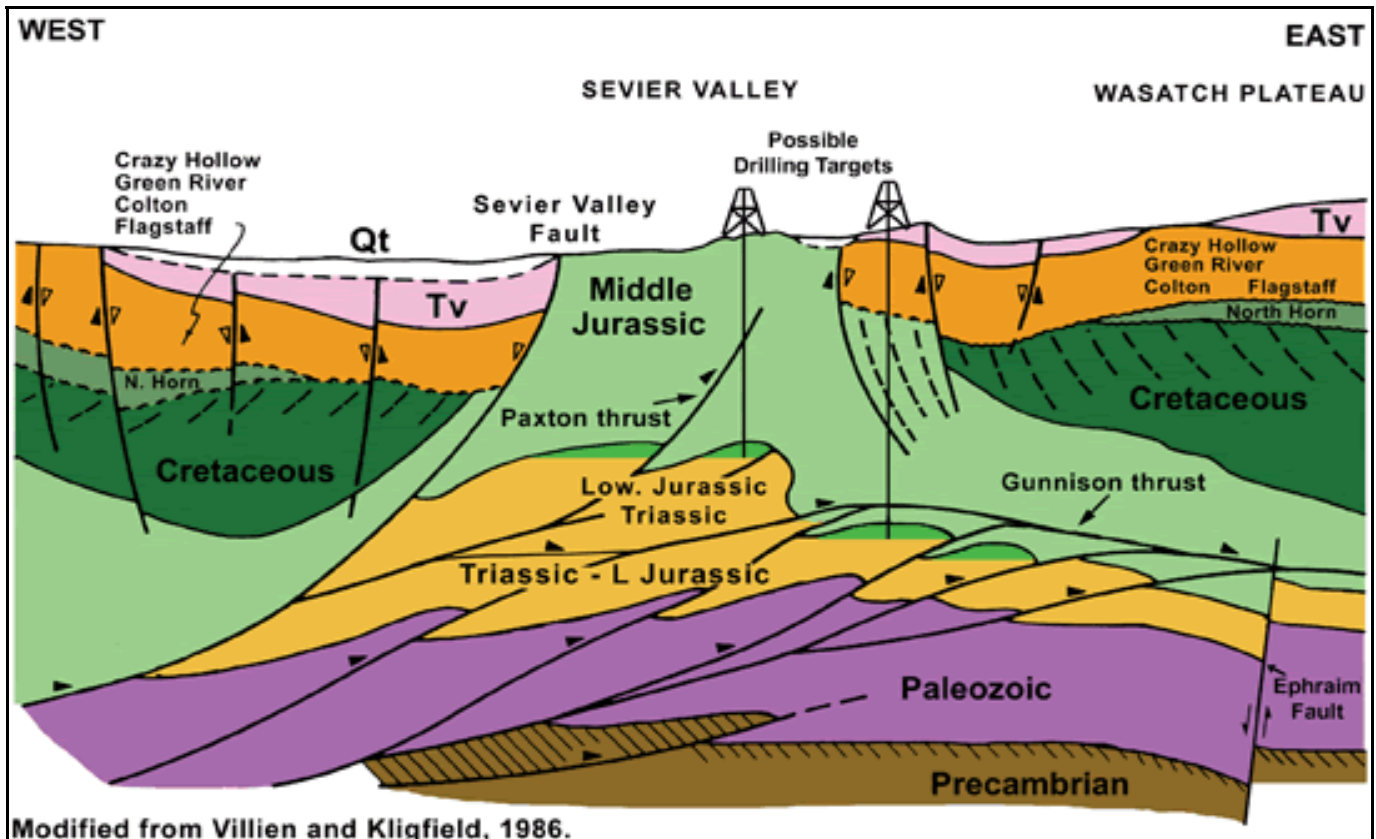
**Member Profile:**  
**Glen Rupe**

**Tales from the**  
**Doghouse**

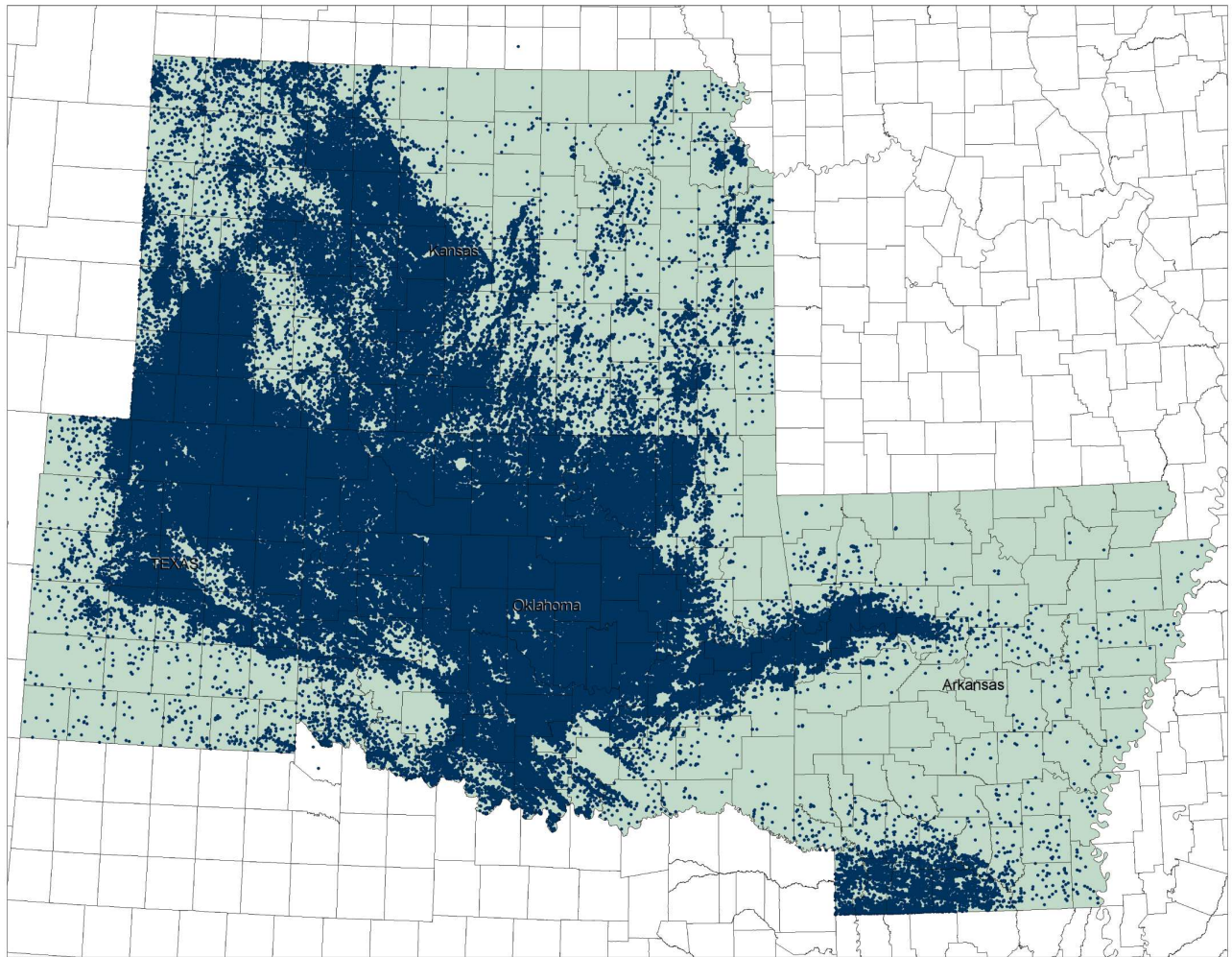
**Memorial:**  
**Jack Heathman**

# UTAH-NEVADA ELEPHANT HUNT

Structural analysis, seismic interpretation,  
and organic geochemistry contribute to the  
Covenant field discovery



*Cross-section of the Utah Thrust Belt.  
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### ON THE COVER:

The Covenant field, discovered by Wolverine Gas & Oil of Utah, LLC along the Central Utah thrust belt is a giant field and has spawned a very active play. The Kings Meadow Ranch 17-1, the discovery well, penetrated a highly porous and permeable reservoir in the Jurassic Navajo Sandstone which contains a 450-foot oil column.

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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](mailto: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>



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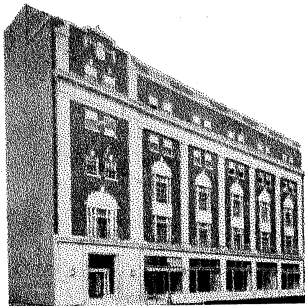
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\*The largest crude oil tanker in the world is 1,504 feet long, the equivalent of more than 5 football fields. Bicycles are used on some tankers to transport crew members from one place to another.

\*There are more than 300,000 miles of pipelines carrying crude oil, natural gas and fuels throughout the United States.

\*The U.S. oil and natural gas industry employs 1.5 million people.

\*A drilling constructed in 1977 that covered 65 acres would require less than nine acres today-and the same number of wells could still be drilled.

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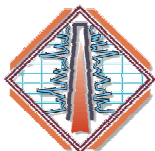
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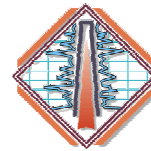
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# President's Letter

*Dear Members,*

The year is half way over and has flown by. We have had many great events and much progress has been made in making this organization even better. My term thus far as president has been a very rewarding experience. I have had the opportunity to work with many of our members and various projects as well as travel to Houston, Texas. I would once again like to thank the membership for allowing me this opportunity to be president and hope that the second half of my term can be as enjoyable as the first.

I would like to thank everyone who helped with the annual golf tournament. It was a soggy one, but I hope everyone still enjoyed themselves. This annual event is looked forward to by many and hopefully the weather will cooperate with us next year.

Bob is setting a great fall of technical talks that I hope many of you will be able to participate in. The big event will be a field trip to the Survey in Lawrence. We will be leaving by bus early in the morning and returning later that afternoon. Lunch will be served. I hope many of you are able to travel with us and see the great job that the Kansas Geological Survey does as they represent the state of Kansas very well on a national level.

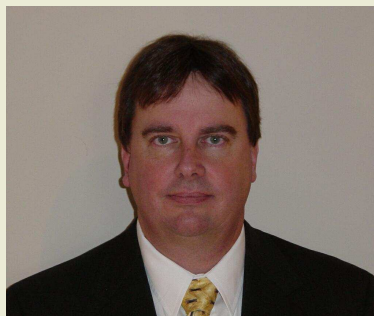
A big welcome is extended to Mike Dealy as the new manager of the Wichita Well Sample Library. And a big thank you is extended out to Larry Skelton who severed the library wonderfully for many years.

Mark your calendars for August 18. We will be having our annual KGS picnic. See the enclosed flyer for more details about the picnic.

Respectfully Submitted,

*Chuck  
Brewer*

Chuck Brewer  
KGS President



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# From The Manager

---

*Dear Members,*

It seems to be a time of changes around the library. First, we have a change of editor for the Bulletin. Kimberly Dimmick-Wells is turning the reins over to Marc Summervill. Kimberly has worked extremely hard this year, bringing us a great run of technical papers. This is a much needed aspect of our Society's Bulletin that had been lacking for several years. Please let her know how much we appreciate that she got that going again. I also want to acknowledge Sal Muzzullo for being the technical editor and reviewing those papers that were submitted. Sal will stay on as technical editor, working with Marc. If you like reading the Bulletin and seeing these articles and technical papers, please let these people know that you appreciate their hard work. Also, if you have anything you would like to submit, get with Marc and let's keep this moving. And finally, thank you Marc for taking on this job!

Another change is that Amy Grelinger gave her notice and May 31st was her last day. She has taken a teaching position at West High School. Amy has been a wonderful asset for the KGS and worked exceptionally hard with all of the Walters Digital Library users. Amy, along with our newest employee, Tammy Nichols, have been working on a new KGS Directory. So, thanks to these two gals, you should be seeing a new KGS Directory this summer.

Thanks to Randy Teter and others that made another KGS Fishing Tournament happen. Also thanks to Kevin Davis and his golf committee for bringing us another very fine KGS Golf Tournament. We had a very good turnout in spite of the rain and wind. In the end, it turned out to be a wonderful day. Good job Kevin!

The next event coming up will be the **Annual Picnic**. Chellie Mazzullo is the committee chair again this year and is planning a wonderful evening for us on **Friday, August 18th**. We are changing the location this year. We are going to try **All Star Sports EAST**. This east location has amusement rides as well as the other activities that we enjoyed at the west location. They have a huge pavilion, which is open air but the roof is insulated and Chellie & I visited on one of the hottest, muggiest days and it was extremely comfortable. We were amazed! So don't let the lack of air conditioning keep you from coming out on August 18th for another wonderful get-together with family and friends. Hope to see you there!

Respectfully submitted,

*Rebecca Radford*

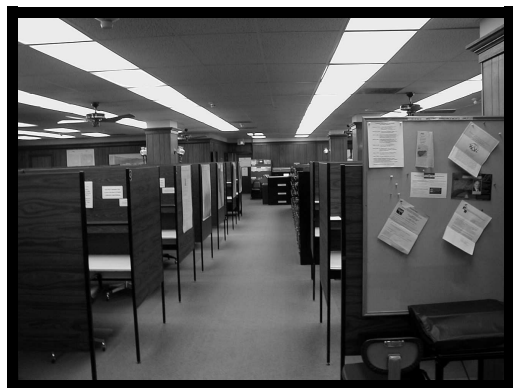
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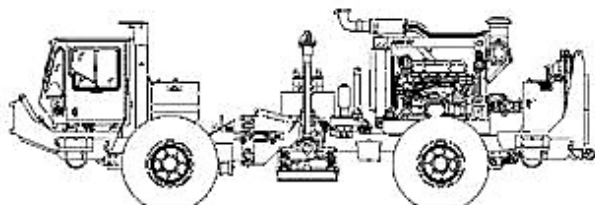
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## UTAH-NEVADA ELEPHANT HUNT

**W**hat follows is more in the nature of a news update than a technical presentation, seeking to give a current look at a potentially large onshore play in Utah and Nevada. This play is somewhat unique in that virtually all of the participants to date are independents, the majors having deserted it as a “lost cause” after some expensive failures. The area of interest is in western Utah and eastern Nevada (Fig. 2). The area is bounded on the west by the Antler orogenic belt, and on the east by the multiple thrust faults of the Sevier orogenic belt. Between these areas lie many potentially undrilled prospects, mostly structural, being principally eastward-stacked thrusts and some large anticlines. In general, the principal pay zones are older to the west (Paleozoic) and younger to the east (Mesozoic), although deeper drilling might reveal Paleozoic pays in Utah as well as in Nevada. The tectonic history of the play area is in large part common to the entire area, with sometimes great thrust distances eastward, and some later extensional faulting. Production found to date is very impressive, with thick oil columns and big reserves if not always big fields. Good to spectacular reservoir rocks with shows of oil are fairly common in the scattered exploratory wells drilled to date.

Earlier discoveries in the Utah/Wyoming part of the thrust belt began in 1975 with the Pineview discovery, and together these fields will probably recover about 2 billion barrels of oil equivalent. In December 2003 Wolverine Oil Company, a Michigan independent, opened the Covenant Field in Sevier County, Utah, shown in figure 2. The log of the discovery well is shown as Figure 3. The well has over 600 feet of oil column in Jurassic sandstones. In November 2005, eight wells produced 142,264 BO for 4,742 BOPD of 40° gravity oil. All wells are restricted to minimize

water coning. To date, wells perforated in the upper sand cut a little or no water, whereas wells in the lower sand have moderate water production. The principal pay zone is the eolian Navajo Sandstone in an upper (hanging wall) thrust plate. The top of pay is at 5838 ft, the oil/water contact is at 6338 ft, and the base of the sand is at 7102 ft.



*Wolverine's 17-1 King's Meadow Ranch discovery well. Reprinted with permission of the AAPG Explorer.*

A thrust fault was drilled at 7700 ft, and the entire Navajo section was repeated in the lower (foot wall) plate from 8148-9340 ft (TD). Good oil shows in the top 700 ft of the Navajo were noted; sidewall cores as deep as 8740 ft and 8815 ft had 23-26% oil, and a test at 8600 ft recovered salt water with an oil show. It is very possible that the sand in the foot wall will also be found productive nearby.

Covenant is a giant field and has spawned a very active play. Figure 2 shows the basic geology of the area and some prospect locations. Wolverine has an active exploration program, and acreage prices have exploded to, in some cases, over \$1000/acre in the principal Utah thrust trends. Federal leases in Nevada and Utah are subject to quarterly open bid sales, and Utah state lands quarterly by sealed bid,

both for 10 years at 1/8th royalty interest. This year, Armstrong Resources of Denver made a sale to Delta Petroleum of a 65% WI in 88,000 acres of leases for \$24 million dollars, 673000 shares of Delta stock, and a carried 35% WI in the first three wells to be drilled this year (#7 in Fig. 1 indicates approximate well locations). Earlier, Petro-Hunt purchased a large block about 35 miles north of Covenant, paying an estimated \$30 million dollars for a seismic option, seismic, and about 40,000 acres of leases

**Author** .....

**Alfred James III**

*Independent Petroleum Geologist  
Wichita, Kansas*

that have not yet been drilled. In Nevada things are not quite so active or expensive...yet. But Nevada's 50 million BO cumulative production, mostly from only a few wells, indicates the area's potential. Oil columns can be hundreds of feet thick and high structures, like Eden's Noah Anticline, are as yet untested. Basic information such as well data is not hard to come by, and there is a good deal of information on-line. An excellent review of the Utah play is at Pioneers Oil & Gas Company's site, compiled by geologist Mike Pinnell, at [www.poil.com](http://www.poil.com). An overview of the Nevada play is at Dr.

Alan Chamberlain's site at [www.cedarstrat.com](http://www.cedarstrat.com).

Please note that the Pioneer and CedarStrat web sites, and the Eden site, are commercial. Utah production, well data, and well logs can be found at [www.ogm.utah.gov/oilgas/](http://www.ogm.utah.gov/oilgas/). Click on "finding well information", then "well data search", and then "enter oil & gas information system".

Nevada well data are at [www.nbmjg.unr.edu](http://www.nbmjg.unr.edu). Click on "lists, index databases" and then "Nevada oil&gas information" for various well lists. Well logs can be ordered by mail from geologist Dave Davis at the Bureau of Mines and Geology at 775-784-6691, ext. 133.

The play area is very large, and as such, there could be many prospects. The lease prices cited above are in the hottest part of the play, mainly on identified structures. Leases elsewhere in both states can be had for more reasonable prices. For example, I have recently bought a fee lease in the middle of the Noah Anticline, and state of Utah leases on-trend southwest of Covenant. As in any early-stage play, the geologist's job is to collect available information and to map out trends and lease ideas. Seismic is mostly proprietary, and to-date mostly unsuccessful, until the discovery of Covenant Field. You'll see a lot of earlier major company dry holes, some apparently well-located holes with shows, and other wells obviously complete

"busts". For example, Chevron, Standard of California, and Champlin had drilled within three miles of Covenant Field years earlier, using seismic, and found the Jurassic pay zones thousands of feet low. #-D seismic can be problematic because of the extremely rugged topography in the area. Detailed gravity surveys, especially in Nevada, appear to be quite useful in showing areas of stacked thrusts in Paleozoic carbonates, in many cases these being in mountain ranges which have not yet been drilled because of obvious logistical problems. One of the first of

these to be drilled will be Eden's Noah Prospect, the gravity survey of which is available on their web site ([www.edenenergycorp.com](http://www.edenenergycorp.com)).

What are the problems? I've discussed seismic, but there's some indication that new technology is successful. It's worth noting that the discovery well at Covenant field is so far the highest datum on the structure – a remarkable success, indeed. Secondly, is there reservoir seal? The Jurassic plays in the Utah thrust belt commonly are overlain by a thick section of evaporites in the Arapien Formation, which is an effective seal. Westward into Nevada the prospective rocks generally are older and commonly lack the overlying evaporites. Here, the seals are in Tertiary or older rocks. The Mississippian Chainman Shale is not only a world-class source rock, but potentially a seal for underlying reservoirs, which are mostly karsted Devonian carbonates. Some anticlines, however, may

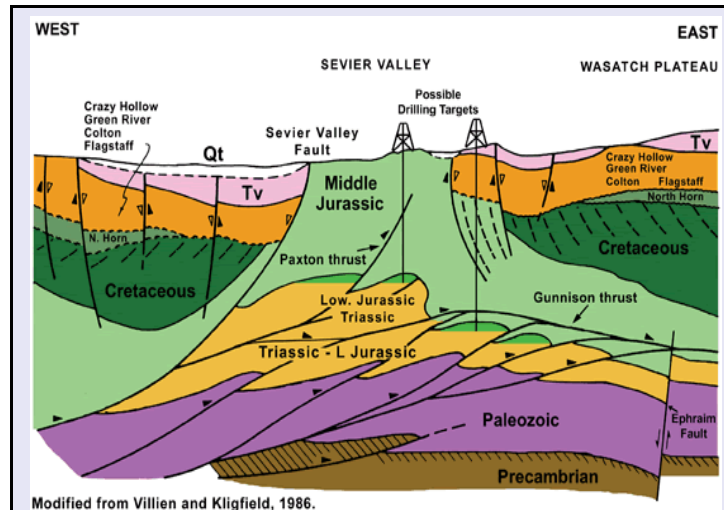


Figure 1: Cross-section of the Utah Thrust Belt. Reprinted with permission of the AAPG Explorer.

## **TRAP SUMMARY**

- \* **Salina Structure = large-scale fault bend fold**
- \* **Passive-roof duplexing with detachment in Arapien**
- \* **Tectonic repetition of Navajo section**
- \* **Tertiary extensional faulting along Arapien detachment**
- \* **Sequential unconformities define structural evolution of Salina trend**
- \* **Role of thin-skinned deformation, passive-roof duplexing, and extensional faulting critical to trap development at Covenant field**

Source: Wolverine Gas & Oil Company of Utah, LLC

have had seal rocks that were compromised by late extensional faulting. As stated, the Chainman Shale plays a double role as both a seal and source. The oil at Covenant Field has been typed as originating from the Chainman from the west. Most Nevada oils have also been typed as from the Chainman. Therefore, it can be hoped that traps westward from the Utah thrust belt well into eastern Nevada will be abundantly sourced.



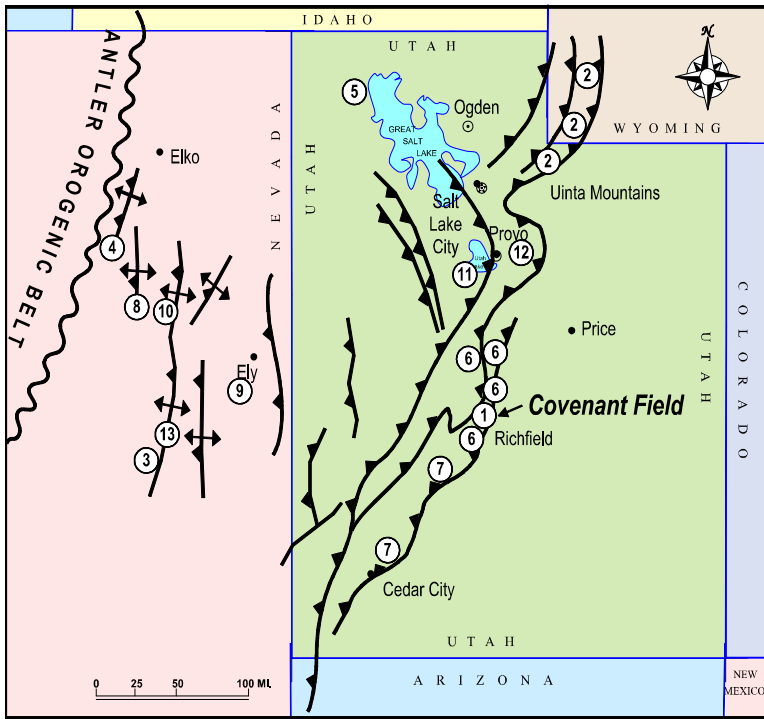


Figure 2: Location of the study area, with existing oil/gas fields and exploration plays.

**Oil and Gas fields:**

1. Covenant, Utah, estimated 50 million BO, Jurassic.
2. Wyoming Thrust Belt, estimated ultimate 2 billion BOE, mostly Jurassic.
3. Railroad Valley, Nevada, 50 million BO, Devonian, Tertiary.
4. Blackburn Field, Nevada, 5 million BO, Devonian.
5. Rozel Point, estimated 1 million BO, Tertiary, basalt, shut in.

**Active Exploration:**

6. Wolverine wildcat locations; 2 drilled: tight holes.
7. Armstrong/Delta Petroleum prospects to be drilled in 2006.
8. Eden Energy Corp., Noah Anticline, drill 2006.
9. Geyser Petroleum, location.
10. Winn Exploration, location.
11. Cleary Petroleum Corp., drilled, tight hole.
12. Ansbro Petroleum, drilled, tight hole.
13. Tierra Nevada Exploration, location.

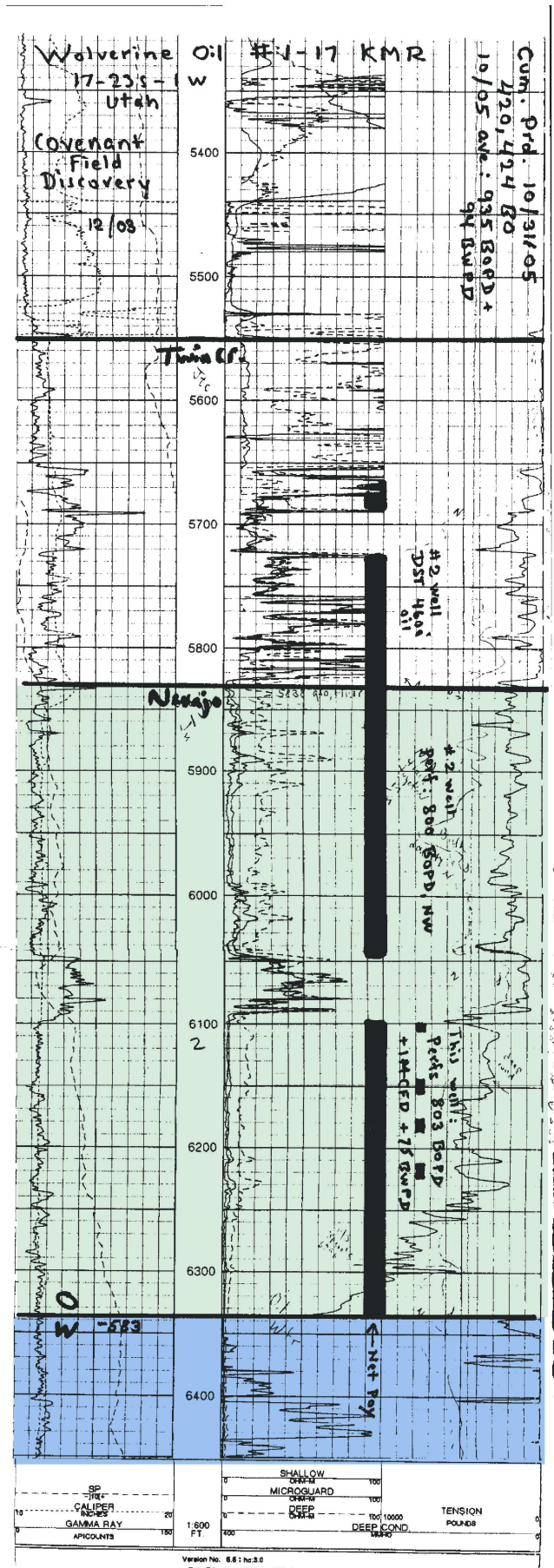


Figure 3. - Type log (gamma ray-caliper-induction), from discovery well at Covenant field.

## **Kansas Geological Society Board Minutes June 2006**

The regular meeting of the Board of Directors of the Kansas Geological Society was held on June 13, 2006, in the Conference Room of the Kansas State Geological Survey in Lawrence, Kansas.

After a tour of the Survey facilities, Mr. Brewer called the meeting to order at 2:25 P.M. and welcomed all Board Members and Advisors. Due to the location of this particular board meeting, there were no reports from the Treasurer or the Manager on financials. Those reports were mailed out at a later date.

The Treasurer's report shows a total of all accounts & investments as of May 31, 2006 = \$449,651.13.

The Manager's report shows a net profit for the Month of May of \$11,596.97 and a year-to-date net of \$32,052.56. Ms. Radford reported that the Society membership stands at 631 members and Library membership stands at 263. Ms. Radford also reported that the Robert F. Walters Digital Library membership stands at 143 members.

**Old Business Discussed:** Mr. Brewer reported that he and Ms. Radford met with Mr. Stan Wisdom and discussed the new lease. They will schedule another meeting to start negotiations for a new lease.

Ms Radford informed the board that Robert F. Walters Digital Library is working, but still needs work from Arquan. Total membership for Walters is 143. Ad Hoc Committee of Chuck Brewer, Phil Knighton, Rebecca Radford, Steve Stribling, David Bayer, and Doug Davis met May 18, 2006 with Arquan to discuss contract and a list of problems found by members. Arquan has asked for a list of grievances to be presented. Discussions are being held with other companies for probable change of software.

Ms. Radford reported that a new directory is complete and should be printed within 30 days.

**New Business Discussed:** Mr. Cowdery, Foundation President, announced that the Foundation board voted to purchase a video camera to be used to film technical presentations. Ms. Radford reported that Chellie Mazzullo, picnic chair, announced that the picnic will be August 18th at All Star Sports East. This will be a new location for the picnic.


Kimberly Dimmick-Wells resigned her position of Bulletin Editor and has lined up Marc Summervill, who accepted the position.

With no further discussions the meeting was adjourned at 3:40 P.M.


Respectfully submitted,

Douglas V. Davis Jr.  
Secretary  
06/22/2006

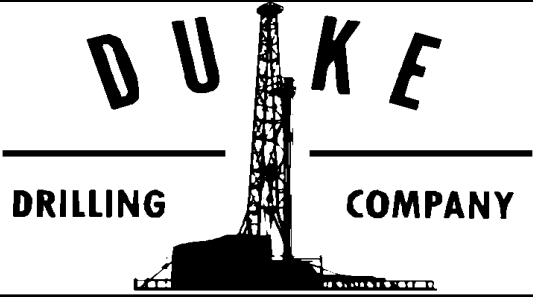
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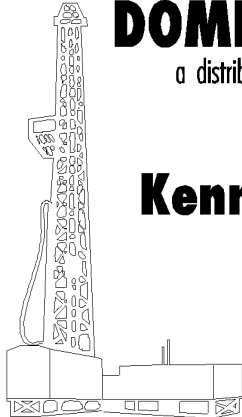
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# Member Profile

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*Glen  
Rupe*

**A**s for starters, I was born in Vilas, Baca County, Colorado on January 31, 1932 in a “dug-out” homestead. Fortunately, I do not remember any of the time spent there, but my mother told me about the early day dust storms wherein it was necessary to cover my crib with dish towels to prevent me from suffocating. My father had a 200’ hand dug well and we were the only house to have electricity. He also invented a generator on his tractor so he could work at night.

Fortunately, the farm failed and we moved to Lamar, Colorado about 1935. My folks started a successful grocery store in Lamar, Colorado. I had two brothers and a sister that helped my folks run their store. I was the youngest, so I was not needed in the store.

I remember my first enterprise was a lemonade stand. The first time I filled the “cigar box” full of money, I ran to tell my oldest brother how much money I had earned. When I returned, the cigar box was gone! That was my first lesson in business.

I was about 12 when we moved to Canon City, Colorado. Our home was located next door to South Canon Junior High School. We were so close to the school that I could hear the bells ringing at the school. I could start getting out of bed on the first ring.

In about 1948, my parents divorced and I ran away from home with a friend to Canyon, Texas and eventually started work for a pipeline company laying line from Syracuse, Kansas to Colorado Springs, Colorado. I believe it was the Colorado Interstate Gas Company. I was thrown in with a bunch of illegal Mexicans. As a matter of fact, they were all Mexicans with the exception of my foreman.

His nickname was “Panama”. The Mexicans fed me and took care of me until I got my first “paycheck”. I got to eat lots of tacos and tamales and developed a lasting respect for the work ethic of the Mexican people.

I found out that the men stirring “tar” in hot pots got paid a lot more and I asked my boss if I could transfer. He said, “You don’t want that job – you watch and they will be fishing someone out of that pot”. He was right! We lived in tents and would tear them down and re-erect them every twenty miles. One thing that always impressed me was the owner of the pipeline company. I believe his name was Haragan out of Houston. He would fly over the pipeline very low and every Friday; tip the wings of the plane to the crews.

The welders on the pipeline were just ahead of us and our job was to scrape the pipe with power scrapers and paint the pipe with tar. My job was to hand paint the welds. We walked about half way to Colorado Springs, mostly with rags wrapped around my feet, as the first day I spilled tar in my boots and had to cut them off blistered feet. I got to see and eat lots of antelope. I quit this job and headed back to Canon City to start school.

When I arrived home, my mother introduced me to her boyfriend, an oil man by the name of Erle Ottman. Erle encouraged me to go to military school and to become a geologist. He was definitely an unforgettable character. He was an old fashioned oil promoter – “diamond rings,” new Cadillacs and he specialized in telling potential investors everything they wanted to hear.

Erle had a mysterious background. By that, I mean I never could believe the stories he would tell. He had supposedly flown airplanes over Burma, flown Greek generals in Greece, purchased Al Capone’s diamond ring, and played semi-professional basketball. I think this was part of his promotion. He would find out what would appeal to you and he would “spice up” some story. I never knew where he came from. He claimed to have been married five times. He also claimed to have had a son and daughter, yet, we never heard from them and when he died, they didn’t show up for his funeral.

Erle and my mother married and they moved to Longmont, Colorado to drill some wells with their newly formed Florence Drilling Company. My mother’s first name was coincidentally “Florence”. After Longmont, they moved to Rock Island, Illinois and took over the top floor of the



Blackhawk Hotel. They drilled a few dry holes in the Cairo, Illinois area and moved to Moline, Illinois and promoted wells in the Lebanon, Missouri area. Meanwhile, Erle had sold me on going to Wentworth Military Academy. At Wentworth, I was captain of the 1948 – 1950 football, basketball and track teams and was voted the “BEST ALL AROUND ATHLETE.” I graduated in 1950 and went to Camp McCoy Wisconsin officer’s candidate school.

About this time, Erle was drilling wells in Caddo Parish around Moring Port, Louisiana, where he again took over the top floor of the hotel. Erle wanted me to help run his rig. All I knew about a rig was that in the swamp I wanted to work in the tower and the early morning shift. Erle again ran out of money and decided to move to Emporia, Kansas where he started promoting shallow wells in the Osage, Woodson and LeRoy, Kansas areas.

With my past geological background in “101 Geology”

Earl decided I should sit on his wells. This was a really “scary moment” for me, as I didn’t have the slightest idea what oil samples should look like. At this time, he also thought I should run two rigs, so rigs were purchased in the name of Glen Rupe Drilling Company and we found the LeRoy “Squirrel Sand” pool and drilled several wells. At first, they looked good coming in after frac’ing, they would produce 50 BOPD, but within sixty (60) days the wells were producing a barrel or two a day.

During this period in my life, I was taking Geology courses under the great Doctor Ver Wiebe. I would leave school in the afternoon and drive to LeRoy to run the cable tool rigs, returning about midnight. This was in 1954, the year my wife, Caroline, and I married, so this was the “honeymoon” she was exposed to.

Some of my classmates at this time were Bill Broughton, Orvie Howell, Bill Hamm, J.C. Musgrove, Gus Messinger, Harold Steincamp, Don Shawver, Ted Sandberg, Jay Clark, Bob McCann, Don Pate, Kenneth Payne, Bill Peterson and Neil Sikes. We also lived near Doc Berg. I brought home a pig once and Berg got a big laugh out of our pig. It was bathed in the tub and had access to the house and yard. Several years out of school, I saw Berg on

the street one day and out of the clear blue sky, he says, “what did you do with your pig?” I didn’t know what the hell he was talking about. After graduating from Wichita State, I studied for a master’s degree, but ended up taking advanced exploration and engineering courses, which appeared to be more helpful in pursuing a life in the oil business.

Caroline and I have three kids, Randy, Becca & Tobin. Before I started buying ranch land in 1973, our family’s favorite thing to do was fly fish in Wyoming and Montana.

After buying our piece of land on Fall River that had an old 1876 vintage stone house, we all decided to restore and remodel it. So, for years, this has been our favorite thing to do and it has been, and still is, a labor of love for all of us. My wife and I have had many world trips, but our favorite spot is our ranch. After buying additional land, we ran our own cow/calf operation and farmed our own crop land. However, now we have leased out the land and enjoy the beauty of the ranch and we have fishing and hunting to galore. But, quite frankly, I would rather grow flowers.

I think I can safely say I’ve seen the worst and best of times in our oil industry. I started out drilling my first well in 1953 at age 21 and I’ve seen lots of ups and downs. It’s all been worth it and I would not trade our profession for any other – I’ve loved it.

***I remember my first enterprise was a lemonade stand. The first time I filled the “cigar box” full of money, I ran to tell my oldest brother how much money I had earned. When I returned, the cigar box was gone! That was my first lesson in business.***



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# KGS Tech Talks

(No technical talks are scheduled for  
June, July & August)

## September

**13th**

Scott Schad:

*“The Hydrocarbon Potential of  
the Caney Shale”*

**20th**

Vance Hall and Glenn Cole, Tulsa:

*“Atokan and Desmoinesian  
Correlations from the Arkoma  
to the Cherokee Platform with  
Emphasis on the Selected  
Coal Markers”*

**27th**

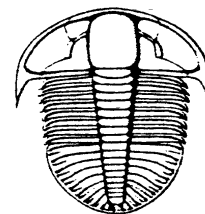
Saibal Bhattacharya,  
Kansas Geological Survey:

*“The Schaben Field,  
Ness County, Kansas”*

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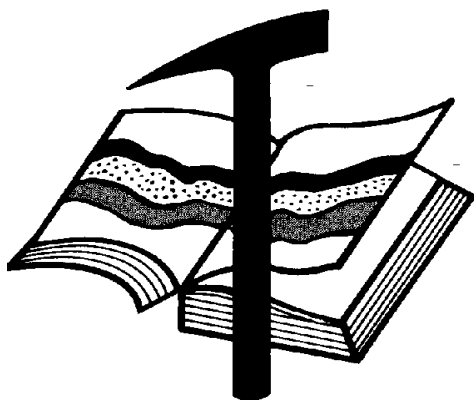
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The Kansas Geological Foundation was founded in March, 1989 as a not-for-profit corporation under the guidelines of section 501(c)(3) of the tax code to provide individuals and corporations the opportunity to further the science of geology. It is dedicated to providing charitable, scientific, literary and educational opportunities in the field of geology for the professional geologist as well as the general public.

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# Tales from the Doghouse

---

**L**acking any personal accounts to publish this month, with thanks to those who have offered other published pieces, I thought it would be interesting to borrow again from the “Sketches in Crude-Oil” published in 1896. The following account is, as Paul Harvey says, “the rest of the story” regarding Edwin L. Drake and the well at Titusville that is broadly regarded as the start of the petroleum industry in this country. It is a much larger story— here somewhat abridged-- than is heard today and, I hope, interesting and instructive.

“One scorching day in the summer of 1856 Mr. Bissell” (George H. Bissell, a lawyer from New York with a major interest in ‘The Pennsylvania rock Oil Company’), standing beneath the awning of a Broadway drug-store for a moment’s shade, noticed a bottle of Kier’s Petroleum and a queer show-bill, or label, in the window. It struck him as rather odd that a four-hundred-dollar bill—such it appeared—should be displayed in that manner. A second glance proved that it was an advertisement of a substance that concerned him deeply. He stepped inside and requested permission to scan the label. The druggist told him to ‘take it along.’ For an instant he gazed at the derricks and the figures—four-hundred feet! A thought flashed upon him—bore artesian wells for oil! Artesian wells! Artesian wells! Rang in his ears like the Trinity chimes down the street... The idea that meant so much was born at last. It was a simple thought—merely to bore a hole in the rock—with no frills and furbelows and fustian, but pregnant with astounding consequences. It has added untold millions to the wealth of the country and conferred incalculable benefits upon humanity. To-day refined petroleum lights more dwellings in America, Europe, Asia, Africa and Australia than all other agencies combined.

To put the idea to the test was the next wrinkle. The idea of artesian boring was too fascinating to lie dormant. Mr. Townsend, president of the company, employed Edwin L. Drake, to whom in the darker days of its existence he had sold two-hundred-dollars’ worth of his own stock, to visit the property and report his impressions. Illness had forced him to quit work—he was conductor on the New York & New Haven Railroad—for some months and the opportunity for change of air and scene was embraced gladly. Shrewd,

far-seeing Townsend, who still lives in New Haven and has been credited with ‘the discovery’ of petroleum, addressed legal documents and letters to ‘Colonel’ Drake, no doubt supposing this would enhance the importance of his representative in the eyes of the Oil-Creek backwoodsmen. The military title stuck to the diffident civilian whose name is interwoven with the great events of the nineteenth century.

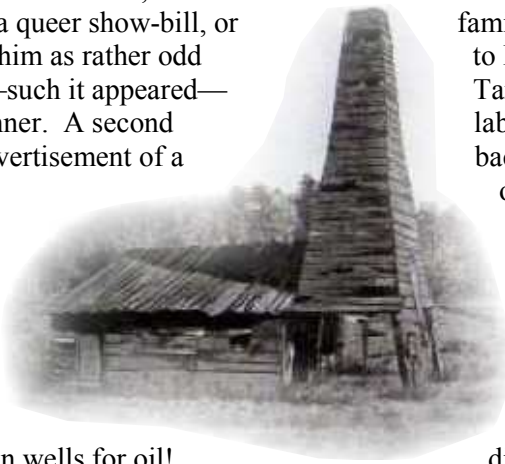
Stopping on his way from New Haven to view the salt wells at Syracuse, about the middle of December, 1857, Colonel Drake was trundled into Titusville—named from Jonathan Titus—on the mail-wagon from Erie. The villagers received him cordially. Drake stayed a few days to transact legal business, to examine the land and the indications of oil and to become

familiar with the general details. Proceeding to Pittsburg, he visited the salt wells at Tarentum, the picture of which on Kier’s label suggested boring for oil, and hastened back to Connecticut to conclude a scheme of operating the property. On December thirtieth the three New Haven directors executed a lease to Edwin E. Bowditch and Edwin L. Drake, who were to pay the Pennsylvania Rock-Oil Company “five-and-a-half cents a gallon for the oil raised for fifteen years.’ Eight days later, at the annual meeting of the directors, the lease was ratified, George H.

Bissell and Jonathan Watson, representing two-thirds of the stock, protesting. Thereupon the consideration was placed at ‘one-eighth of all oil, salt or paint produced.’ The lease was sent to Franklin and recorded in Deed Book P, page 357. A supplemental lease, extending the time to forty-five years on the conditions of the grant to Havens, was recorded, and on March twenty-third, 1858, the Seneca Oil Company was organized, with Colonel Drake as president and owner of one-fortieth of the ‘stock.’ No stock was issued, for the company was in reality a partnership working under the laws governing joint-stock associations.

Provided with a fund of one-thousand dollars as a starter, Drake was engaged at one-thousand dollars a year to begin operations. Early in May, 1858, he and his family arrived in Titusville and were quartered at the American Hotel, which boarded the Colonel, Mrs. Drake, two children and a horse for six-dollars-and-a-half per week! Money was scarce, provisions were

*(Continued on page 24)*



cheap and the quiet village put on no extravagant airs. Not a pick or shovel was to be had in any store short of Meadville, whither Drake was obliged to send for these useful tools! Behold, then, 'the man who was to revolutionize the light of the world,' his mind full of grand purpose and his pockets full of cash, snugly ensconced in the comfortable hostelry. Surely the curtain would soon rise and the drama of 'A Petroleum Hunt' proceed without further vexatious delays.

Drake's first step was to repair and start up Angier's system of trenches, troughs and skimmers. By the end of June he had dug a shallow well on the island and was saving ten gallons of oil a day. He found it difficult to get a practical 'borer' to sink an artesian well. In August he shipped two barrels of oil to New Haven and bargained for a steam-engine to furnish power for drilling. In February, 1859, Drake went to Tarentum and engaged a driller to come in March. The driller failed to materialize and Drake drove to Tarentum in a sleigh to lasso another. F.N. Humes, who was cleaning out salt-wells for Peterson, informed him that the tools were made by William A. Smith, whom he might be able to secure for the job. Smith accepted the offer to manufacture tools and bore the well. On May twentieth the men and tools were at the spot selected for the hole. A 'pump-house' had been framed and a derrick built. A room for 'boarding the hands' almost joined the rig and the sawmill.

Delays and tribulations had not retreated from the field. In artesian boring it is necessary to drill in rock. Mrs. Glasse's old-time cook-book gained celebrity by starting a recipe for rabbit-pie: 'First catch your hare.' The principle applies to artesian drilling: 'First catch your rock.' The ordinary rule was to dig a pit or well-hole to the rock and crib it with timber. The Smiths dug a few feet, but the hole filled with water and caved-in persistently. It was a fight-to-a-finish between three men and what Stow of Girard—he was Barnum's hot-stuff advance agent—wittily termed 'the cussedness of inanimate things.' The latter won and a council of war was summoned, at which Drake recommended driving an iron-tube through the clay and quicksand to the rock. This was effectual. Colonel Drake should have patented the process, which was his exclusive device and decidedly valuable. The pipe was driven thirty-six feet to hard-pan and the drill started on August fourteenth. The workmen averaged three feet a day, resting at night and on Sundays. Indications of oil were met as the tools pierced the rock. Everybody figured that the well would be down to the Tarentum level in time to celebrate Christmas. The company, tired of repeated postponements, did not deluge Drake with money. Losing speculations and sickness had drained his own meager savings. R.D. Fletcher, the well known Titusville merchant, and Peter Wilson endorsed his paper for six-hundred dollars to tide over a crisis. The

tools pursued the downward road with the eagerness of a sinner headed for perdition, while expectation stood on tiptoe to watch the progress of events.

On Saturday afternoon, August twenty-eighth, 1859, the well had reached the depth of sixty-nine feet in coarse sand. Smith and his sons concluded to 'lay off' until Monday morning. As they were about to quit the drill dropped six inches into a crevice such as was common in salt-wells. Nothing was thought of this circumstance, the tools were drawn out and all hands adjourned to Titusville. Mr. Smith went to the well on Sunday afternoon to see if it had moved away or been purloined during the night. Peering into the hole he saw fluid within eight or ten feet. A piece of tin-spouting was lying outside. He plugged one end of the spout, let it down by a string and pulled it up. Muddy water? No! It was filled with PETROLEUM!

That was the proudest hour in 'Uncle Billy' Smith's forty-seven years' pilgrimage. Not daring to leave the spot, he ran the spout again and again, each time bringing it to the surface full of oil. A straggler out for a stroll approached, heard the story, sniffed the oil and bore the tidings to the village. Darkness was setting in, but the Smith boys sprinted to the scene. When Colonel Drake came down, bright and early next morning, they and their father were guarding three barrels of the precious liquid. The pumping apparatus was adjusted and by noon the well commenced producing at the rate of twenty barrels a day! The problem of the ages was solved, the agony ended and petroleum fairly launched on its astonishing career.

The news flew like a Dakota cyclone. Villagers and country-folk flocked to the wonderful well. Smith wrote to Peterson, his former employer: 'Come quick, there's oceans of oil!' Jonathan Watson jumped on a horse and galloped down the creek to lease the McClintock farm, where Nathanael Cary dipped oil and a timbered crib had been constructed. Henry Potter, still a citizen of Titusville, tied up the lands for miles along the stream, hoping to interest New York capital. William Barnsdall secured the farm north of the Willard. George H. Bissell, who had arranged to be posted by telegraph, bought all the Pennsylvania Rock-Oil stock he could find and in four days was at the well. He leased farm after farm on Oil Creek and the Allegheny river, regardless of surface indications or the admonitions of meddling wiseacres. The rush for property resembled the wild scramble of the children when the Pied Piper of Hamelin blew his fatal reed. Titusville was in a whirlpool of excitement. Buildings arose as if by magic, the hamlet became a borough and the borough a city of fifteen-thousand inhabitants.

Unluckily for himself, Colonel Drake took a narrow view of affairs. Complacently assuming that he had 'tapped the



mine'—to quote his own phrase—and that paying territory would not be found outside the company's lease, he pumped the well serenely, told funny stories and secured not one foot of ground! Had he possessed a particle of the prophetic instinct, had he grasped the magnitude of the issues at stake, had he appreciated the importance of petroleum as a commercial product, had he been able to 'see an inch beyond his nose,' he would have gone forth that August morning and become "Master of the Oil Country!" 'The world was all before him where to choose,' he was literally 'monarch of all he surveyed,' but he didn't move a peg! Money was not needed, the promise of one-eighth or one-quarter royalty satisfying the easy-going farmers, consequently he might have gathered in any quantity of land. Friends urged him to 'get into the game;' he rejected their counsel and never realized his mistake until other wells sent prices skyward and it was everlastingly too late for his short pole to knock the persimmons. Yet this is the man whom numerous writers have proclaimed 'the discoverer of petroleum!' Times without number it has been said and written and printed that he was the first man to advise boring for oil,' that 'his was the first mind to conceive the idea of penetrating the rock in search of a larger deposit of oil than was dreamed of by any one,' that 'he alone unlocked one of nature's vast storehouses' and 'had visions of a revolution in light and lubrication.' Considering what Kier, Peterson, Bissell and Watson had done years before Drake ever saw—perhaps ever heard of—a drop of petroleum, the absurdity of these claims is 'so plain that he who runs may read.' Couple with this his incredible failure to secure lands after the well was drilled—wholly inexcusable if he supposed oil-operations would ever be important—and the man who thinks colonel Drake was 'the first man with a clear conception of the future of petroleum' could swallow the fish that swallowed Jonah! In a conversation on the subject Mr. Bissell remarked: 'Let Colonel Drake enjoy the pleasure of giving the well his name; history will set us all right.' So it will and this is a step in that direction. If the long-talked-of monument to commemorate the advent of the petroleum-era ever be erected, it should bear in boldest capitals the names of Samuel M. Kier and George H. Bissell.

Edwin L. Drake, who is linked inseparably with the first oil-well in Pennsylvania, was born on March eleventh, 1819, at Greenville, Greene county, New York. His father, a farmer, moved to Vermont in 1825. At eighteen Edwin left home to begin the struggle with the world. He was a night clerk of a boat running between Buffalo and Detroit, worked one year on a farm in the Wolverine state, clerked two years in a Michigan hotel, returned east and

clerked in a dry-goods store at New Haven, clerked and married in New York, removed to Massachusetts, was express-agent on the Boston&Albany railroad and resigned in 1849 to become conductor on the New York&New Haven. While boarding at a hotel in New Haven he met James M. Townsend, who persuaded him to draw his savings of two-hundred dollars from the bank and buy stock of the Pennsylvania Rock-Oil Company, his first connection with the business that was to make him famous. Early in 1857 he married Miss Laura Dow, sickness in the summer compelled him to cease punching tickets and his memorable visit to Titusville followed in December. In 1860 he was elected justice-of-the-peace, an office worth twenty-five-hundred dollars that year, because of the enormous number of property-transfers to

***He plugged one end of the spout, let it down by a string and pulled it up. Muddy water? No! It was filled with PETROLEUM!***

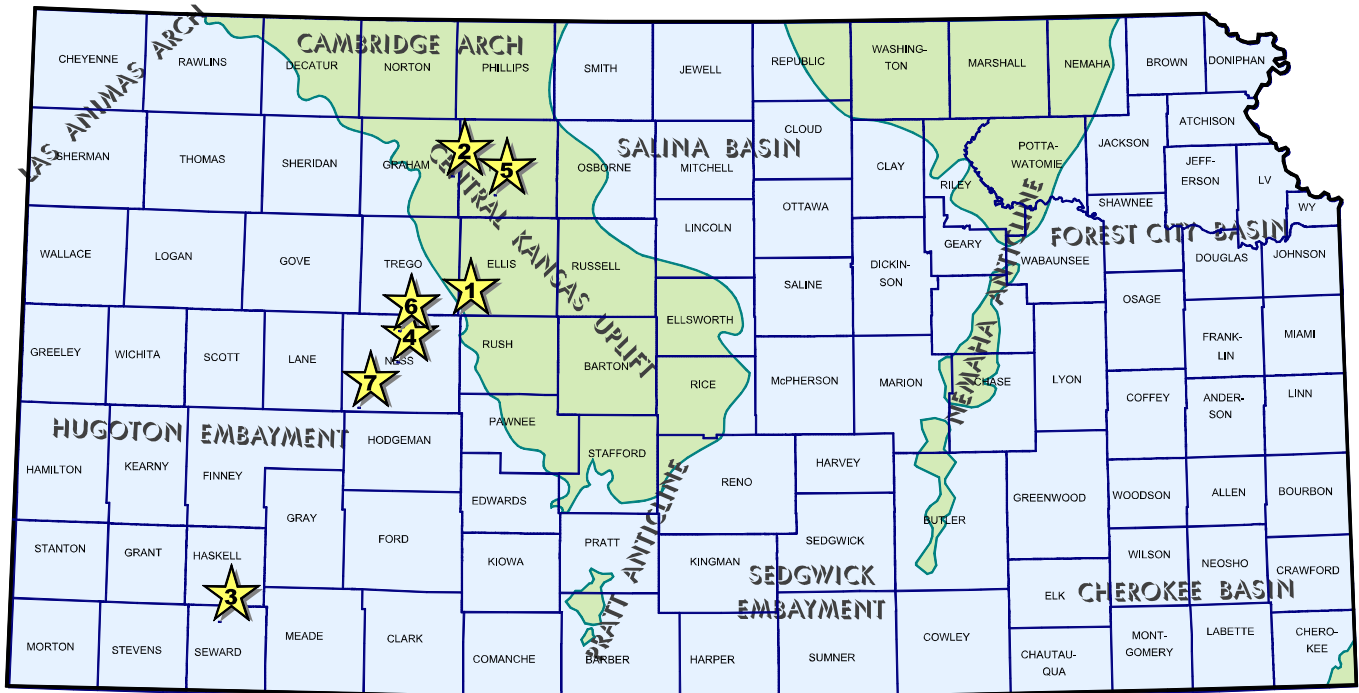
prepare and acknowledge. Buying oil on commission for Shefflin Brothers, New York, swelled his income to five-thousand dollars for a year or two. He also bought twenty-five acres of land from Jonathan Watson, east of Martin street and through the center of which Drake street

now runs, for two-thousand dollars. Unable to meet the mortgage given for part of the payment, he sold the block in 1863 to Dr. A. D. Atkinson for twelve-thousand dollars. Forty times this sum would not have bought it in 1867! With the profits of this transaction and his savings for five years, in all about sixteen-thousand dollars, in the summer of 1863 Colonel Drake left the oil-regions forever.

Entering into partnership with a Wall-street broker, he wrecked his small fortune speculating in oil-stocks, his health broke down and he removed to Vermont. Physicians ordered him to the seaside as the only remedy for his disease, neuralgic affection of the spine, which threatened paralysis of the limbs and caused intense suffering. Near Long Branch, in a cottage offered by a friend, Mr. and Mrs. Drake drank the bitter cup to the dregs. Their funds were exhausted, the patient needed constant attention and helpless children cried for bread. The devoted wife and mother attempted to earn a pittance with her needle, but could not keep the wolf of hunger from the door. Medicine for the sick man was out of the question. All this time men in the region the Drake well had opened to the world were piling up millions of dollars! One day in 1869, with eighty cents to pay his fare, Colonel Drake struggled into New York to seek a place for his twelve-year-old boy. The errand was fruitless. The distressed father was walking painfully on the street to the railway-station, to board the train for home, when he met 'Zeb' Martin of Titusville, afterwards proprietor of the Hotel Brunswick. Mr. Martin noted his forlorn condition, inquired as to his circumstances, learned the sad story of

*(Continued on page 27)*

# Exploration Highlights



**By John H. Morrison, III**  
**Independent Oil & Gas Service**

1) (Wichita, KS - IOGsi News Service 4/17/06) - IA Operating, Inc., of Wichita (KS), has established the new Bluff Canal Field with the completion of the Mavis #26-1, located in approximately NE SW NW in section 26- T14s- R20W, Ellis County. The wildcat well is on pump at an undisclosed production rate with commingled pay coming from the Reagan Sand and Lansing-Kansas City 'K' zones. Rotary total depth is 3819 ft. The new field is situated three-quarters mile northeast of the Solburn Southeast Field (LKC oil since 1978), or eight and one-quarter miles south and one and three-quarters miles east of Ellis, KS. The prospect was based on 3-D seismic data.

2) (Wichita, KS - IOGsi News Service 4/17/06) - Bach Oil Production, of Alma (NE), is producing 105 barrels of oil per day, no water, at the Ida Mae #2, located in SW SW in section 18- T7s- R20W, Graham County. The well is an infield discovery in a remote area in southwest corner of the 46 year old, multipay LeSage Field, near the Graham County line. Operator completed the well on February 27, 2006 from perforations shot in the Lansing-Kansas City 'A', 'C', 'J' and 'K' zones. Perforations were from depths of 3313 to 3316 ft., 3350-3353 ft., 3471-3475 ft. and 3493 to 3499 ft.

respectively. American Eagle Drilling tools drilled the well to a loggers total depth of 3604 ft. Field area is located twelve and one-half miles north and one and three-quarters miles west of Palco, KS.

3) (Wichita, KS - IOGsi News Service 4/17/06) - Presco Western, LLC, of Boulder (CO), has successfully completed the E. Hall #5-N as a commercial oil and gas well three and one-half miles southeast of Sublette, KS. The wildcat well, located in about NW SE SW of section 16- T30s- R32W, Haskell County, is producing new reserves from the Mississippian Saint Louis formation. Production volume is unknown. The deposits lie over three miles south of recent new production in the Lockport South Field in section 33- T29s- R32W. The Morrow gas field was discovered by Strata Exploration, Inc. last year. Closest Mississippian production is found in the Victory Field over five miles away. The new Hall discovery well has been designated as the Haskell Township pool opener.

4) (Wichita, KS - IOGsi News Service 4/24/06) - Grand Mesa Operating Company, of Wichita (KS), has discovered Cherokee Sand oil deposits one-half

mile southwest of established production in the Osgood Field in Ness County. The #1-29 Dietterich-Mishler, located in approximately NW NW NE in section 29- T16s- R23W, was completed this month for an undisclosed rate. The infield discovery and field stepout was drilled to a total depth of 4600 ft. by American Eagle Drilling tools. Patrick J. Deenihan served as wellsite geologist. Field area lies two and one-quarter miles east of Ransom, KS.

5) (Wichita, KS - IOGsi News Service 4/24/06) - FIML Natural Resources, LLC, of Denver (CO), has found new isolated Lansing-Kansas City oil reserves at a wildcat well located five and one-half miles southwest of Stockton, KS. The Williams #11-A is producing an unknown amount of oil in the NE/4 SE/4 of section 16- T8s- R18W in Rooks County. Discovery site is situated three-quarters mile west of Shawnee and LKC oil wells in the U. S. 183 West Field. Total depth of the well is 3682 ft. The new field has been named Harmony Hill Northwest.

6) (Wichita, KS - IOGsi News Service 4/24/06) - Hess Oil Company, of McPherson (KS), is producing newly discovered Mississippian oil reserves at the Shirley 'B' #1 in approximately SE SE NW of section 23- T15s- R23W in Trego County. The remote wildcat well is pumping an undisclosed amount of crude from open hole from 4279 to 4290 ft. Wellsite located nearly one and one-half miles northwest of the Tregsun Field which has produced Lansing-Kansas City and Cherokee oil since the early 1980's. The Smoke Hill Field about two and one-half miles to the west has produced nearly 80,000 barrels of oil from the Mississippian formation. Hess Oil's discovery has been named Smoke Hill East Field.

7) (Wichita, KS - IOGsi News Service 5/3/06) - Palomino Petroleum, Inc., of Newton (KS), has swab tested crude oil at the rate of 17.5 barrels per hour, no water, at the Barrows Trust #1, located in SE SW of section 25- T19s- R25W in Ness County. (IOGsi News Service 4/3/2006). The wildcat well is recovering oil from upper Marmaton perforations from 4196 to 4204 ft. The well filled overnight with 2700 ft. of oil with a small amount of gas surfacing. Operator had earlier treated the zone with 2500 gallons of acid. A pumping unit is currently being installed on the 4530 ft. deep well at site located approximately five and one-quarter miles south of Laird, Kansas. Closest known production is situated five-eighths mile north in the Wesley Field (Mississippian oil).

*(Continued from page 25)*

actual privation, procured dinner, gave the poor fellow twenty dollars and cheered him with the assurance that he would raise a fund for his relief. The promise was redeemed.

At a meeting in Titusville the case was stated and forty-two hundred dollars were subscribed. The money was forwarded to Mrs. Drake, who husbanded it carefully. The terrible recital aroused such a feeling that the Legislature, in 1873, granted Colonel Drake an annuity of fifteen-hundred dollars during his life and his heroic wife's. California had set a good example by giving Colonel Sutter, the discoverer of gold in the mill-race, thirty-five-hundred dollars a year. The late Thaddeus Stevens, 'the great commoner,' hearing that Drake was actually in want, prepared a bill, found among his papers after his death, intending to present it before Congress for an appropriation of two-hundred-and-fifty-thousand dollars for Colonel Drake. In 1870 the family removed to Bethlehem, Pennsylvania. Years of suffering, borne with sublime resignation, closed on the evening of November ninth, 1881, with the release of Edwin L. Drake from this vale of tears. A faithful wife and four children survived the petroleum-pioneer. They lived at Bethlehem until the spring of 1895 and then moved to New England. Colonel Drake was a man of pronounced individuality, affable, genial and kindly. He had few superiors as a story-teller, neither caroused nor swore, and was of unblemished character. He wore a full beard, dressed well, liked a good horse, looked every man straight in the face and his dark eyes sparkled when he talked. Gladly he laid down the heavy burden of a checkered life, with its afflictions and vicissitudes, for the peaceful rest of a humble grave."

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Quite a story, don't you think? I apologize for the length, but I have to add this port script from the same book: "The Drake well declined almost imperceptibly, yielding twelve barrels a day by the close of the year. It stood idle on Sundays and for a week in December. Smith had a light near a tank of oil, the gas from which caught fire and burned the entire rig. This was the first 'oil-fire' in Pennsylvania, but it was destined to have many successors. The total output of the well in 1859 was under eighteen-hundred barrels. One-third of the oil was sold at sixty-five cents a gallon for shipment to Pittsburg. The well produced moderately for two or three years from the first sand, until shut down by low prices, which made it ruinous to pay the royalty of twelve-and-a-half cents a gallon.

To submit your own "tale" please contact  
Bob Stolze at  
(316) 794-3443  
Or Marc Summerville at (316) 267-4379 x103  
msummerville@peoplepc.com

**W**ith the passing of Jack Heathman on May 15, 2006, the industry, and the geological profession, lost one of its most outstanding members and the community lost a true leader.

His exciting life commenced in Shelby, Iowa, but soon after his birth, the family moved to Burns, Wyoming where he received his early education, culminating in his graduation from Burns High School. In 1928, Jack enrolled at the University of Wyoming where for one and half years he had, in his words, “a good time.” After this Jack helped his father in his business for a period, but in 1934 he moved to Denver where he secured a job working in a filling station for \$60 per month. While at the station a former fraternity brother, who was a geologist, pulled into the station to have his car filled. Jack learned that he was making \$125 per month. This gave Jack the impetus to return to the University of Wyoming to study geology. He had a great record at the University, receiving his Bachelor’s and Master’s degrees, and, in the process, receiving the Honor Book – Geology.



Jack interviewed with Anthony Folger of Gulf Oil which led to a geological argument over the concept of “buried hills,” but in spite of this Folger saw something he liked in Jack and hired him on the spot. At Gulf Oil Jack worked with Bob Carmoday, Virgil Cole, and Frank Brooks who was to become a life-long friend. In 1943 he joined Hollow Drilling, later to become Bridgeport Oil. It was at Bridgeport that the first indication of what was to become a characteristic of Jack’s, that of being a “starter,” was demonstrated. He developed and constructed one of the first trailers for well sitting. A year after joining Hollow Drilling, Jack married Lenora Ash, daughter of an oil operator. Frank Brooks was the best man. To this union were born three children: Sherry, who followed in her father’s footsteps and graduated as a geologist and now works for Cessna; Kim, a successful entrepreneur who resides in Reno, Nevada; and Mike who works in the computer industry and resides near San Francisco, CA.

After leaving Bridgeport, Jack embarked on a series of successful ventures: H.H.& B. Drilling Company in 1945, Heathman-Honaker Drilling in 1948, and then Heathman Drilling Company with Bill Bartlett as a partner and Bob Walters as geologist. In 1950 with Bill Graham and Bill Cardwell as partners, Jack formed International Drilling Company to drill in Italy. Soon after the Italian investors hired their personnel, they were out of the drilling business

in Italy. However since they were also registered in Panama, they decided to acquire a rig to drill in Venezuela, which they did until 1953. From 1953 until 1957, Jack operated the Heathman-Seelingson Drilling Company. Later, Jack was involved with exploration in Switzerland. After a visit to the Denver Petroleum Club he, along with Bob Parriott, decided to form a Petroleum Club in Wichita. He and Frank Brooks were among the original twelve who provided the impetus to start the club. Jack served as the Petroleum Club’s first President.

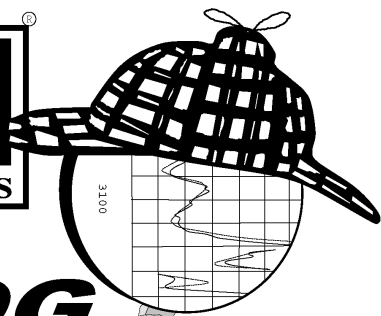
Jack, along with Kean Tilford, operator of Tilford Pharmacies, was instrumental in the founding of St. Stephen’s Episcopal Church. In 1959 Jack, with a number of local investors, formed Underground Vaults and Storage for the preservation of records in the salt mine at Hutchinson. Once again Jack was the first President and served as Chairman of the Board from 1984 until 1988. Jack was among the individuals instrumental in the founding of Independent Day School, later to become Collegiate. At one time Jack, with Jim Ralstin, formed Hydrocarbon Surveys to core drill shallow coal beds to establish structure. Although they were unsuccessful in the drilling of a structure they were able to sell the project to Northern Illinois Gas Company for gas storage.

Jack served the community in a variety of positions including Vice President of the Wichita Country Club, the Board of Directors of the American Cancer Society both at the county and state level, and as Director and Vice President of KIOGA. In his own words “golf and flying” were his recreational interests. His interest in flying might have approached a passion. He had both a private and a commercial license and held instrument and multi-engine ratings. He accumulated over 3900 hours on business trips and family vacations. Jack enjoyed traveling with his wife Lenora who died in January. To best describe Jack’s life in a sentence perhaps would be to say that he was “completely involved and engrossed in a myriad of activities.”

A memorial fund has been established with the Kansas Geological Foundation.

**Recently in the May-June issue of the Kansas Geological Society Bulletin in a Profile, I mistakenly published incorrect information. It was stated that Craig Morris died in prison. He was never in prison I have been informed. I wish to retract the statement and express my deepest apologies to the family for this grievous error.**  
*Bob Cowdery*





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# KGF Memorials

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



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## July 2006

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

## August 2006

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