Production Trends in the Travis Peak of Panola and Rusk Counties, Texas, East Texas Basin

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Note: This article is from the Ark-La-Tex Chapter, and is the first in a series submitted by SIPES Chapters.

ABSTRACT
Travis Peak oil and gas in Panola and Rusk Counties, Texas is found in both structural and stratigraphic traps. The structurally trapped oil and gas is largely confined to the crest of the Sabine Uplift in central Panola County. The stratigraphically trapped oil and gas is produced from westward dipping strata between depths of -7,500 ft. and -5,600 ft. across southwestern Panola and central Rusk Counties.

The production map reveals that wells producing from stratigraphic traps often occur in northwest-southeast trending alignments that may span the entire county. Well log cross sections show that the stratigraphic traps along the trends occur as a series of wedge-outs along a common lineation. The linear production trends are coincident with specific patterns of erosion that are visible on topographic maps. The topographic features are associated with lineaments that are visible on LANDSAT imagery and high altitude photography.

The lineations are thought to represent lines of weakness in the sedimentary cover that may extend to the basement rock and perhaps into the Earth’s crust. The zones of weakness may be created by continental plate motion, tectonic events, or gravity tide tectonics. Regardless of the origin, these linear zones exert a certain amount of control over present day sedimentation and erosion, and they appear to have been in place during Travis Peak deposition actively influencing paleo-sedimentation.

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The following reports on national, state and environmental issues were presented to the SIPES Board of Directors on June 21, 2006 in Lake Tahoe, Nevada by Vice President of National Energy Mike Austin, State Legislative Affairs Chairman George Johnson, and Ray Blackhall, chairman of the SIPES Environmental Committee. The views and opinions expressed are those of the authors. Some of the information presented is in the public domain and is available from a variety of sources; other references were selected by the authors, and are noted below.

**INTRODUCTION**

Crude oil prices remain high and volatile because of increasing global demand coupled with continued political unrest in many areas. By contrast, natural gas prices are anemic due to large storage volumes resulting from a very mild North American winter. Following the early season tropical storm Alberto, the markets are nervous about supply disruptions that could occur during another active hurricane season in the Gulf of Mexico.

**SUPPLY & DEMAND**

In spite of oil prices hovering near all time highs, OPEC ministers kept their output quota unchanged at 28 million BOPD excluding Iraq during their June meeting. The cartel did not adopt a proposal from Venezuelan President Hugo Chavez to formally cut output, set a price ceiling of infinity or shift the pricing of petroleum to euros instead of dollars. However, the Saudi Oil Minister Ali Naimi said the oil market is oversupplied and overpriced. As a whole, OPEC’s output has fallen by about 600,000 BOPD to 27.3 million BOPD. Saudi Arabia, Iran, Venezuela and Nigeria are all producing less than one year ago. Their concern is for a sudden economic slowdown that would erode prices due to high storage levels. In April, OPEC President Edmund Daukoru stated that $60 oil prices would not harm world economic growth.

Canadian oil sand reserves are the world’s second largest after Saudi Arabia. Production for 2006 is expected to reach 1.2 million BOPD. The Canadian Association of Pipeline Producers projects output to reach 1.9 million BOPD in 2011 and 2.7 million BOPD by 2015. Companies with significant expenditures include Total, Chevron, Shell, ExxonMobil, ConocoPhillips, and Devon. Predictions are for between $94 and $125 billion expenditures between now and 2015. In addition, pipelines are scrambling to obtain market share and connect the crude with refineries. Considering the high costs to produce this resource, these companies must have a bullish price projection.

For conventional sources, 90% of the world’s untapped oil reserves are in the hands of governments or state-owned oil companies, many of which are politically unstable. The governments of some Latin American countries are driven by popular demand to limit or remove foreign oil company’s presence in their natural resource extraction. The instability of these sources has recently been seen in Ecuador, Bolivia, and Venezuela. In April, Hugo Chavez of Venezuela seized Total and ENI oilfields after the companies refused to accept a new joint venture scheme that reduced their share of production. Sixteen other oil companies accepted the changes and signed migration agreements. Five fields were voluntarily given up by other producers.

In May, Ecuador expelled OXY over a contract dispute because they sold drilling rights to Encana without government approval. The government revoked the contract and demanded that local operations of the 100,000 BOPD producing fields be handed over to Petroecuador.

On May 1, Bolivia nationalized its gas fields, dispatched troops and ordered foreign firms to renegotiate contracts. Refineries were also claimed by the Bolivian troops. Even 54 gas stations owned by private Bolivian citizens were seized. Petrobras was obligated to turn over 82% of their production to the Bolivian national company, approximately $300 million of projected revenues for 2007.

In Nigeria, local militants continue to disrupt supplies. Their demands are for more control over oil resources and compensation payments of over $1 billion from companies like Royal Dutch Shell for environmental damages. After a recent visit by Chinese President Hu Jintao, the militants

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threatened to treat any Chinese citizens found in oil installations as thieves. "The Chinese government by investing in stolen crude places its citizens in our line of fire." In early June, eight foreign workers were kidnapped 40 miles offshore Nigeria. This marked the farthest offshore facility rebels had attacked to date.

In Iran, the political discussions surrounding nuclear enrichment continue to put a cloud over the reliability of their oil supply. The UN Security Council's demand that Iran suspend its production of enriched uranium was not accepted. However, Iran's oil minister stated that Iran does not intend to withhold production as a political lever. Iranian production represents 5% of the global supply.

Gulf of Mexico production is still curtailed at the beginning of another hurricane season. Federal officials reported that on June 1, 22% of crude oil production and 13% of natural gas production remained offline due to damage from hurricanes Katrina and Rita.

World petroleum consumption growth is projected at 1.7 million BOPD in 2006 and 1.9 million BOPD in 2007. That is 85.6 million BOPD in 2006 and 87.5 million BOPD in 2007. Most of this growth will be met by non-OPEC supplies. Large new projects outside of the USA are located in Angola 500,000 BOPD, Caspian Sea 400,000 BOPD, Canada 200,000 BOPD and Brazil 200,000 BOPD. These increases will be partially offset by declines in many mature fields. Domestic crude production is projected to increase to 5.3 million BOPD in 2006 and 5.6 million BOPD in 2007. Most of this increase is expected from the Mars, Thunder Horse and Atlantis platforms in the Gulf of Mexico. The IEA predicts world oil consumption to increase to 115 million BOPD by 2030.

Chinese consumption is projected to grow by 5.3% in 2006 while its economy expands by 9-10%. Growth demand in the Middle East has increased 13% since 2003, nearly the same as China. Currently, the Middle East consumes 6.1 million BOPD, just behind China's 6.6 million BOPD.

Both China's and India's economies continue to grow rapidly. In the first quarter, 2006, India's economic growth was reported at 9.3%, China's was 10.2%. Considering that the combined population of China and India is eight times that of the USA, this growth is a key factor in projecting world petroleum demand. In Beijing, China, nearly 1000 new cars hit the streets daily. Chinese car sales were up 54% in the first quarter of 2006, compared to the same period in 2005. Currently, China has 7 cars for every 1000 people, roughly the same level as the U.S. in 1915. At the current pace, by 2020, China will have 130 million cars, up from 33 million today. This will have a large impact on global oil demand.

Total U.S. consumption is projected at 20.84 million BOPD in 2006 and 21.28 million BOPD in 2007, a 0.9 and 2.1 percent increase respectively.

Domestic natural gas production growth is projected at 0.7% in 2006 and 1.2% in 2007. Demand is estimated to be 21.74 TCF in 2006 and 22.56 TCF in 2007. Working gas in storage was 2397 BCF on Friday, June 9. This is 451 BCF higher than 2005 and 659 BCF above the 5-year average. The EIA claims the U.S. commercial storage facilities can hold 4.1 TCF. Concern is that storage could fill up a month or two prior to the beginning of winter withdrawals, causing havoc for producers. Electrical demand for air conditioning and hurricane disruptions are the brakes on filling storage from now until November.

LNG imports are expected to increase to 710 BCF in 2006 and 950 BCF in 2007, from 631 BCF in 2005 according to EIA. In late April, three LNG projects received favorable final environmental reviews from FERC. The Calvert County, Maryland, Cove Point LNG terminal capacity expansion would increase daily rates to 1.8 BCF from 1 BCF. BP's proposed New Jersey Crown Landing terminal project would have a baseload of 1.2 BCFD and a maximum 1.4 BCFD rate. Sempra Energy's Port Arthur LNG terminal would deliver 1.5 BCDF initially in 2008 and an additional 1.5 BCFD as early as 2010. Meanwhile, Qatar Petroleum, ConocoPhillips and Shell have begun construction of LNG plants in Qatar targeted for U.S. delivery. Initial deliveries are targeted for 2009 with a 2.8 BCDF capacity.

Some pipelines are betting that the east coast LNG terminals will not be built or will be delayed for some time. Duke Energy plans to partner with CenterPoint Energy to build a 1,600 mile pipeline from Texas to Pennsylvania. Also, Kinder Morgan Energy Partners and Sempra Energy plan to build a $4 billion, 1,300-mile pipeline from the Rockies to Ohio. Combined the pipelines should deliver as much as 3.5 BCDF to the east coast markets by 2009.

Total U.S. energy demand is projected at 99.8 quadrillion BTU for 2006, of which, 6.4% is from renewable sources.

OIL & GAS PRICES

Limited surplus capacity, primarily located in Saudi Arabia, existing supply problems in Nigeria, Iran, Iraq, and Venezuela, along with expectations of an active hurricane season should keep crude prices in the current high range for the next several months. The EIA projects WTI prices to average $68 in both 2006 and 2007. Crude prices closed at $75.17 on the NY Mercantile Exchange on April 21, an all time high. The only damper on prices would be an economic slowdown in Asia, which is not currently on the horizon.

Ethanol is being touted as a clean and available alternative to crude oil. In April, the spot price of ethanol was about $2.65 per gallon, which has nearly doubled in the past year. In the U.S., corn ethanol production benefits from a 51 cent per gallon subsidy. Sugarcane growers are also interested in ethanol, but the reported breakeven price is about $2.50 a gallon. At that price growers would get the same returns from ethanol that they get from sugarcane.

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Henry Hub prices are predicted to average $7.74 in 2006 and $8.81 in 2007. They also project $10 prices in December and January this winter. The recent 13% price jump in mid-June was the result of a lower than predicted storage fill of 77 BCF for the week ended June 9.

**U.S. ECONOMY**

The Commerce Department reported that the GDP rose at a 4.8% annual rate in the first quarter of 2006 following a weaker 1.7% in the fourth quarter of 2005. This was the largest quarterly advance since the third quarter of 2003. Many media reports claim that high energy prices are reducing disposable income and will slow the economy. However, economist Brian Wesbury points out that even though U.S. energy costs have risen by $244 billion since 2001, incomes have risen by $1.7 trillion. This leaves Americans with nearly $1.5 trillion at their disposal after they have filled up.

Consumer prices increased by 0.4% in May and are up 4.2% from a year earlier. Ominously, core prices which exclude food and energy rose 0.3% in May and are up 2.4% from a year ago.

A possible brake on the economy will be higher borrowing costs. Fed Chairman Ben Bernanke will battle rising inflation with additional rate increases. It is extremely likely that the Fed will increase the key lending rate to 5.25% at their June 28-29 meeting. Bloomberg reports that nearly 2/3 of the Chicago Board of Trade show investors expect an additional rate hike to 5.5% at the August Fed meeting.

**RIGS, SEISMIC CREWS AND TRAINED PERSONNEL**

On June 16, the U.S. rig count was 1672 up 314 rigs from a year earlier. This is approaching an increase of one rig per day. The question remains: Who will run these rigs? Rigzone reports that average day rates for semisubs and drillships as a group have risen 54% in the past year. Rigzone reports that nearly 2/3 of the Chicago Board of Trade show investors expect an additional rate hike to 5.5% at the August Fed meeting.

**North American Rig Count**

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<th>06/16/06</th>
<th>06/09/06</th>
<th>06/17/06</th>
<th>Change Weekly</th>
<th>Change Annual</th>
<th>Percent Change Weekly</th>
<th>Percent Change Annual</th>
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<tbody>
<tr>
<td>Total U.S.</td>
<td>1672</td>
<td>1661</td>
<td>1358</td>
<td>11</td>
<td>314</td>
<td>0.7%</td>
<td>23.1%</td>
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<tr>
<td>Offshore</td>
<td>94</td>
<td>97</td>
<td>95</td>
<td>-3</td>
<td>-1</td>
<td>-3.2%</td>
<td>-1.1%</td>
</tr>
<tr>
<td>Land</td>
<td>1578</td>
<td>1564</td>
<td>1263</td>
<td>14</td>
<td>315</td>
<td>0.9%</td>
<td>24.9%</td>
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<td>Inland W. atmosphere</td>
<td>25</td>
<td>25</td>
<td>23</td>
<td>0</td>
<td>2</td>
<td>0.0%</td>
<td>8.7%</td>
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On April 1, there were 58 seismic crews working in the U.S. 9 more than 1 year ago, an 18% increase. An additional 8 crews were reported as available but not working. As a whole, seismic crews are running the largest backlog of projects in recent memory. Many have booked jobs more than one year in advance. The Alberta oil sand play is experiencing its own labor crunch. Some companies are altering their business plans because they can’t hire enough people to carry out projects. Others are importing workers from abroad. John Lau, chief executive of Husky Energy, Inc. estimates that Alberta’s oil industry has about a 75,000 to 100,000 skilled laborers shortage.

Even OPEC is concerned about cost increases. In early April, OPEC ministers said soaring commodity and raw material prices are increasing the cost of oil and gas projects by up to three times. They warned that costs could curtail some new energy production projects.

**MERGERS, ACQUISITIONS & POLITICS**

Washington continues to rumble about high energy costs. The rumbling reached a fever pitch shortly after quarterly profits were reported in April for the 1st quarter of 2006. Reported profits were:
- Shell - $6.89 billion, 3.3% increase
- Exxon - $8.4 billion, 7% increase
- Conoco-Phillips – $3.29 billion, 13% increase
- Chevron - $4 billion, 49% increase
- BP - $5.62 billion, 15% decrease

Amid these reports, President Bush called for a deeper investigation into whether oil companies are illegally manipulating prices, he directed the EPA to ease some regulations for gasoline, and he briefly halted contributions to the Strategic Petroleum Reserve. Not surprisingly, this political grandstanding had little effect on the cost of a gallon of gas. Left out of the beltway limelight were earnings reports from PetroChina and CNOOC. For the first quarter, CNOOC’s revenues surged 45% from the previous year. PetroChina announced 2005 earnings of $16.6 billion, a 28.4% increase from 2004. Perhaps President Bush and Congress should extend their investigation into price gouging by these foreign companies as well.

In late May, the House passed a stand alone bill to allow drilling in a portion of ANWR. The bill has no chance of passing the Senate because of a Democratic filibuster. The House rejected an attempt to end a quarter-century ban on oil and natural gas drilling in 85% of the country’s coastal waters despite arguments that the new supplies are needed to lower energy costs. The defeat was led by lawmakers from Florida and California that contended drilling would negatively impact their tourism industry.

The Congress refuses to accept the fact that supply and demand are driving up energy prices, not the oil companies. As Thomas Sowell stated in a May 10 editorial, “Nothing is easier, or more emotionally satisfying, than blaming high prices on those who charge them, rather than on those who cause them.” Sowell also pointed out that "the government collects far more in taxes on every gallon of gasoline than the oil companies collect in profits. The very politicians who have piled tax after tax on gasoline over the years, and voted to prohibit oil drilling offshore or in Alaska, and who have made it impossible to (Continued)
build a single oil refinery in decades, are all over the television screens denouncing the oil companies."

Recent acquisitions include:
- Shell Canada agreed to acquire BlackRock Ventures, Inc. for $2.4 billion. BlackRock's primary assets are in the oil sands play of Alberta. On the basis of proved plus probable oil reserves, the offer represents $11.45 per barrel for oil in the ground.
- Energy Partners make an unsolicited offer to purchase Stone Energy Corp. for $1.43 billion in late May.
- Kinder Morgan's top management proposed to take the pipeline company private in a $13.5 billion proposal that would be the largest management buyout in history, and also on the most leveraged.
- Citic Group, a state-owned conglomerate in China, is offering $2.2 billion to buy Nations Energy Co., based in Alberta, Canada. The primary asset is a field in Kazakhstan, Karazhanbas, which produced 41,000 BOPD in 2005. This deal will feed fears that Western energy companies find it difficult to compete with state-controlled and private companies in China and India. It is not expected that the Canadian government will interfere with this sale, unlike the U.S. government's role in the UNOCAL sale last summer.

Another recent example of Chinese government involvement in energy acquisitions occurred in late April. Chinese President Hu Jintao committed to $4 billion of infrastructure improvements in Nigeria in exchange for four oil-drilling licenses. The deal calls for China to buy a controlling stake in Nigeria's 110,000 BOPD Kaduna refinery and to build a railroad, power stations, cement factory, housing and shopping malls. In exchange, Nigeria will offer right of first refusal to state-run China National Petroleum Corp. on four oil-exploration blocks.

Overall, while U.S. politicians hold press conferences claiming price gouging and market manipulation by Big Oil, the governments of China and India are aggressively acquiring oil and gas assets to feed their increasing demand for energy. $3/gallon gas may look like the good old days if we don't change the focus of our discussions from the high cost of energy to the availability of energy supply.

**STATE LEGISLATIVE NEWS**

**TEXAS**

The governor’s Oilfield Cleanup Fund Advisory Committee recommended that operators who miss P-5 renewal deadlines should be penalized administratively, but not fined. The recommendation was passed along to the legislature during the Committee’s April quarterly meeting. Texas Railroad Commission officials had asked for stiff fines for those who let their permits lapse. The RRC’s Oil and Gas Division, which handles permits, is frustrated that an average of 150 operators don’t renew within the guidelines. Representative Buddy West, the OFCUF Committee Chair, will carry legislation into the next session which should make the penalty system a reality.

Texas Railroad Commission Michael L. Williams, who chairs the FutureGen Texas Advisory Board, said a bill approved by the Texas Legislature improves Texas’ bid to become home to FutureGen, the $1 billion proposal by the U.S. Department of Energy to build and operate a near-zero emission power plant. **House Bill 149** makes Texas’ proposal much more attractive because the state of Texas will provide indemnification for the carbon dioxide that will be permanently stored in deep underground formations, which is a key objective of the FutureGen project. This legislation moves Texas significantly ahead in the national competition for FutureGen, because no other has identified a suitable answer to this important question. Texas is the number one consumer of coal in the nation. We have a huge supply, and it is an affordable fuel source. FutureGen will be a great, clean supplement to the state’s natural gas-fired electric generation.

At its recent Midyear Summit Meeting, the Interstate Oil and Gas Compact Commission (IOGCC) named Texas Railroad Commissioner Victor G. Carrillo as its vice chairman for a one-year term beginning in October 2006. Congressionally charted in 1935, the IOGCC is the largest compact of states, and represents the regulatory and policy interests of the nation’s petroleum-producing states. Its mission is to champion the efficient recovery of domestic oil and natural gas resources while protecting health, safety, and the environment.

**OKLAHOMA**

**House Bill 1592** (Reduction of Interest Due on Late Paid Royalties) died in the Senate Energy Committee. This bill was a request by Chesapeake, and was similar to a bill the company requested last year. Chesapeake asserts the interest on late paid royalties should reflect the market interest rate. Contrary to these claims, the requirement to pay interest on late payment of royalties was passed in 1982 as an incentive to pay on time. Reduction of the interest rate would decrease the incentive to pay timely. This bill did not receive a hearing in the Senate Energy Committee and could be revived in 2006.

**Senate Bill 309** (Providing Exemption from Gross Production Taxes for Economically At-Risk Wells) was signed by the governor. This bill was requested by OIPA. It extended a previous exemption from gross production taxes for wells that might otherwise be plugged because they are not economical. The removal of the price caps increased the benefit of this legislation to the industry.

**House Bill 1587** (Moving Surface Damage Actions from District Court to the Oklahoma Corporation Commission) died in the Senate Energy Committee. This is the same bill brought last year by OIPA, and was a request bill by OIPA again this year. The bill did not receive a hearing in the Senate Energy Committee, and could be revived in 2006.

(Continued)
NEW MEXICO

New Mexico’s legislative session closed on February 16 this year without passing a Surface Owner’s Protection Act (HB437/SB631). Despite the strong leadership from the legislation’s sponsors Rep. Any Nunez from Hatch, and Senator Cisco McSorby from Bernalillo, the original version of the legislation was watered-down by the oil and gas industry to such an extent that it ultimately became a negative for folks on the ground. Significant provisions that were stripped from the bill by industry included the bond per well amount, brought down from $25,000 to $2,500, and damages provisions.

Increased tax revenues from oil and gas production allowed New Mexico lawmakers to approve $762.5 million in extra money for construction projects, and to begin financing a commercial spaceport that could launch commercial satellites, or one day send tourists rocketing outside Earth’s atmosphere.

COLORADO

Colorado’s legislative session is in full swing, and in the thick of things is Representative Kathleen Cury’s surface owner damages bill (HB 1185). The bill was amended in the Transportation and Energy Committee, largely based upon industry efforts led by BP. The bill would require a $15,000 surface damages bond per well and negotiations over surface use agreement. However, the damages covered by the bill have been whittled down to include only those beyond the oil and gas operator’s “reasonable use,” which is the current state of the law in Colorado already. The bill would also put in place the option to use appraisers to establish the amount of surface damages. It has now passed two committees in the House and awaits action by the full house. It must then to the Senate for consideration. Efforts to amend the bill to make it stronger are still being considered. The wild card is probably Governor Owens. It isn’t clear if he will sign the bill, even if it makes it to his desk.

KANSAS

House Bill 2104, a recommendation of the Kansas Energy Council in 2005 and 2006, amends Article 9 of the uniform Commercial Code to restore a priority creditor status for sellers of oil and gas production when a purchaser is in bankruptcy. Such an amendment would follow the language of the former K.S.A. 84-9-319, which was repealed in 2000. Originally introduced in 2005, the bill passed the House 123 to 0 on February 23, 2005. It was referred to the Senate Judiciary Committee on February 24, 2005, and passed the Senate 40 to 0, as amended, on March 15, 2006.

House Bill 2673, an act requiring certain information be provided to oil and gas royalty interest owners regarding royalty payments was introduced by the Utilities Committee and passed both the House and Senate. It was signed into law by the governor on March 1, 2006.

House Bill 2757, an act requiring notification of oil and gas spills to landowners was introduced by the Environment Committee on January 27. It passed the committee and the House. The bill was referred to the Senate Natural Resources Committee in February and hearings were sent for March 3. The bill passed the Senate on March 9, and was signed into law by the governor on March 21.

WYOMING

Federally-owned oil, gas, coal, coalbed methane and oil shale are all “leasable” minerals. The BLM has discretion to lease these minerals, generating revenue for the state, tribes and federal government. The MLA does not specifically mention coalbed methane, but it is generally leased as part of the gas resource. All these minerals were originally “locatable” minerals, developed for free and federal lands under the General Mining Law of 1872. The Mineral Leasing Act of 1920 (MLA) removed the energy minerals (coal, oil, oil shale, gilsonite, and gas) from the “free access” rule of the 1872 Mining Law. The 1872 Mining Law still allows development of hardrock minerals like gold, silver and copper without payment of any lease royalty.

ENVIRONMENTAL REPORTS

This is a particularly interesting time to be presenting a report, and likely my last in this capacity, on environmental issues, considering the timing of the Al Gore movie, An Inconvenient Truth, a study on global warming, with a bit of Mr. Gore’s personal life thrown in. If ever an issue has become more galvanized, where both sides are “digging in,” perhaps, we are seeing it now. This report will continue to take as near to a “middle of the road” approach as (Continued)
possible, so as to not further fan flames on either side. With headlines like "Scare of the Century" (remember, the century is young) and "day of reckoning," this issue has the attention of the mainstream media, and therefore the attention of the general public, so it is no longer purely an issue for scientific debate.

Al Gore was our vice-president and had aspirations for the top job. He is not one to be taken lightly and still carries some political clout even though he presently professes to not be interested in higher office, his agenda having changed to an issue he considers far more important. Having as yet not seen his movie, we can only look at what the media has garnered from it. Al is donating 100% of the profits from his book and movie to "a bipartisan educational campaign to further spread the message about global warming."

The main support for Mr. Gore’s contention is the evidence he presents from shrinking glaciers around the globe, measurements of the Antarctic ice sheet, and the ice loss from the Greenland ice sheet. Pictures are an effective way to demonstrate this approach. There are enough studies around to support just about anything. No doubt about it, at the present rate Glacier National Park could turn out to be the park that used to have glaciers. Ocean surface temperatures fluctuate, and hurricanes could become more common and seriously stronger. According to Mr. Gore, sea level could rise twenty feet before the end of this century. It makes great headlines, sells media and advertising and sounds pretty sensational. But how much of this "fact" is in fact fact? And, more importantly, how much of global warming is caused by humans and by carbon dioxide from our burning of fossil fuels, something often called the main culprit?

Let us take a look first at Antarctica. Part of the Antarctic Peninsula ice sheet did break off, and there has been some measurable warming of the sea in that area, an area comprising less than two percent of the continent’s total "land" mass. By contrast, the warmer sea has produced more clouds, thus more precipitation, and the change has been more measured snowfall in the interior and a net gain of ice for the continent. Net gain in ice means less water in the ocean, not more. More snowfall in the arctic regions is a precursor to an ice age. It takes a warming period prior to a glaciation for the vast amounts of snow to fall that build up into continental glaciers. Antarctica has the driest place on Earth, not the wettest. Perhaps we should be more worried that we will trigger another glacial period. We are due for one according to some scientists.

Much the same can be said for Greenland, where the same phenomenon is taking place. The margins of Greenland are losing ice, again a fact often cited by global warming enthusiasts, but satellite measurements indicate that the interior is gaining ice. It is interesting to note that temperature records indicate that between 1920 and 1930, Greenland’s rate of warming was as much as fifty percent higher than the rate between 1995 and 2005. That was before the widespread use of fossil fuels supposedly triggered the problem. After 1930 the temperature records appear normal again. Remember ice core evidence too, as presented in an earlier report. Ice cores indicate that previous interglacial periods were warmer than the one we are in now and that areas of the Arctic have been much warmer in the last one thousand years than they are today.

Has skepticism among scientists been replaced by widespread belief that humans and our fossil fuel consumption are causing an overabundance of carbon dioxide and other greenhouse gases, thus causing the world to heat up, in turn drowning shorelines worldwide before the end of the century? Most media would have us believe this. Or is it more practical to jump on the proverbial bandwagon? Controversy, hysteria, tragedy, suffering, and bad news in general sell more newspapers, books, and television advertising than pleasant, non-controversial stories. Government and other study grants are much more easily procured for research on issues of public concern. Carbon dioxide, because of its minute percentage as a constituent of the atmosphere, may not even be as big a factor as methane. Cow flatulence may be a major contributor to methane levels. Solve that one for me. Vegetarians unite against cow flatulence. I’m not even a vegetarian, but I’m applying for the grant.

Surface and upper atmospheric temperatures have risen, particularly in the last ten to twenty years. The measurements are there, and many studies are in progress, so this is undeniable. But even if the human effect is causing this period of global warming that does not answer the question as to whether or not legislation can change the situation or even slow it down. For that matter should we? The boon to world wide agriculture of a slightly warmer climate may be a benefit to the steadily growing human population. Besides, natural phenomena may cool things off in a few years anyway and we all know that fossil fuels will not last forever. Blaming all of global warming on fossil fuels used for transportation, industrial output, etc. is another convenient way to blame things on big business and particularly energy companies, and a way to legislate.

As responsible earth scientists we should all do everything we can to be well-informed and pro-active on the subject of global warming. Denial is not a good stance, nor is complete acceptance. Remember that in June of 2005, the U.S. National Academy of Sciences along with the national scientific academies of the United Kingdom, Canada, Japan, Russia, China, Brazil, Germany, France, Italy and Spain issued the following statement: "The scientific understanding of climate change is now sufficiently clear to justify nations taking prompt action, and a lack of full scientific certainty about some aspects of climate change is not a reason for delaying an immediate response that will at reasonable cost prevent dangerous anthropogenic interference with the climate system." Just wish they had defined reasonable cost.

(Continued)
Alternative Fuels for a Cleaner Environment

Wind power has been a fast-growing sector of the energy business. In fact, wind turbine deliveries are now about two years out. A typical wind generating machine stands nearly three hundred feet tall with blades over one hundred feet in length. These machines need about a fifteen mile per hour breeze to generate efficiently, and production falls disproportionately rapidly as wind speed decreases. Previous reports have focused on some of the problems associated with wind power such as the large footprint for a wind farm and associated bird and bat death rates. But wind power saw a thirty-five percent increase in 2005, with over three billion dollars of new equipment installed in twenty-two states adding 2500 megawatts of generating capacity. Some of the advantages of wind power are obvious including the fact that it is clean, renewable, leaves no waste products, and is readily available. In places where it will eventually replace some coal fired plants, the benefits are obvious.

Biofuels in the United States are still lagging and production is still at relatively low rates, although U.S. Energy Information data shows that the U.S. ethanol industry set a new monthly production record of 302,000 barrels-per-day in February 2006, representing a 14,000 barrels-per-day increase from January, and a 57,000 barrels-per-day increase from February 2005. The increase in ethanol production is important to meet rising demand resulting from ongoing environmental and legal problems associated with the clean-air fuel additive MTBE. In April hearings on Capitol Hill, U.S. senators discussed extending federal tax credits and import tariffs to provide long-term security to ethanol manufacturers. A 51 cents-per-gallon federal Volumetric Ethanol Excise Tax Credit took effect in January 2005 and is currently scheduled to expire in 2010. A 54 cents-per-gallon tariff on ethanol imports is scheduled to expire in 2007. It is interesting to note that Brazil now produces over half of the fuel used in its cars from biofuels.

Germany developed a process during World War II to extract diesel from coal. Using a similar process, dissolved organic waste can be heated and passed over a cobalt iron catalyst to produce synthetic diesel. A pilot project in the northeast employing similar synfuels technology is producing synthetic oil from poultry wastes. The technology is there, and ethanol substitution for more toxic gasoline additives has been legislated. In April the Colorado Senate approved a bill requiring seventy-five percent of all gasoline sold in the state starting in November to contain ten percent ethanol. The Wisconsin Senate in March narrowly defeated legislation that would have required all regular-grade gasoline sold in the state to contain at least 10 percent ethanol. In Houston, ethanol is showing up at the pumps in greater percentages. Converting biomass and waste to synthetic fuel does not have the glamour of drilling wells for fossil fuels so energy companies will be slow to convert. The real answer may lie in more efficient conversion from bio-engineered plants.

Oil from oil shales is a known technology that will continue to grow if energy prices remain high. Unlike cleaner alternatives, oil shale extraction does have real problems including the lack of a viable technology for economic recovery or extraction, the high cost of mining, and environmentally acceptable ways to dispose of the waste rock.

Many thanks to the members listed below for their continuing support of our society

**Oil Finder – $1000**
- James L. Allen — Houston, TX
- Michael N. Austin — Broomfield, CO
- Scott G. Heape — Dallas, TX
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- Susan M. Golden — Golden, CO
- Wesley L. Lilley — Centennial, CO
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- Wilbur E. McMurtry — Oklahoma City, OK
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- J. Donald Haynes — Wimberley, TX
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- Douglas H. McGinness III — Wichita, KS
- Wilbur E. McMurtry — Oklahoma City, OK
The Dallas Chapter began the second quarter with much anticipation for the upcoming events which included our annual Mexican Fiesta and hosting the SIPES 43rd Annual Meeting in South Lake Tahoe, Nevada.

In April, the featured speaker was Doug Wight, Vice President Corporate Development of CDX Gas LLC, Dallas, Texas. His talk centered around the use of his company’s patented Z-Pinnate Horizontal Drilling and Completion System which was developed for coal and shale reservoirs that have low production rates and low recovery factors. A Z-Pinnate well consists of one or more main laterals with several side laterals. More than 40 U.S. patents have been granted developing this system. Pinnate means “veins of a leaf” or “feather like” and in map view this aptly describes the lateral configuration. There are numerous advantages associated with this system. A Z-Pinnate system drains a reservoir more uniformly and efficiently in a shorter period of time with a higher EUR. A Z-Pinnate well drilled into a coal seam can deplete over 1,000 acres from a single location and recover 85 to 90 percent of gas in place (GIP). Such a system employed in the Appalachian Basin of West Virginia recovered 92 percent of GIP versus 11 to 20 percent of GIP for a vertical well. Also, by minimizing the dewatering period, Z-Pinnate wells reach maximum production in a matter of days. Production profiles show nearly 75 percent of cumulative production is recovered in the first 24 months. This dramatically improves project economics and increases the present value of a project. In addition to being more efficient, this technique requires less surface facilities and is therefore more environmentally friendly. CDX has successfully employed the Z-Pinnate System in several U.S. basins including the Appalachian Basin, the Arkoma Basin, the San Juan Basin and also in Canada.

The annual Mexican Fiesta dinner was held at Royal Oaks Country Club in lieu of the May luncheon meeting. Members and their guests feasted on traditional Mexican fare. Our activities chairman, David Martineau, #3049, added additional fanfare with door prizes and an entertaining speaker, Michael Heald. He combined rock climbing and geology through the lens of a camera.

June found us packing up and heading west in order to host the SIPES 43rd Annual Meeting from June 21-23, 2006, in South Lake Tahoe, Nevada. James Henderson, #1005, was the convention chairman and did an outstanding job organizing and coordinating the Annual Meeting technical sessions. Also assisting were Woody Leel, #2980, and spouse Lynne, Cliff Walker, #2096, and spouse Sandy, Ed Gonzales, #2903, Jerry Watkins, #2681, and SIPES National Office Assistant Katie Ruvalcaba. Although the technical sessions focused on Nevada and the Great Basin, other topics addressed included a Deep Woodbine play in Polk County, Texas, the history of California gold mining, the New Albany Shale play in the Illinois Basin and the Barnett Shale play in Texas. The most entertaining, colorful and controversial paper was given by Alan Chamberlain, Ph.D. titled “Great Basin Elephant Hunt.” Years of detailed field work and past experience with major oil companies enabled Chamberlain to develop maps of Nevada’s geology and develop a detailed framework of the complicated Paleozoic structure and stratigraphy of the Great Basin. He says traditional thinking of this province as an extensional basin is inaccurate and has retarded exploration. His work has delineated numerous compressional features and he has identified several large thrust related prospects.

The All-Convention luncheon speaker was Brent McDaniel, Sr. vice president of ATMOS Energy. His presentation addressed several timely (Continued)
topics. Politically, our elected officials seem more concerned about punishing the oil companies for excessive profits than establishing a coherent energy policy for the future. While China and India are buying oil and gas assets in Nigeria, and Venezuela and Cuba are teaming up to drill offshore Cuba, the U.S. Congress is considering reinstating the windfall profits tax.

We are still recovering from hurricanes Rita and Katrina with respect to supply interruption. The period August 26, 2005 – August 29, 2005 saw Gulf of Mexico production decline from 13BCF/D to less than 4 BCF/D. Shut in gas combined with early December cold triggered an increase in gas price and the fear of supply security. A mild winter helped alleviate the situation. Although most Gulf of Mexico gas is back on line, 1.3 BCF/D is permanently lost.

We currently have a surplus of natural gas. There is 12.4 TCF in storage and this is up 451 BCF over last year and 659 BCF above the five-year average. This is in part the result of a decline in industrial gas usage. Gas prices should remain in the $6.00 - $8.00/ MCF range with much volatility.

Two additional sources of natural gas include LNG and what Brent refers to as Key Resource Plays. LNG is growing but has infrastructure challenges with pipeline transmission. On a peak day, east coast ports of entry could not offload LNG due to capacity constraints which would result in higher LNG prices. Key Resource Plays refers to both conventional and unconventional gas exploration currently occurring in numerous basins throughout the U.S. Nearby examples would be the Barnett Shale in the Ft. Worth Basin and the Bossier Sand in the East Texas Basin.

We are already looking forward to the SIPES 44th Annual Meeting June 18–20, 2007, in Monterey, California.

Hugh Pendery
Secretary
DENVER

Spring was a busy time for the SIPES Denver Chapter. In addition to an always interesting lineup of luncheon talks, the chapter took an important step in expanding its presence in the Denver oil and gas community by sponsoring a professional seminar in conjunction with the SIPES Foundation.

Dr. "Trobe" Grose shares his wisdom on Yellowstone National Park with the April luncheon crowd of the Denver SIPES Chapter.

As in the past, the SIPES Denver Chapter held their monthly luncheon meetings at the Wynkoop Brewery in Lower Downtown Denver, located just blocks from Coors Field and the home of the Colorado Rockies. The speaker for the April luncheon was Professor Thomas L. T. Grose of the Colorado School of Mines Department of Geology and Geological Engineering. Dr. Grose spoke on the subject of Yellowstone National Park and addressed some of the myths and hype being circulated in the media today about the potential for a catastrophic volcanic event in the park. The theme of Dr. Grose's talk was whether geology is being forsaken for entertainment in the news, and he gave an informative and factual accounting of the current state of geologic work in Yellowstone. Professor Grose received the B.S. and M.S. from the University of Washington and the Ph.D. from Stanford University. He taught at The Colorado College before joining the Colorado Mines faculty in 1964. Teaching, research, and consulting have consistently involved field mapping, and in recent years he has mapped over 12,000 square miles mainly in volcanic terrains of the Cascades and Sierra Nevada.

In early May, the Denver Chapter was proud to sponsor, in conjunction with the SIPES Foundation, a professional seminar titled "Contracts for Explorationists, or Hey - I Thought You Said I Got a 3% Override!" The half-day workshop was presented by SIPES member Steve Reynolds, #2852, vice president of Infinity Oil and Gas of Denver. The seminar was open to all oil and gas professionals in the Denver area, and even attracted attendees from out of state! The seminar attendance reached the registration limit, and 2/3rds of the attendees were non-SIPES members. This accomplished one of the main goals of holding the seminar which was to expand the presence of SIPES in the Denver oil and gas community, and impress upon those attending the benefits of a membership in SIPES. The chapter is especially appreciative of the hard work and expertise put forth by Steve in presenting this course. It is the hope of the Denver chapter to make the sponsorship of some type of professional seminar an annual event.

Later in May, SIPES member Mike Pollok, #2512, of Oklahoma City came to Denver to present a luncheon talk on the Tonkawa sandstone of northern Oklahoma. The Tonkawa Sandstone in northern Oklahoma and southern Kansas can be quite prolific, and fields have been found ranging in size from 5 BCF to 100 BCF. Mike spoke on the geologic characteristics of the play pointing out that regional mapping of the sand has identified shale channels that can serve as trapping components. Mike Pollok received his B.S. in geology from the University of Oklahoma in 1986 and has worked as a non-consulting independent petroleum geologist since 1987. Mike explores for oil and gas on the northern shelf of the Anadarko Basin and in Southern and Southwest Kansas.

Mike Pollok presenting a talk on the Tonkawa sandstone of northern Oklahoma at the May meeting.

The chapter took a break this summer and did not schedule luncheon meetings in June or July. Denver Membership Chairman Bill Goff was pleased to report that as of June there were fifteen new member applications out and in some stage of being completed. The efforts of the Denver chapter this year in putting on an informative series of luncheon talks as well as a pertinent professional seminar appears to be working well to garner newfound attention to SIPES in the Denver area. An exciting fall lineup of luncheon talks looks to continue this trend.

Bill Miller
Secretary
MIDLAND

Richard Mason, publisher of "The Land Rig Newsletter," a monthly publication that provides trends analyses for the land-based contract drilling sector of the oil and gas industry was our April luncheon speaker.

Mr. Mason has written articles for a variety of oil and gas trade publications over the last decade, and previously worked ten years as a field historian for the Texas Tech University archives, collecting historical materials on petroleum, agriculture, and irrigation development in the American Southwest.

He also spent a year in Midland, Texas as director for the Nita Stewart Haley Memorial Library, a privately held historical archive. Mr. Mason has worked in various capacities for four West Texas newspapers, including the "Midland Reporter Telegram," and the "San Angelo Standard." He is a 1974 graduate of Ohio University with a bachelor of arts degree, with honors, in history. Continental Land & Fur Company, Inc. was introduced as the April meeting sponsor.

Our May 17 luncheon featured Mark B. Merritt, assistant general manager of Fasken Oil and Ranch, Ltd. in Midland discussing "Hubbert's Peak and Long-Term Oil and Gas Prices." Mr. Merritt discussed M. King Hubbert's application and limitations of the logistics curve to the prediction of ultimate oil recovery for the U.S., Middle East, and world oil production. He also reviewed long-term oil and gas price cycles and discussed the possible timing and implications of a global peak in conventional oil production.

Mark Merritt is assistant general manager, oil and gas for Fasken Oil and Ranch, Ltd. in Midland. He has been with the company for twenty-one years. Prior to joining Fasken, Mr. Merritt was a petroleum engineer for Union Oil Company of California in their Midland office. He holds a B.S. in chemical engineering from Texas Tech University.

Randy Seright, senior engineer and head of the Reservoir Sweep Improvement group at New Mexico Tech's Petroleum Recovery Research Center in Socorro, New Mexico was our June meeting speaker. His topic was "Useful website for water shut-off applications." He described the utility of a website that provides extensive information about the use of gels for conformance improvement and water shutoff. The website is: http://baer-van.nmt.edu/rand. This site provides a web school that introduces gel treatments to those unfamiliar with this area. The web school (1) describes key properties of polymers, gelants and gels, (2) introduces some important concepts for gel placement, and (3) provides approaches for solving various types of excess water production problems, using field examples. The website also outlines a strategy for attacking excess water production problems when limited resources are available for problem diagnosis. Another section on the website provides in depth consideration of concepts for placing gels to minimize channeling and water production while maximizing hydrocarbon productivity. Still another part of the website provides Excel spreadsheets of important calculations when designing gel treatments. Videos are provided that illustrate useful concepts during flow of polymers and gelants. Many special topic areas can also be found on the website, including an objective second opinion on technologies that are currently being marketed aggressively. All of the above are provided free of charge.

Randy Seright heads the Reservoir Sweep Improvement group at New Mexico Tech's Petroleum Recovery Research Center. His research focuses on developing methods to prevent fluid channeling through reservoirs and to reduce excess water and gas production during oil recovery. The current emphasis is on using gels for this purpose. He has a B.S. degree in chemical engineering from Montana State University (Bozeman) and a Ph.D. in chemical engineering from the University of Wisconsin (Madison). David H. Arrington Oil & Gas was introduced as the June meeting sponsor.

The Midland SIPES Chapter co-sponsored a one-day course offered by Midland College, instructed by Randy Seright and Robert Sydansk on June 22, 2006 entitled "Polymer and Polymer-Gel Water Shutoff Treatments: What It Takes to Be Successful and Illustrative Field Applications." The course was designed for geologists, engineers and well operators and owners actively involved with water injection and production inefficiencies and their associated operating expenses.

Tom Gentry
Secretary
Chapter News Continued

HOUSTON
The Houston Chapter's Luncheon Program has continued to be popular and draw large numbers of attendees to our events. In April, Marc H. Helsinger, #2712, presented "Seismic/Sequence Stratigraphy – Gulf Coast Exploration Applications." Marc described how seismic sequence stratigraphic analysis, available to the industry for over 25 years, is not being sufficiently utilized to obtain a complete integration of well and seismic data. He explained how such analysis leads to better delineation of depositional environments, reservoir geometry, and potential porosity trends. Marc went on to describe how there are numerous prospects with substantial reserves both onshore and offshore the Texas and Louisiana Gulf Coast, but they will not be found without a completely integrated analysis.

April speaker Marc Helsinger (L) and Marc Edwards.

Marc is currently an exploration manager with Hamman Oil and Refining with thirty years of experience in the Texas and Louisiana Gulf Coast. He received a B.S. in marine geology from C.C.N.Y, an M.S. and Ph.D. from Rensselaer Polytechnic Institute in stratigraphy and sedimentology. He has been using sequence and seismic stratigraphic techniques to develop new trend plays and generating oil and gas programs for twenty years. NuTech Energy Alliance graciously sponsored hospitality service for the event.

Robert J. Scott with The Exploration Company, presented our May pro-gram on "The Maverick Basin - New Technology, New Success." The Maverick Basin is a small carbonate basin geographically associated with the large sand and shale-rich Gulf Coast Basin. Oil company managers have often rejected exploration programs for the Maverick Basin in favor of more glamorous objectives in the Gulf Coast Basin. As a result, the Maverick Basin has remained underexplored. In the past ten years, new technologies have led to new plays and significant increases in production in the Maverick Basin, and 3-D seismic has been absolutely essential. It has defined the structural framework of the basin and found new reef trends and unique structural plays. Directional drilling is now allowing operators to produce oil and gas from low permeability reservoirs that have been troublesome in the past. Current activities place the Maverick Basin at the threshold of prominence for oil and gas exploration in the Gulf Coast area.

Mr. Scott has been associated with The Exploration Company since 1989, serving as a consultant before joining TXCO in 1996 as chief geologist. Mr. Scott has published numerous professional papers and holds a bachelor of arts degree in geology from Augustana College and an M.S. degree in geology from the University of Wisconsin. The Mudlogging Company USA, LLP graciously sponsored hospitality service for the event.

In June, Dan Jarvie with Humble Geochemical Services, discussed "Geochemical Logic and Techniques for Unconventional Gas Exploration." Source rocks have been oil productive for many years, but typically from highly fractured units or from adjacent porous intervals. In addition, source rocks may be good resources for gas if they have an optimal organic richness and thermal maturity to have converted both residual kerogen and any retained oil to gas. Commercial rates will not be achieved if a minimum level of conversion or thermal maturity has not been reached or exceeded. While gas is generated in the oil window from all kerogen types, the presence of black oil components will occlude the limited permeability of a tight shale system resulting in low flow rates and precipitous decline rates. Thus, even though gas shows are present in the oil window and measured gas contents can appear commercial, it does not necessarily indicate the likelihood of commercial shale gas production. Gas window thermal maturity is a critical component of producibility as the presence of higher molecular black oil components will occlude the limited permeability of a tight source rock and result in low gas flow rates. Thermal maturity should be assessed by both visual and chemical means. The key point is that indications of thermal maturity may not necessarily agree with the extent of kerogen conversion, nor provide a good indication of the presence of problematic compounds. Gas risking plots can be constructed to ascertain if all data provides a consistent assessment of gas producibility.

Dan Jarvie is an analytical and interpretive organic geochemist. He works conventional petroleum systems, but has been involved in unconventional oil and gas work since 1984. He earned a B.S. from the University of Notre Dame and was mentored in geochemistry by Don Baker of Rice University and Wallace Dow formerly of DGSI. He is president of Humble Geochemical Services. Special thanks go to DrillingInfo for providing hospitality at this event.

Scott Sechrist, Secretary
Larry Rairden, Chairman

June guest speaker Dan Jarvie (L) and Steve Hartzell.
FORT WORTH

In April, Chapter Vice Chairman Tom Bass presented a brief resume of the speaker, Naresh Kumar. Dr. Kumar received his Ph.D. in geology from Columbia University, and then joined the faculty of Columbia and Fairleigh Dickinson Universities. In 1977, he joined ARCO, serving in Dallas, Midland, Denver and Anchorage. During this time he managed a staff of 230 professionals and budgets up to 75 MM$. He has been involved in the discovery of 400 million barrels of oil. In Alaska, he helped develop daily production of 1.5 million barrels a day from North Slope fields, 25% of U.S. oil production. Dr. Kumar retired from ARCO in 1996 and created his own consulting firm, Growth Oil and Gas. He has consulted throughout the world for many major international oil companies and governments. Recently he completed a project evaluating the major basins of the world for unconventional resources. He completed his MBA in finance in 2003 and continues to teach classes at UTD, as well as Brookhaven and Richland Colleges. After serving as Chairman of the Committee on Resource Evaluation for AAPG, he testified to the U.S. Congress on National Energy Policy.

"During the past 30 years, the U.S. has maintained gas production at about 21 tcf. According to the Department of Energy, natural gas requirements will exceed 34 tcf/year after 2025. Almost 10 tcf is expected to be produced from the unconventional. Currently, unconventional resources produce 5 tcf/year. The nation will have to drill 25,000 wells to reach the 10 tcf goal. Significant improvements in seismic, drilling, logging, fracturing and production technologies for unconventional resources have to be made before the full potential can benefit the nation. Industry, governments, and the environmental community will have to work together to avoid supply shortfalls."

Our May meeting speaker, Michael H. Paul Lewis, presented his discussion of "Transforming a Train Wreck... the Bakken Express." The Mississippian and Devonian aged Bakken Formation of the Williston Basin is the focus of an exciting exploration and exploitation effort, touted as the premier domestic oil play of this decade. Over 350 horizontal wells are producing more than 50,000 BOPD, as of January 2006, with about 14 drilling rigs running full time. More than 1000 wells are expected to be drilled in the next 4 years.

There have been two plays for the Bakken since original production in 1953. The first was an economic "train wreck" in the late 1980s to early 1990s. The second play has transformed the Bakken into a highly profitable "express" in the Middle Bakken. The use of horizontal drilling and newly designed fracturing techniques originally engineered through an alliance between Lyco Energy Corp. and Halliburton Energy Services in 1999-2000.

It is estimated that more than 400 MMB of oil has been generated by the Bakken, less than 2% has been produced. Potential production extends over 1 million square miles. The wells produce 41 degree oil with a casinghead GOR from 900 to 2500 MCF/BO. Ultimate recovery ranges from 200 to 800 MBO, depending on lateral length and other factors. At current oil prices the rate of return exceeds 100%.

This paper generated interest due to the oil prone Barnett production possible in the western portion of the Fort Worth Basin. The meeting was adjourned after some interesting questions.

The Chapter's June meeting was cancelled so as not to compete with the SIPES National Convention at Lake Tahoe. The next Fort Worth meeting will be scheduled for the third Thursday in September.

Louis DuBois
Secretary

IN MEMORIAM

We regret to note the passing of the following members:

Walter R. Berger, Jr., #681 of Midland, Texas who died on July 24, 2006

Earl G. Griffith, #630 of Denver, Colorado who died on August 20, 2006

Lee Wayne Moore, #460 of Midland, Texas who died on July 29, 2006

Z. W. Rogers, Jr., #2577 of Houston, Texas who died on July 11, 2006

Robert M. Sanford, #1360 of Dallas, Texas who died on July 22, 2006
CORPUS CHRISTI

Guest speaker for the April 2006 Corpus Christi SIPES meeting was Manti Cummins, of Cummins CPA, PC. He presented "The Peñascal Wind Project - Proposed Wind Energy in South Texas." Manti Cummins's nearly thirty year career has concentrated on strategic development, business start-up and venture finance. He is presently leading the development of a 400-megawatt wind farm in Kenedy County, Texas. The Peñascal Wind Project would be constructed and operated on private ranch land in Kenedy County, Texas. Plans call for a two-phase development, totaling up to 400 megawatts (MW) with a total investment of $440 million. The project would provide enough clean, cost-effective electricity to annually supply some 110,000 South Texas homes.

Our May SIPES luncheon featured Larry Bruno, Core Laboratories' regional manager in Houston. Mr. Bruno presented "Studies on Mud Tracer Programs and Their Controls." He described the best drilling mud tracers for water-based mud and oil-based mud, explaining the characteristics that make them successful. He is the regional manager in the United States for Core Laboratories' Petroleum Services Division. His duties include operational responsibility for Core Lab's flagship facility at the Houston Advanced Technology Center, as well as the eight other regional locations throughout the U.S. and Trinidad.

The June Chapter luncheon featured guest speaker Mike Lucente, #2984, of LMP Petroleum, Inc. His presentation was "Anatomy of a New Field Discovery." LMP Petroleum, Inc. successfully explored for and discovered North Los Torritos Field; EUR 45 BCF gas equivalent. The area was mature, land problems were severe, well costs were high, and analogous fields were marginal. What a perfect place for a discovery!

Mr. Lucente has been, and remains an active exploration geologist in the lower Texas Gulf Coast. He is credited with discovering or co-discovering many other new fields and field extensions, including El Gato Wilcox; Las Mujeres Wilcox extension; Vaquillas Ranch (six new fault blocks); Berry R. Cox Wilcox; Frost Vicksburg extension; Samano deep Vicksburg; Destino Wilcox and Destino Wilcox extension; Tea Jay Wilcox; Orangedale extension; North Strake extension; Luigi Wilcox; and the newly discovered South Rosita Wilcox Field operated by Pogo Producing.

The SIPES Corpus Christi Chapter will co-host the SIPES 2007 Convention in Monterey, California. Monterey promises to be a great setting for the June 2007 SIPES Convention, with outstanding technical presentations, networking opportunities, great scenery and plenty of warm hospitality.

Ed Riddle
Secretary
and erosion. Placing these zones of weakness on exploration and production maps may aid the geologist in predicting the trend of a stratigraphic play, increasing the probability of success of exploration and development drilling without adding additional cost.

**INTRODUCTION**

Almost three thousand wells have been completed in the Lower Cretaceous Travis Peak Formation in Panola and Rusk Counties in East Texas (Fig. 1), and they have produced over 1.19 trillion cubic feet of gas. The Travis Peak Formation is composed of fluvial sandstone deposits laid down in meandering and braided stream channels. The Travis Peak is overlain by the Lower Cretaceous Pettet Limestone and underlain by the Lower Cretaceous to Upper Jurassic Cotton Valley Sandstone (Fig. 2). The production is found in both structural and stratigraphic traps. Most of the structural traps occur in Panola County while most of the stratigraphic traps are found in Rusk County. Depths of production range from about 5,000 ft. in northeast Panola County to about 8,000 ft. in southwest Rusk County. Porosity in the pay zones commonly ranges from 6% to 15%, and normal pay thickness ranges from 5 ft. to 30 ft. In many cases, the reservoirs are discontinuous and difficult to map because of the meandering and braided nature of the deposits. The sediments are also overprinted by successive episodes of erosion in a stacked channel series. Even with these complicating factors, the production map reveals some striking and consistent trends of production that span from northwest to southeast across the two-county area. Topographic maps show that a distinct set of stream drainage patterns are associated with the production trends. The surface topographic trends are interpreted to result from zones of weakness that cut the sedimentary cover. The zones of weakness influence present day drainage and erosion, and they appear to have been present during Travis Peak deposition directing the courses of drainage that emplaced the deposits of present day gas reservoirs.

**TRAVIS PEAK STRATIGRAPHIC TRENDS LINEATIONS OF PRODUCTION**

Figure 3 is a structure contour map on the top of the Pettet Limestone in Panola and Rusk Counties, Texas. The Pettet overlies the Travis Peak and is often used as a mapping horizon because the top is easily picked and it is a good seismic reflector. The sub-sea depth to the Pettet ranges from -5,100 ft. in northeast Panola County at Bethany Field where the structure closes over a salt swell, to -7,500 ft. in southwest Rusk County where the structure dips to the southwest. The structural closure and gentle westward dips in Panola County mark the crest of the Sabine Uplift and much of the production is structurally trapped over the massive feature. To the west, the structure map is characterized by monoclinal dip to the west, and the production is primarily stratigraphically trapped.

The dots on the map represent wells that are completed in the Travis Peak. Examination of the map shows that, as a group, the wells in Panola County trend toward the southwest down the plunging nose of the uplift. As the production trend approaches the Rusk County line, it makes a
Figure 3. Pettet structure map of Panola and Rusk Counties, Texas showing wells having Travis Peak completions, production lineaments, and cross section locations.

Figure 4. Cross section A-A’ location map with the location of Lineament 6.
ninety degree turn toward the northwest and continues down structure. In Rusk County and southwestern Panola County, some alignments of productive wells can be recognized. Wells line up along Lineament 1 in Figure 3 between the -7,000 ft. and -7,100 ft. contour lines, and along the -6,900 ft. contour. Wells line up along Lineament 2, between -7,100 ft. and -6,900 ft., and from -6,700 to -6,600 ft. Alignment on Lineament 3 occurs between -6,900 ft. and -6,300 ft. Lineaments 2 and 3 form the northeastern boundary of a fairway of production between -6,900 ft. and -6,400 ft. Lineament 4 serves as a boundary for most of the Rusk County Travis Peak production. Most of the wells along Lineament 5 are in Panola County between -5,600 ft. and -5,800 ft. Lineament 6 is defined by wells in Panola County. Lineament 7 extends from an alignment of wells in Panola County to a few outlying wells in Rusk County. Lineament 8 is defined by a higher concentration of wells in that trend from northwest to southeast over the nose formed by the -5,500 foot contour line. In general, the lineaments in the area of structurally controlled production are less well-defined than those in the area that is stratigraphically controlled.

- **CROSS SECTION A-A’**

Boxes labeled by letters on Figure 3 indicate the locations of cross sections that illustrate the stratigraphy of the Travis Peak petroleum reservoirs. Figure 4 is a map view showing well log cross section A-A’, located in south-central Panola County. Lineament 6 cuts through the cross section between the Union Pacific Resources JRA Kyle 5 and the Amoco Rogers GU 3. The Travis Peak produces gas in the Amoco Rogers GU 3 from two sandstone beds (Fig. 5). The upper zone is perforated from 6,947 ft. to 6,952 ft. and the lower zone is perforated from 7,066 ft. to 7,079 ft. The zones tested for 543 thousand cubic feet of gas per day (MCFD) and 11 barrels of condensate per day (BCPD). The cumulative production from the zones totaled to 0.292 billion cubic feet (BCF) of gas.

The lower zone is about 13 ft. thick with slightly increasing shale deflection upward on the gamma ray (GR) and spontaneous potential (SP) log curves. The unit is interpreted as a channel deposit, possibly a braided stream bed. The zone is shaley and impermeable to the south and wedges out to the north. The trend of the channel would appear to be parallel to Lineament 6.

The upper zone thickens to the south with decreasing shale upward as shown by the GR curve and the SP curve. This unit is interpreted to be a splay or crevasse sub-delta that wedges out as it approaches Lineament 6. Cross section A-A’ illustrates the occurrence of stacked pays that are deposited in differing sub-environments of the fluvial system. The pattern suggests that there could have been a preferential direction of transportation and sedimentation along Lineament 6.

- **CROSS SECTION B-B’**

Cross section B-B’ (Fig. 6) is located in west-central Rusk County and trends along structural strike parallel to the -5,700 ft. Pettet contour line. The cross section illustrates the productive zones that are associated with Lineament 7 (Fig. 7). The Union Pacific 9 CGU 25 is perforated in the Travis Peak from 6,460 ft. to 6,470 ft. and from 6,522 ft. to 6,536 ft. The two zones have a cumulative production of 0.08 BCF gas and 17,269 BO. In the lower zone, the GR curve shows increasing shale upward typical of a channel deposit. In the upper zone, the GR curve shows decreasing shale upward typical of overbank and splay deposits. Both zones wedge-out toward the northeast. The upper zone is not present in Union Pacific 8 CGU 26 to the southwest, which implies that the deposition must trend parallel to Lineament 7. The SP curve deflection in the lower zone changes character to the southwest to a rounded, symmetrical shape, and is interpreted to grade from channel to overbank deposition in that direction.

The Union Pacific 8 CGU 26 is perforated from 6,405 ft. to 6,418 ft. and has produced 0.423 BCF gas and 152,808 BO. The pay zone has a symmetrical, rounded SP curve deflection and thickness that is typical of straight-channel braided stream deposits. It is not present in the Union Pacific 9 CGU 26 to the southwest which suggests that the zone runs parallel to Lineament 7.

- **CROSS SECTION C-C’**

Cross section C-C’ (Fig. 8) is situated in east-central Rusk County. The cross section cuts Lineament 3 which marks the northeastern boundary of Shiloh (Travis Peak) Field. The zone of interest on this cross section is the unit that is perforated from 7,352 ft. to 7,356 ft. and 7,362 ft. to 7,370 ft. in the Cypress International Paper 1. The zone has produced 0.897 BCF gas and 6709 BO. The GR curve and the SP curve show increasing shale content upward, and both have a shape typical of a channel point bar deposit. The zone is not present in the Natural Gas and Oil Welch Unit 8-1 to the north where the sediments are interpreted as floodplain shales. The zone is also not present in the Natural Oil and Gas T. C. GTS and G. N. RGS 1 to the south, where the sediments are interpreted as overbank and floodplain sandstone and shale, and the channel appears to trend parallel to Lineament 3.

**TOPOGRAPHIC EXPRESSION OF LINEAMENTS**

The alignments of Travis Peak production in the Panola – Rusk County area are associated with alignments of some diagnostic stream drainage patterns (Berger, 1981) found on topographic maps. When drainage systems intersect lineaments at a perpendicular angle, four types of erosional patterns generally result (Fig. 10). First, the width of the floodplain will change and the stream course will have a

(Continued)
slight deflection. If the stream crosses a buried elevated structural feature, the floodplain will narrow and the stream banks will become more incised. Conversely, if the stream crosses over a depressed structural feature, the floodplain will become wider and the stream banks will be less incised (Fig 10A). The high side of the lineament in Figure 10A would be on the southwest side. Second, termination of the headward erosion of a stream system often will occur where it reaches a lineament. Figure 10B shows the headward reaches of the stream system ending at the lineament. Streams often drain in opposite directions from a lineament where the headward erosion from opposing stream systems has joined. Third, stream tributaries often join at a lineament intersection. Figure 10C shows a pattern that is commonly found where streams join at a lineament. Fourth, when stream systems flow down the trace of a lineament, they are characterized by fairly long, straight segments of drainage (Fig. 10D). The drainage will usually follow the lineament for a distance before cutting out to follow regional dip.

A topographic map of Panola and Rusk Counties is shown in Figure 11 at a 20 foot contour interval. The map is a montage of United States Geologic Survey Digital Elevation Map (DEM) files. The topographic features illustrated in Figure 11 are marked with letters that correspond to the drainage patterns lettered in Figure 10. Lineament 1 (Fig. 11) has both A and C patterns of erosion. Pattern A is a deflection of stream course and a narrowing of the floodplain. Also, there is a distinct alignment of Travis Peak production at that location. Pattern C is a joining of tributaries at the lineament intersection. An example of Pattern C is found on Lineament 2 a short distance farther up the same stream system from Pattern C on Lineament 1. There is also an alignment of Travis Peak production at that location. Lineaments 3 and 4 show examples of Pattern B, the limit of headward erosion along a lineament. The stream system on Lineament 3 drains to the southwest, while the stream system on Lineament 4 drains to the northeast. The highland area contained between Lineaments 3 and 4 is the fairway of stratigraphic production in the Travis Peak. The (Continued)
Figure 6. Cross section B-B' location map with the location of Lineament 7.
Figure 7. Cross section B-B’ showing productive zones in the Union Pacific 8 CGU 26 and in the Union Pacific 9 CGU 25, and the location of Lineament 7.
Figure 8. Cross section C-C' location map with the location of Lineament 3.
Figure 9. Cross section C-C' showing productive zones in the Cypress International Paper 1, and the location of Lineament 3.
center of the area has drainage outward in almost all directions. Two occurrences of Pattern A, course deflection and floodplain width, are found on Lineament 5. An instance of Pattern C, joining of tributaries, is found on Lineament 7. Pattern D, the trending of drainage down the trace of a lineament is not common in the area shown. However, an instance of Pattern D is marked on a portion of stream course that is not associated with a production lineament. The production lineaments were defined by trends of wells which do not mark all of the lineaments.

The association of stream drainage system patterns with production does not appear to be a coincidence. The surface drainage is being influenced by a system of joints, or zones of weakness, that extend from depth to ground level. As a stream progresses from one sedimentary block to the next across a zone of weakness, there is either a slight difference in elevation or some movement on the boundary that causes the course to deflect and floodplain width to change.

**LINEAMENTS AND TRAVIS PEAK DEPOSITION**

The Travis Peak depositional environment is documented by Davies et al. (1991). Travis Peak sediments were deposited in fluvial settings in both meandering and braided streams. The sediments are fine grained sandstones and shale. The meandering streams are characterized by point bar deposits, splay deposits, crevasse sub-delta or lake delta deposits, along with levee, lake, and swamp sediments in the floodplain. The braided streams are characterized by straight courses with mid-channel sand bars and the associated levee and overbank deposits. Figure 12 (after Davies et al., 1991) is a schematic drawing illustrating the Travis Peak depositional environments. A lineament is superimposed on each of the block diagrams to illustrate how the deposition might be configured along the trend. The present day stratigraphic traps would be point bars isolated in meander bends, and splays and sub-deltas tilted in the updip direction. The direction of deposition during Travis Peak time appears to be toward the southeast along the strike of the lineaments.

Present day erosion and deposition is southwest and northeast, or ninety degrees to paleo-deposition. The present day drainage and erosion appears to be responding to a rise in the Sabine Uplift. This causes the streams to make more perpendicular lineament crossings resulting in more A, B, and C type drainage patterns. During Travis Peak time, drainage was to the southeast resulting in more D type drainage patterns.

(Continued)
Figure 11. Topographic map showing the location of Travis Peak wells, production lineaments, diagnostic drainage patterns indicated by letters in upturned boxes, and the locations of cross sections shown in boxes with identifying letters.
SPECULATION ON THE ORIGIN OF LINEAMENTS

There are numerous definitions of the term "lineament." In the context of this paper, a lineament is a linear trend or alignment of surface drainage features, ridge lines, valleys, or stream courses that can be recognized on imagery, photography, or topographic maps. There are no restrictions as to length, offset of sediments, breeching, or truncation. Lineaments may be associated with faults, or with fracture zones. In many cases they are associated with magnetic and gravity features that originate in the deep basement. In all of these cases, they can be thought of as zones of weakness that result from earth movement connected to some geologic mechanism. Lineaments are numerous in the East Texas Basin, and form a network similar to a regional joint system.

At least three mechanisms can be called upon to create the lineament system. They are large scale tectonic events, continental plate motion, and gravitational forces that cause earth tides. The Laramide Orogeny, which began in Late Cretaceous and lasted through the Late Paleogene, was the last major tectonic event to affect the area. The surface beds exposed in the Panola-Rusk area are primarily Wilcox, Carrizo, Reklaw, and Queen City that are Eocene age. These sediments would have been deposited during the closing phases of the Laramide. There is a possibility that compression created by subduction of the Farallon Plate could have created a regional conjugate joint system through a large part of Texas. If this is the case, then lineaments associated with that joint system now cut through Quaternary alluvium deposited long after the Laramide had ended. That would imply some periods of new movement.

Continental plate motion is another mechanism that could create a wide-ranging joint system. Reconstructions of the early Gulf of Mexico (Pindell, 2000) show the North American Plate moving toward the northwest beginning in Jurassic time and continuing through the Tertiary. The plate moved as the floor of the Gulf continued to spread setting up a trailing edge scenario characterized by passive sedimentation. This movement does not show an evident mechanism to create large scale compression or extension that would result in a conjugate joint system.

Gravitational forces that drive the earth tides that are set up by the earth-moon planetary system are the most interesting mechanism for creating a regional joint system. The gravitational mechanism is termed Gravity Tide Tectonics and has been discussed by P. J. Cannon (1998). Cannon points out that faults and fractures are propagated through sediments twice each day by a tidal bulge. In a million years, the different sides of a fracture would have moved past each other 730 million times. The setting is diagrammed in Figure 13 which shows a schematic presentation of the earth and moon as viewed above the North Pole. The center of mass of the earth-moon system is at a point about 1,200 miles beneath the earth's surface. The earth and moon rotate around the common center of mass. Since the earth turns, the center of mass whirls around the earth's mantle like a beater continually churning the entire planet and all of the interior rock. The joints and fractures resulting from Gravity Tide Tectonics would be continually propagated to the surface where they would be visible as lineaments on imagery, photography, and topographic maps.

Gravitational forces are a satisfying model for the creation of regional zones of weakness and the resultant lineament system. The model explains why lineaments cut the youngest sediments exposed at the surface and, at the same time, associate themselves with sediments deposited millions of years earlier.
CONCLUSIONS

The Travis Peak production map reveals that a significant amount of oil and gas is found in northwest to southeast trending fairways in Panola and Rusk Counties, Texas. The production is mostly from stratigraphic traps in meandering and braided fluvial sediments. The production trends are associated with alignments of drainage patterns that are recognized on topographic maps. The drainage patterns consist of changes in floodplain width and stream course, joining of tributaries, alignment of the limits of headward erosion, and straight segments of stream courses. These features are interpreted to result from the intersection of the drainage systems with zones of regional northwest-southeast trending zones of weakness. The zones of weakness are believed to be most likely created by Gravity Tide Tectonics resulting from forces created by the earth-moon planetary system. The joint and fracture systems affect present day erosion and sedimentation as well as paleo-sedimentation and erosion. The lineaments that mark the path of the zones of weakness can be mapped and used by the petroleum geologist to improve the probability of success when drilling oil and gas wells.

REFERENCES CITED


Note: James (Rick) Turner can be reached at Barrow-Shaver Resources in Tyler at rick-bsr@tyler.net.
This report gives a description of and instructions for hands on usage of the Texas Railroad Commission GIS Map Server web-based service.

In general, I have found the current RRC website to be somewhat laborious to navigate and is generally lacking pertinent data or information related to oil and gas exploration and development studies. However, the Texas Railroad Commission has made progress by the development of a Geographic Information System (GIS) based data set for public usage, which can be accessed through the current RRC website.

The GIS map viewer site is up to date, easy to navigate and contains information that is presented in a user-friendly format. The map viewer can be accessed by going to the RRC website http://www.rrc.state.tx.us/ and scrolling down in the Interactive Data section and then clicking on the GIS Map server tab, or typing in the address http://www.rrc.state.tx.us/gis/index.html and going directly to the map viewer site. Once you arrive at the website, scroll down and click that you accept the terms and conditions of the notice and disclaimer, once accepted, you would then be directed to the map viewer site. This website provides for interactive search capabilities and map views of pipeline, survey and well location data, (pipeline and well data are updated on a daily basis).

This report will attempt to outline the various functions and tools associated with the GIS Map Viewer and the data that can be viewed. This will be based upon a combination of personal working knowledge, in conjunction with the explanations and definitions as provided by the RRC.

**Map Display**

When you first arrive at the GIS map viewer site, on your screen you will have the Map Display popup, which shows the state of Texas with each county outline, RRC district boundaries and district offices. The navigation functions are found on the right hand side of the map display. The display default tabs are set to view well, pipeline and survey data. The well data, survey data, and pipeline data will come into view as you zoom into the area that you are researching. This is also applicable for data such as roads, railroads, city street/highway grids and rivers data. Even though the map data is based from USGS 7-1/2 minute quads, topographic data is not available at this time.

**Well data:** The well data will be displayed as either producing or plugged oil wells, producing or plugged gas wells, dry holes, injection/disposal wells, permitted locations and any canceled locations. To the right of each well will be the last 5 digits of the coinciding API number. Unfortunately, the RRC has not listed all historic API numbers at this time.

Additionally, individual wells can be selected and wellbore, logs, production and operator information can be accessed.

**Pipeline data:** Pipelines are shown in green and are identified as to what type, crude transmission, crude gathering or gas gathering. Operator, product, and diameter can further be determined.

**Surveys:** The survey image will be in purple and will show survey lines, survey names, and abstract numbers.

**Basic Navigation**

To navigate to a specific area that you desire to research is fairly simple and straightforward. As previously mentioned, the navigation functions are located on the right side of the display. The display default is set to view wells, pipelines and surveys. You can check in the adjacent box as to what views you desire and then click "Refresh.”

Now comes the fun part, there are several ways to get to where you want to go and get the well, pipeline or survey data that you want, and they are all simple to accomplish. To check on a particular well or lease you can do one of the following:

1. Under "Click Map To,” click the pull down button and scroll down to your desired county. Once you scroll down (Continued)
and select a specific county, you will automatically be directed to a map view of only the selected county. If you know approximately the location of the well(s) or survey, then you simply place your mouse in that area and click. Each time you hit enter or click your mouse you will zoom in at 2X. Once you locate your well or survey you can then go back to the “Click Map To” hit the pull down tab and click “Center Map.” Once you have done this, just simply place your mouse pointer over your well or survey of interest and click. The map will automatically center your map view from this reference point.

2. Or you can bypass all of the previous steps by simply clicking with your mouse pointer the county shown on the main map display. You can then continue as described above and fine-tune your map view to your well or survey of choice.

3. Should you have a well of interest and if you have the API number, you can also go to the bottom of the functions option and simply enter the API number in the space provided and you will be automatically directed to that well. You can then customize your map view to fit your needs.

Navigating with the zoom function: This is self-explanatory. Select “zoom in” or “zoom out” as either 2X or 5X. The “Zoom-In 2X” zooms to one-half the previous map scale, or out one-half the previous map scale using the “Zoom-Out 2X.” The 5X feature zooms in or out to one-fifth the previous map scale. Additionally you can navigate your view with the “half screen pan” by selecting the multi-direction arrows in the direction you desire to view.

You can at any time return to the entire state map view by selecting the “Entire State” option.

Getting started with the data

Once you have arrived at your survey and well or lease of interest you can now begin to search and view any associated well data.

Well Data: One of the most useful aspects of the GIS map server is the ability to retrieve individual well data.
easily. To access individual well information go to the "Click Map To" function, then to the pull down tab and choose "Identify Wells." Go to your individual well of interest and place your mouse directly on the well (make sure that you have the map zoomed in enough). You have to have your mouse directly on the desired well or you will get the message: "Features not found within the Identify search tolerances." This does not mean that there is no data available, only that you have to be a bit more precise with your mouse. There is one more problem that you might encounter trying to access individual well data. Most current MS systems have a viewer called "Quick Time." I won't bore you with the history of the lawsuits that caused Microsoft to use this viewer, but "Quick Time" is not capable of reading many data files. To get around this problem (don't forget to do this), when you place your mouse on the individual well, before your click your mouse, press and hold your control button on your keyboard, then click your mouse. This will have to be done for each function (GIS Attributes, Operator/Wellbore/PDQ, etc.) with the exception of the ¼ or ½ mile circumference option. If this does not work and you still have problems viewing any data, I would suggest acquiring a different viewer. There are many available as free downloads on the Internet. One I have found useful is a free download viewer called "IrfanView."

Part 2 will be published in the November 2006 issue of the SIPES Quarterly and will provide specific instructions on how to use this beneficial website.
The SIPES Foundation gratefully accepts all donations and acknowledges these contributions with a letter.
Due to limited space in the newsletter, we are unable to list gifts under $26.

(Continued)
2006 SIPES Foundation No Hassle Raffle Winners

1st Prize - $500

H. Jack Naumann, Jr.  
Midland, TX

2nd Prize - $250

Jim Evans  
Franklin, LA

Dudley J. Hughes  
Flowood, MS

3rd Prize - $100

Leonard E. Jordan  
Shreveport, LA

H. Jack Naumann, Jr.  
Midland, TX

Frank Mabry  
Cedar Park, TX

Francis W. King  
Oklahoma City, OK

4th Prize - SIPES Key Chain

W. R. Finley (2)  
Lafayette, LA

William J. Furlong  
New Orleans, LA

W. C. Burkett (2)  
Midland, TX

Jerry Watkins  
Dallas, TX

George R. White  
Lafayette, LA

Bobbye B. Taylor  
Bullard, TX

Colles C. Stowell  
New Orleans, LA

SIPES Foundation President George Johnson announcing the raffle winners at the SIPES Convention.
At the Lake Tahoe meeting, the SIPES Foundation Board voted to fund a geologic guide book for Carlsbad Caverns National Park. The board felt confident that SIPES members would respond to this opportunity like they did to the Guadalupe Mountains National Park publication, "Listening to the Rocks, A Young Person's Guide to the Permian Reef Trail." Each member will be given the opportunity to help fund the Carlsbad project. Both of these books will increase the public's knowledge of earth sciences while providing positive publicity for our organization.

Reflecting back to when I joined SIPES, I want to thank John Rakowski, #1939, the geologist who invited me to join. John not only encouraged me to join SIPES but also helped me get established as a consultant and even took a piece of my first drilling deal. Through his introductions, SIPES members participated in a significant part of that first deal. John was truly a "godfather" to me in my career and I will forever be grateful. I expect each of you have a "godfather" in your past, and I would love to hear your story.

Now, I want to challenge each member to become a "godfather" to another earth scientist. During this "boom" time in our industry, SIPES has a unique opportunity to show other independents the value of our great organization. With over 1200 members, we have many investors, operators, consultants and idea generators in our ranks. The ethical standards of our members is one reason to join. We can discuss technical, legal or governmental problems faced by independents with our peers without confidentiality concerns. I have found this to be one of the greatest benefits of SIPES.

So, in closing, I encourage each of you to invite a fellow scientist to a SIPES meeting in your area this fall. You can be their "godfather" and as result our industry and SIPES will benefit.

Until next quarter,
Mike Austin

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**WELCOME NEW MEMBERS**

The following new members were approved by the SIPES Membership Committee from March 14, 2006 to June 9, 2006

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<td>C. Fontenot</td>
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SIPES Vision Statement

To be the pre-eminent organization for furthering the professional and business interests of independent practitioners of the earth sciences. In achieving this vision, emphasis will be placed on (1) professional competence, (2) professional business ethics, and (3) presenting a favorable, credible and effective image of the Society.

Adopted by the SIPES Board of Directors
September 21, 1990

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