NOGS LOG

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November 2006

Volume 47, Number 5

November and December Activities

NOGS Events

November 4 - NOGS Fall Field Trip

"Hurricane Katrina – What Happened?" tour by Dr. Stephen Nelson, of Tulane University

See announcement on page 19

November 6 - NOGS Luncheon

Dr. Tim Matava, Consultant Geophysicist, will present "The Barnet Shale Play of North Central Texas: A Regional Perspective."

(See Page 7 for Abstract and Biography)

Le Pavillon Hotel
Check with concierge or front desk for location
Lunch served at 11:30am

Admission:
with reservation $25.00
without reservation $30.00
Student Member with reservation ..... Free

December 4 - NOGS Luncheon

Guest speaker and topic were not available at time of press.
Please check the NOGS website, www.nogs.org, for updates.

December 8 - NOGS Holiday Party

At Vincent's, 4411 Chastant Street in Metairie

See announcement on page 11

Inside This Issue

THE NEW ORLEANS GEOLOGICAL SOCIETY

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Sent to press on October 16, 2006.

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--- NOGS Contact List continued on page 8---

from the President

UNO

Of the NOGS current membership, eighteen percent have a University of New Orleans pedigree. One has to believe that number has been much higher in the not-too-recent past. Those of us who entered the local workforce in the 70's and 80's have many memories of an eclectic group of young geologists and those who taught them. From "The Nuge" and the Krewe of Motha Roux to classic names of Ward, Weidie, and Craig, the Geology and Geophysics Department was a driving force in contributions to industry in the way of personnel, as well as the New Orleans Geological Society. UNO, under Dr. Craig, was actually for many years a repository for NOGS publications. Our publications made it to GCAGS and AAPG conventions in UNO vehicles.

This is not to downplay the major role our other great Universities have played in contributing to our workforce: LSU is dominant; Tulane steady and consistent; and some pretty good oil finders have come from schools such as Southeastern, LA-Lafayette, Nichols, and Centenary.

However, as UNO evolved toward the present day, its names retired, passed away, or moved on to other opportunities, Petroleum Geology nearly disappeared as a viable program. In spite of great tribulation, the post-Katrina effect was not to drive the final stake in the heart of UNO's petroleum geology program, but to provide a springboard for its rebirth.

As we have heard Chairman Shea Penland describe to us, UNO geology has been re-organized as the Department of Earth and Environmental Sciences. "The cornerstone of the undergraduate program is a strong science core and a concentration in Geology. In addressing the current needs of our State EES will offer new programs in Coastal Science and Restoration, Environmental Science and Policy, ***and Petroleum Geology***" (emphasis added), he stated.

Realizing the magnitude of restoring an entire program, NOGS sought out an individual who was a proven leader, a local person with a strong UNO tie. We are very fortunate that former NOGS president Michael J. Gallagher, a Geologist with Dominion with a UNO and a Tulane degree, has accepted the challenge. NOGS, to formalize its support for the concept, has created the Ad Hoc Committee for University Support.

In the short term, NOGS, having already gotten you out to the Mineral Auction, will provide a late November-early December lecture on the current state of petroleum geology in our industry, and for the Spring Semester create an evening class on "Oil and Gas Basics", as Mike described at the October luncheon.

In the longer term, NOGS will provide advice on the curriculum that should comprise a petroleum geology program - hence, the interactive and excellent "brainstorming" session Mike led at the October luncheon, and our request to especially the more recent hires for your particular input on courses. Most importantly, however, is the need to build faculty, and to be able to entice them with a competitive standard of living. Toward this goal we will be seeking to endow professorships and chairs, which will take a lot of money.

At a meeting with UNO Chancellor Tim Ryan, we were convinced of strong, long-term support for the program, all the way to the top of the University. Dr. Ryan reiterated the three components necessary for the success of New Orleans economy: the port; tourism; and, oil and gas. He ultimately wants UNO to be a center in southeast Louisiana for petroleum geology. Just as we regularly see Dr. Penland quoted on coastal issues in articles, and in the newspaper, so does Dr. Ryan want a UNO professor to be the "consultant of choice" on oil and gas issues when the press requires a comment. He wants UNO to be a nationally recognized "Top 10" program in petroleum geology.

I have to admit I have very selfish reasons for supporting this program in its entirety: Industry is screaming for more G&G practitioners, and when I retire in 30 or 40 years, I want to be sure the value of my company's stock is in good hands. There are three other items: SIPES 2008, AAPG 2010, and GCAGS 2012. We are going to need a lot of volunteers. Rebuilding the local workforce and with it our volunteer base is critical in NOGS being able to continue to host world-class meetings.

This is not only a heavy challenge, but also a crucial one for the future of New Orleans. It is also do-able. But we need your help, especially you UNO grads and if you don't call us we WILL call you. Contact Mike Gallagher at Dominion 504-593-7480, Michael_J_Gallagher@dom.com. Participation in NOGS a privilege and a real pleasure.

Michael Fein

November 6 Luncheon Presentation

The Barnett Shale Play of North Central Texas: A Regional Perspective

presented by

Dr. Tim Matava

Consultant Geophysicist

ABSTRACT

The importance of putting a hydrocarbon play into regional context prior to prospecting cannot be underemphasized. The Barnett Shale Play in the Fort Worth Basin of North Central Texas is no exception. Often times gas shale plays are called "engineering" plays, but this is far from true. This study shows that by conducting a regional study, which extends far beyond the Fort Worth Basin into the Mesozoic and Cenozoic clastics, better constraint on the timing of maturation and uplift of the basin can be attained. Further, the results appear to fit well with Galloway's timing of sediment to the Texas portion of the Gulf of Mexico.

BIOGRAPHY

Tim Matava is a consulting geophysicist specializing in prospect and play analysis. Tim's activities include using integrated basin simulators to quantify regional geologic processes in sedimentary basins.

Tim graduated from the University of Alaska Fairbanks in 1991 with a Ph.D. in Geophysics and received an MBA degree in Finance from the University of Dallas in 1997. Tim started his career in New Orleans with Mobil Oil and later worked for BP for a short time before starting his own company in 2002.

Tim and his wife Lori Sloan live in Houston; they have two children in elementary school.

THE LUNCHEON RESERVATION DEADLINE IS OCTOBER 29, SO CALL THE NOGS OFFICE - *TODAY!*

"And Looking Ahead..."

The next luncheon will be December 4. Guest speaker and topic were not available at time of press. Please check the NOGS website, www.nogs.org, for updates. Contact the NOGS office at 561-8980 or use the e-link on the NOGS website (www.nogs.org) to make your reservation.

Dr. Roy K. Dokka (right), October's luncheon speaker at Le Pavillon, is greeted by Jared Bosch of Chevron.

BLAST FROM NOGS PAST

This month we look back at a couple of social events and two then novel ideas for NOGS.

15 Years Ago (Nov. 1991): The NOGS Log announced the upcoming "Picnic in the Park" to celebrate the first 50 years of NOGS. The event was held at City Park Shelter #1 on a Saturday afternoon to allow whole families to attend.

20 Years Ago (Nov. 1986): Richard A Edmund's President's column announced the search for a permanent home for the NOGS office in the CBD.

40 years Ago (Nov. 1966): The printed minutes of the Monthly Meeting reported that President H. Grady Collier "announced the possibility of a photo directory and asked a show of hands of all in favor. Assembly was unanimously in favor."

50 Years Ago (Nov. 1956): You have to admire the detail and price breakdown in this announcement. "The Christmas Dance will be held December 8 at the Grand Ball Room of the Roosevelt Hotel. The price of the tickets will include the actual cost **per couple** as follows: Meals $9.00, corkage $1.00, Mixers $1.00, Orchestra $1.00, tax and service charge $2.00, decorations 50 cents; total $14.50. This dance will be semi-formal as in the past."

-Tim Piwowar

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--- continued from page 3 ---

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NOGS Holiday Party
December 8, 2006
7:30– 10:30 pm

at

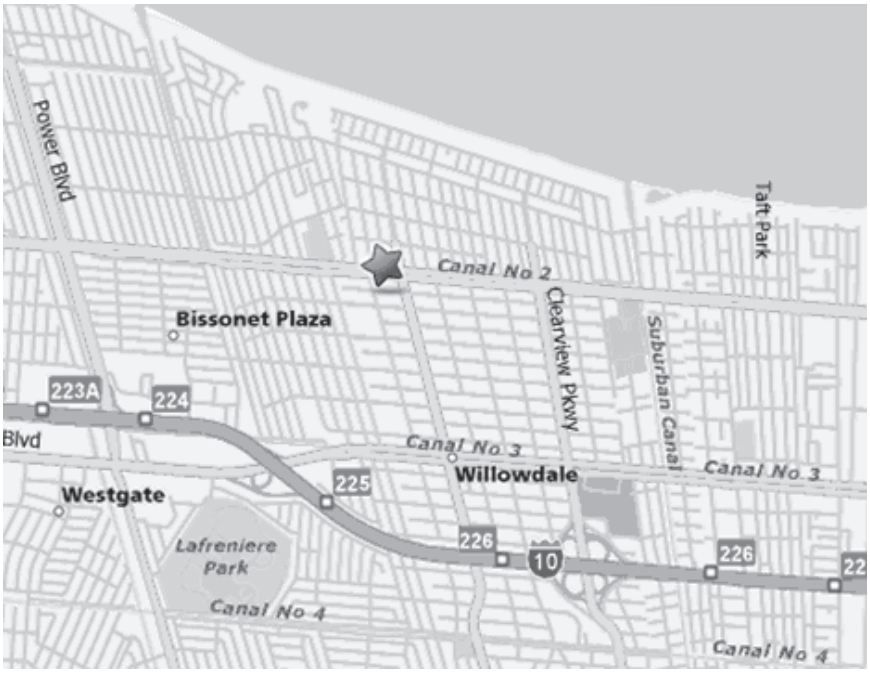
Vincent's

4411 Chastant Street
Metairie
(Just above west Esplanade)

Cost: $50 per person

Includes:
Italian Buffet
Open Bar

For Reservations
Call the NOGS Office: 504-561-8980
Spouses Welcome



Chevron Conquers the Rock

Of interest to our members……

With the assistance of NOGS President Mike Fein, NOGS has received permission from Byron King to reprint the article *Chevron Conquers the Rock* which was originally published on the *Whiskey and Gunpowder* website. This particular item locally resonates because of NOGS members who have been directly involved with Chevron's success. Mr. King's great parallel between Colonel Drake's and Chevron's achievements is NOGS's celebration of the work of our members and their colleagues. If you like this work, please visit the *Whiskey and Gunpowder* website for more, or to sign up for a free subscription.

About the author: Byron King is a Harvard grad who worked West Texas for Gulf in the 70's and into the 80's. He served his nation in the Navy, where, when not flying missions, he was also a field historian. Now a practicing attorney in Pittsburgh, he "looks at current events, economics, and politics through the lens of history. He brings to the table a unique perspective that incorporates many millions of years of the Earth's geologic history, and blends its significance into the more recent, man-made kind of tale." He is a regular contributor to the e-zine *Whiskey and Gunpowder* (http://www.whiskey andgunpowder.com), which "covers the spectrum of the many factors that affect economics including, but not limited to politics, technology, nature, and history." Its authors and essayists cover topics such as personal liberties, big-picture economics with historic and geologic intertwinings, banking, real estate, macroeconomic trends and institutional analysis, and the similarities between the markets and a variety of historical events. (Quoted items are directly from the website.)

Chevron Conquers the Rock

ON SEPTEMBER 5, 2006, Chevron Corp. announced: "That it successfully completed a record-setting production test on the Jack #2 well at Walker Ridge Block 758 in the U.S. Gulf of Mexico. The Jack well was completed and tested in 7,000 feet of water, and more than 20,000 feet under the seafloor."

It is the deepest successful well test drilled to date in the Gulf, at a total depth of 28,175 feet. The Chevron announcement went on to state: "During the test, the well sustained a flow rate of more than 6,000 barrels of crude oil per day with the test representing approximately 40% of the total net pay measured in the Jack #2 well…"

"More than half a dozen world records for test equipment pressure, depth, and duration in deep water were set during the Jack well test. For example, the perforating guns were fired at world record depths and pressures. Additionally, the test tree and other drill stem test tools set world records, helping Chevron and co-owners conduct the deepest extended drill stem test in deep-water Gulf of Mexico history."

A Historic Achievement, Last Year

Yes, absolutely, this is historic. Chevron has accomplished what until recently many observers thought was all but impossible. Chevron's success in the deep water of the Gulf of Mexico was not, to be sure, "the first" deep well ever drilled in deep water. There have been other deep holes drilled in the Gulf and in other parts of the world. And there are similar efforts being conducted in the Gulf, and planned elsewhere, by other oil companies.

Furthermore, the Chevron announcement is not exactly "new" news. The Jack #2 well was drilled in 2004, and Chevron and its partners spent much of the past two years evaluating and testing the prospect. According to public accounts, the Jack well penetrated more than 350 feet of "oil pay," which is a very respectable and auspicious encounter with the relatively unfamiliar rocks of the geological target formations. But Chevron's technical teams apparently required a large amount of additional testing, data gathering, and analysis in order to determine future development plans. Thus, Chevron kept its information "tight" until last week.

Looking back one year, in August 2005, Petroleum News reported: "Chevron plans to conduct a rare and no doubt expensive production test on one of its lower Tertiary oil discoveries in the 'ultra-deep-water' Gulf of Mexico, evidently to better understand the commercial viability of the promising but financially risky play…"

"Explorers hardly ever resort to deep-water flow testing to determine a reservoir's productivity, largely because of the expense and the time required to prepare for one. A full-scale production test, such as the one planned for Jack, could run $30 million or more."

Among other things, the Los Angeles Times has reported that to drill the Jack #2 well and conduct the follow-up testing, Chevron paid $216,000 a day to lease Transocean Inc.'s Cajun Express drilling rig. Do the math: That is almost $80 million per year just to rent the rig. Geologists, geophysicists, petroleum engineers, drill bits, pipe, mud, wireline services, helicopter rides and all the rest come extra. And that is if you can obtain the

necessary equipment and skilled personnel in an industry that is experiencing critical shortages of both. Looking forward, the rental rate for the Transocean rig will rise to $460,000 a day from 2007-2010 (not quite $170 million per year). In essence, the bigger the rig, the higher the day rate. So this deep-water drilling effort takes some serious money. Only deep pockets need apply.

The Oil, the Money, the Sticker Shock

Neither Chevron nor its partner companies have yet publicized detailed information on the oil quality or reservoir parameters of Jack #2. These data are considered proprietary, and certainly cost a lot of money for Chevron et al. to acquire. According to Oil & Gas Journal, however, one insider at Devon stated that while the oil-bearing rocks at Jack #2 do not pose any "undue complexity," the producing reservoirs are very different from one another. This probably has to do with fracture systems within the rock formations and the intrusion of the lower and older salt beds into the rock formations above (another discussion for another article). Salt is a prominent feature in the play, and in most respects, the salt formations control the location and entrapment of petroleum. (Yes, we are discussing some rock formations composed mostly of salt, like what you put on the ice on your driveway in the wintertime.)

Neither Chevron nor its partners have described the quality of the oil or gas, sulfur content, or the oil-to-gas ratio of the reservoirs. However, the implication is that the reservoirs are oil-dominant. Oil from other deep Tertiary formations in the Gulf has tended to be of heavy grade, with up to about 4% sulfur content. Not terrible, but not so great, either.

The Jack #2 well is remote from all existing subsea oil-gathering pipelines, so moving any oil to shore poses a major logistic problem. Chevron and Devon have held discussions with the U.S. Minerals Management Service concerning the possibility of using floating production, storage, and offloading (FPSO) vessels. If the facility, when productive, produces associated natural gas, then that too will present a handling problem. MMS frowns on "flaring" natural gas (just burning it off at the end of a long boom), so any production-associated gas could be used to power the production platform, or it might have to be reinjected into the rock formations.

Early-stage figures on field development in the vicinity of Jack #2 are yielding cost estimates of $80-120 million per well drilled, plus as much as $1.3-1.5 billion for subsea facilities. Again, only deep pockets need apply.

By way of comparison, Chevron's Tahiti project, located elsewhere in the deep water of the Gulf of Mexico, will begin producing in 2008 and carries a $3.5 billion price tag. Tahiti will produce an estimated 125,000 barrels per day, thus carrying an up-front price tag of $28,000 of capital expenditure per barrel of oil equivalent produced per day. In another Gulf of Mexico project, Chevron's Blind Faith project will cost an estimated $1 billion and yield an estimated 30,000 barrels per day, for a capital expenditure of $33,000 per barrel of oil equivalent produced per day.

This is quite a contrast to the historically adjusted cost of capital expenditure for shallow-water, shelf development in the Gulf of Mexico, which is about $1,000 per barrel of oil equivalent produced per day. In other words, deep-water development may be 30 times as expensive as shallow-water offshore development. That is what I call "oil patch sticker shock."

Some estimates place deep-water Gulf of Mexico oil resources, from lower Tertiary formations beneath the "allochthonous salts," in the range of 15 billion barrels, and possibly more. Allochthonous salts are beds of salt that overlay stratigraphically "younger" formations. (I will address the geology of the deep-water Gulf in future articles about the Chevron discovery.) These subsalt formations are the targets at which Chevron, its partners, and many other oil-exploring firms are aiming. Oil might be, as goes the old saying, where you find it. There might even be a lot of oil. But it is not at all cheap to get there. In fact, it is cheaper to send space probes to Mars or Saturn than to drill beneath the deep salt. You can look it up.

An Immense Achievement and Cultural Milestone

All things considered, the Chevron flow test was outstanding. And timing or no, Chevron's well is an immense achievement by the company, its partners, and the many other vendors, subtier vendors and members of the team who contributed to bringing Jack #2 to fruition.

-- continued on pages 14-15 --

There will be other deep-water wells, of course. In all likelihood, there will be many others. Some of these future deep-water wells will no doubt break the records set at Jack #2. But Jack #2 stands alone in one respect. Its announcement is a milestone on the pioneering trail of applying immense measures of resources to solve a great problem. Chevron's is among the first confirmations of a significant oil discovery in a frontier exploration area, the deep-water Gulf, now that mankind has moved onto the backside of Hubbert's curve.

The Chevron well is emblematic of the culture and industry of our modern, industrial, immensely complex, and interrelated world. Jack #2 is not just another oil well, but is instead the culmination of literally decades' worth of fundamental research and development work by industry, academe, and government. And the Chevron well has been made possible only due to a vast array of utterly spectacular, and fairly recent, developments in numerous scientific and engineering fields, coupled with people who are willing to place big bets on very risky plays.

Among the indispensable scientific and engineering developments behind the Jack #2 well are those in geology, oceanography, geophysics, cartography, mathematics, signal processing, and numerical computing. Add to this developments in global positioning, telecommunications, petroleum engineering, mechanical and electrical engineering, naval architecture, metallurgy, drill bit design, drilling rig design and management, down-hole logging and completion, and human factors such as study and management. And do not forget that this is a far-offshore well, on a federal lease issued and administered by the U.S. Department of the Interior Minerals Management Service. I am sure that I am neglecting to mention other equally worthy fields of human study and endeavor (Cajun-style cooking, perhaps?), and for that I apologize and say that my editor has so only much space in which I can write.

But make no mistake: Chevron's accomplishment is emblematic of our era. Chevron utilized the most advanced scientific and engineering assets of the world in which we all dwell, brought them all together, and did what otherwise could not be done. That is, Chevron located and drilled a well in deep water, based almost entirely on information gained from remote sensing, and with nary a use of traditional, "rock-kicking" geological exploration methods. (I will discuss this in another article, as well.) The Chevron effort marks a leap ahead in using advanced technology to find oil, but it should not be confused with the "technology will save us" line of thinking. Like Oprah says, "Don't go there."

The Solution of a Great Mining Problem

Chevron's accomplishment is entirely impressive, and certainly of historic proportions comparable even to that of Col. Edwin Drake. I have written much about Col. Drake and his oil well at Titusville, Pa., completed on Aug. 27, 1859. The Titusville well was no Jack #2, in that Drake's well produced only 25 barrels of oil per day from Devonian age sandstone at a depth of about 70 feet below ground level. But it was the best that anyone could do at the time with what was available. Drake's great accomplishment was to demonstrate that it could be done. The rest is history.

Drake's well, the first of many wells drilled by many others, ushered in an era of relatively abundant, relatively affordable, conventional petroleum. And that petroleum has illuminated, lubricated, motorized, mechanized, fertilized, and plasticized the world ever since. Absent Col. Drake, we would probably live in a different world, if we were around to live on this world at all.

In an early article in *Whiskey & Gunpowder* entitled "The Ghost of Colonel Drake,"<http://www1.youreletters.com/t/409494/10483301/794896/0/> published Nov. 27, 2004, I noted that Drake's impressive neoclassical grave monument is built of granite to form a high wall, under which the deceased colonel (OK, he was not really a colonel, but that is what people called him) and his wife lie in eternal repose. Overseeing the colonel's place of rest is a very handsome bronze sculpture of a muscular man pounding and dressing a drill bit with a massive hammer. Drake's monument reads in part:

"Col. Edwin L. Drake... Founder of the Petroleum Industry, the Friend of Man. Called by Circumstances to the Solution of a Great Mining Problem...He laid the Foundations of an Industry that has Enriched the State, Benefited Mankind, Stimulated the

Mechanical Arts...and has Attained Worldwide Proportions."

"His highest Ambition was the Successful Accomplishment of his Task. His Noble Victory the Conquest of the Rock, Bequeathing to Posterity the Fruits of his Labor and of his Industry."

In its own Big Oil sort of way, Chevron has also solved a great mining problem and successfully accomplished its task. Chevron has "stimulated the mechanical arts," and scored a noble victory. Chevron has gone offshore, into deep water, and conquered the rock. Like Col. Drake's grave, this also is definitely worth a statue one of these days.

Chevron, Babe Ruth, and the Backside of Hubbert's Curve

And it is critical that Chevron has conquered the rock just now, because mankind is in the process of crossing its own significant peak. The rock is fighting back.

As I mentioned above, and as frequent *Whiskey & Gunpowder* readers certainly know by now, mankind is entering upon the backside of Hubbert's curve. Global oil production is on the verge of entering the phase of irreversible decline. For many years, cumulative worldwide oil extraction and depletion has exceeded new oil discovery by a wide margin. So the fact that Chevron has drilled, tested, and completed Jack #2 does not nullify Peak Oil. Jack #2, in fact, demonstrates a key element of the Peak Oil thesis. That is, that the "easy" oil is gone. Mankind has been drilling it up, lifting it out of the ground, and burning it into heat and vapor for the past 147 years. The oil that mankind will lift from the earth in the future, on the far side of Peak Oil, will be in faraway places, in harsh climates, under excruciatingly difficult conditions, deep down, heavy, sour, and overall expensive.

So welcome back to the world of Peak Oil, if perchance you ever left. Yes, by all means, break out the champagne for Chevron. Like the famous story of legendary baseball great Babe Ruth, Chevron has walked up to the plate, pointed to the distant bleachers, and smacked the ball right out of the park. And the crowd goes wild!

But remember that Babe Ruth struck out a lot more times than he hit home runs. And understand that the game we are playing, in order to fuel our oil-addicted culture, is far from over. In fact, the game that we are playing never ends.

Until we meet again…
Byron W. King

From the editor….

FROM THE EDITOR

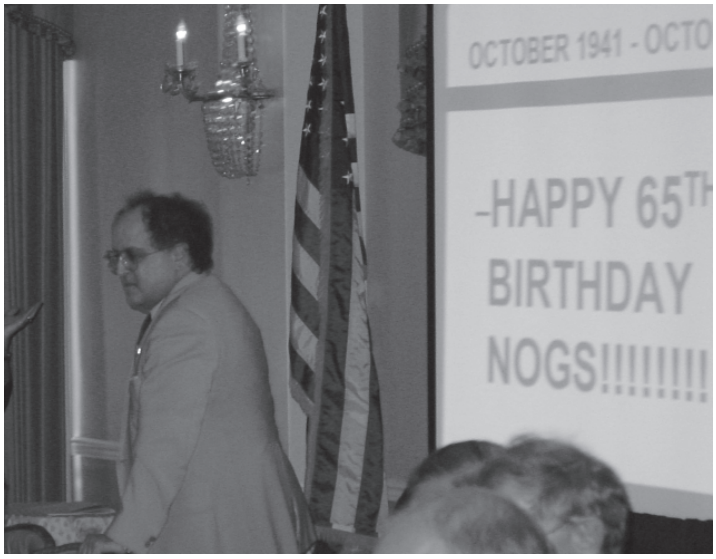
Special thanks this month go to Mike Fein and Paul Post. Mike has obtained permission to republish Byron King's article *Chevron Conquers the Rock* presented in this issue; and thanks to Paul Post, for a consistently relevant and timely collection of industry news in the monthly Drill Bits column.

Remember you can elect to download the *NOGS log* directly from the website at www.nogs.org to help us control *NOGS Log* expenses. Let us know if you want to "go digital" at log@nogs.org.

Robert Rooney
Editor *NOGS Log*

NOGS Celebrates 65 Years!!!

NOGS celebrated its 65th anniversary at the October 9th luncheon at Le Pavillon. Marking the special occasion, a charter member of NOGS, Mr. Lawrence Eustis, attended and performed the ritual blowing out of the candles on the anniversary cake. Mr. Eustis has been a member of NOGS since 1941. Of historical note: the first NOGS meeting was held on October 6th, 1941 in the old St. Charles Hotel (since torn down, the site of the present Place St. Charles building). At that time there were 11 independent operators of small oil companies in New Orleans. Oil was selling for $1.25 - $1.50 per barrel, and natural gas had a very limited sale. In 1941, NOGS had 55 members. Along with Mr. Eustis and the other charter members, some of those instrumental in the origin of NOGS were George Schneider of Texaco, J.W. Hoover of the California Company, Pete Peterson of Freeport Sulphur Company, and D.D. Utterback of Freeport Sulphur Company. You can read more about the history and highlights of NOGS at the NOGS website: www.nogs.org/aboutus.html.


OCTOBER 1941 - OCTO
-HAPPY 65TH
BIRTHDAY
NOGS!!!!!!!!


30th Annual
MINERAL AUCTION
Games!

NOGS Membership News & Information

This is your page. We would like to fill it with your news. In addition to professional news from our members; e.g., promotions, transfers, moves, new employer, etc., we also welcome your success stories. Please e-mail items to log@nogs.org.

Kickoff Party was a Win!

Not to be upstaged by the Saint's homecoming game against the Falcons, Art Johnson reported that the NOGS Kickoff Party on September 15th at Chad's Bistro went very well and was considered a huge success, with approximately 56 people in attendance. Special thanks to Suzie Baker of NOGA for the great decorations, and to Jim Rapier, sports editor for the Times-Picayune and son-in-law of our own Annette Hudson, for offering his insights to local and current sports happenings by fielding a plethora of questions from the sports-savvy NOGS audience. Thanks to all those who attended in support of the new board of directors.

Art's next event will be the NOGS Holiday Party at Vincent's in Metairie, scheduled for December 8th, see the flyer on page 11 in this issue for details.

New NOGS Members September 2006

Jennifer W. Connolly
Shell
Production Geologost
701 Poydras St
New Orleans, LA 70161
504-728-6411

David F. Little
W & T Offshore
Staff Geologist
Ste 1200 - 3900 N Causeway
Metairie, LA 70002
504-210-8132

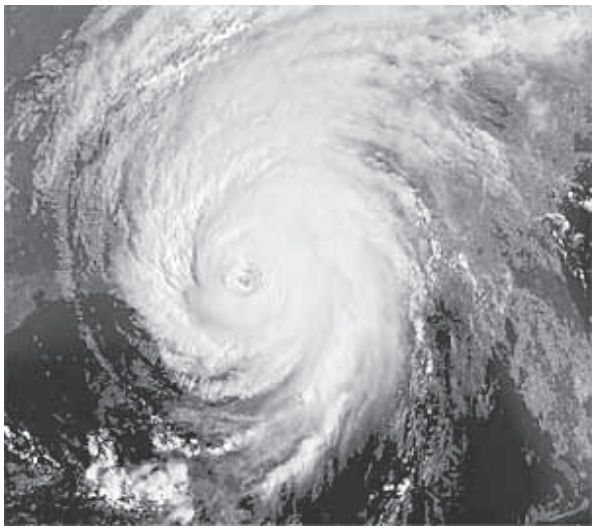
Tim Maciejewski
Chevron
Geophysicist
935 Gravier St
New Orleans, LA 70112
504-592-6148

Ryan D. Weber
Paleo-Data Inc.
6619 Fleur De Lis Dr
New Orleans, LA 70124
504-488-3711

REINSTATED
Philip W. Johnson
Leading Edge GeoTechnology
1213 Orange St
New Orleans, LA 70130
504-430-2027

REINSTATED
Mark A. Kulp
Univ. of New Orleans
Dept of Geology & Geophysics
Lakefront
New Orleans, LA 70148
504-280-1170

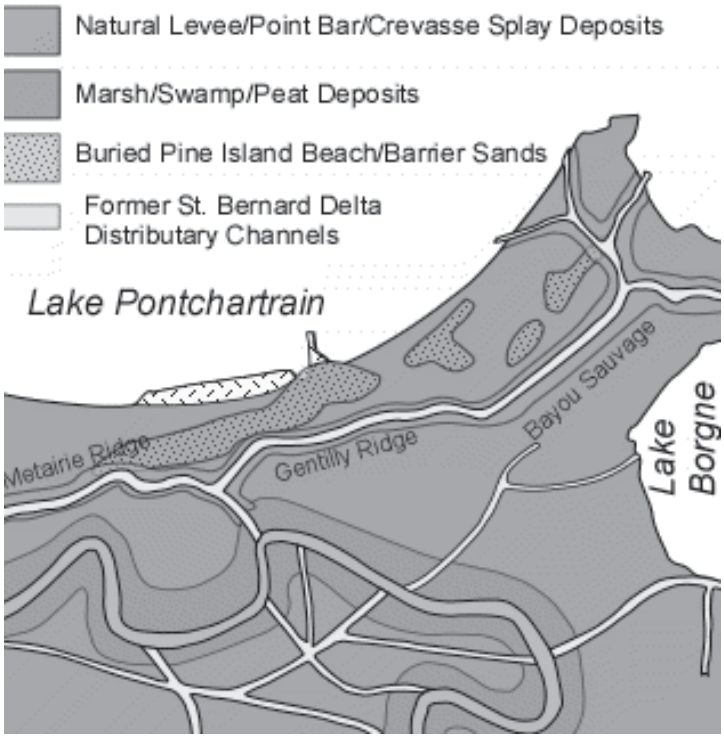
N.O.G.S. Fall 2006
Field Trip Announcement



"Hurricane Katrina – What Happened?"
Saturday November 4, 2006
8:30am – approx. 2pm

Tour Guide: **Dr. Stephen Nelson**, Tulane University

Take a geological tour of the devastated areas of New Orleans. Learn and analyze what happened from a geological point of view. The land on which New Orleans is built has origins that began about 4,000 years ago. As sea level was rising after the last glacial maximum, a series of barrier islands was built outward from the coast of Mississippi across what is now the southeastern edge of Lake Pontchartrain. Then, the Mississippi River began to build delta complex and associated distributary channels that are now the Metairie Ridge and Gentilly Ridge. The natural levee deposits built high areas and the channels eventually filled in with sediment. Between the distributary channels, the low areas became swamps. The city of New Orleans was built in these low areas and a man-made levy system was created to protect the city's low-lying areas from hurricanes and other natural disasters. This system failed when Hurricane Katrina made its landfall as a Category 3 storm on the morning of August 29 in southeast Louisiana.



Dr. Nelson has graciously agreed to do this trip at no charge to N.O.G.S. members. A field guide and other relevant material can be viewed and downloaded from Steve's website (http://www.tulane.edu/~sanelson/Katrina). Volunteer drivers are needed to ensure the group moves efficiently between stops.

The trip will depart at 8:30am from the horseshoe drive in front of Tulane University on St. Charles Ave. and end at approximately 2pm near the 17th Street canal levee breach. Tentative plans then are for those interested to proceed to nearby Bucktown for eats and refreshments.

To enroll, get more information and to volunteer to drive, please contact David Garner at 504-728-6154 and david.garner@shell.com.

INFO TIDBITS

- **USGS Reports Latest Land Change Estimates for Louisiana Coast**: Gaye S. Farris of the USGS On October 3rd 2006, reported that 217 square miles of Louisiana's coastal lands were transformed to water due to Hurricanes Katrina and Rita. How much of the land loss is permanent is not yet known, and will require monitoring by field studies and aerial photography after each growing season. The analysis was performed by comparing Landsat Thematic Mapper satellite images of coastal Louisiana from Oct. 16 and Oct. 25, 2005, with ones taken between Oct. 13 and Nov. 7, 2004, coupled with small-plane over flights and on-the-ground field studies.

  The entire article can be found on the Louisiana Department of Natural Resources website at: http://dnr.louisiana.gov/sec/execdiv/pubinfo/newsr/2006/1003usgs-coast-land-change.pdf
- **Distant Planet is Half Fire, Half Ice**: Ker Than, Staff writer for Space.com reported on October 12th, 2006, that a distant planet has been identified that has a day side that is always hot as lava, and a night side chilled to possibly below freezing. The planet is Upsilon Andromeda b, a gaseous giant that orbits close to Upsilon Andromeda, a star 40 light years away. The planet is believed to be tidally locked to its star in the same way our moon is with the earth. Likewise the day side of the planet temperature is estimated to be 2,550 to 3,000 degrees Fahrenheit, but only 4 to 450 degrees on the night side. This represents the first time a temperature variation has been recognized across the surface of a planet outside of our solar system. The measurements were made using infrared data collected from NASA's Spitzer Space Telescope.

  The entire article can be found at: http://www.space.com/scienceastronomy/061012_fireice_planet.html
- **DOE Project Injects 700 Tons of Carbon Dioxide Into Texas Sandstone Formation**: Scientists took a major step forward in the U.S. Department of Energy's carbon sequestration program when they injected 700 tons of CO2 a mile underground. The project is named the Frio Brine project and is funded by the DOE. The test is expected to take one year, and will provide data on whether these formations can store CO2 over long periods effectively, with the overall goal of reducing greenhouse gas emissions through sequestration. Results of the test may also help with the design of FutureGen, a $1 billion DOE effort to build the world's first zero-emissions coal burning plant.

  The entire article can be found at: http://www.fossil.energy.gov/news/techlines/2006/06057-Frio_CO2_Injection.html

Robert Rooney

THE NEW ORLEANS GEOLOGICAL SOCIETY, INC.

810 UNION STREET SUITE 300, NEW ORLEANS, LA 70112

TELEPHONE: (504) 561-8980 • FAX: 561-8988 • E-MAIL: NOGS@GS.NET • WEBSITE: WWW.NOGS.ORG

MEMBERSHIP APPLICATION

_____ _____
Name (Last, first, middle intital) Date

_____ _____
Company Title

(____) _____ (____) _____

_____
Phone Number Fax Number E-mail Address

_____
Work Address (PO Box/Street, City, State, Zip, Country)

_____ (____) _____
Home Address (Street, City, State, Zip, Country) Phone Number

Prefered Mailing Address (check one): Work _____ or Home _____ _____
Spouse's Name

_____
Other Professional Society Memberships (AAPG*, AIPG, GSA, etc.) * Please indicate AAPG member category

College/University:	Degree	Year	Major

Explain, in brief, your affiliation with the petroleum industry:

_____

_____

Please mark appropiate classification: ❑**New Member** ❑**Reinstatement** ❑**Renewal**

ANNUAL DUES: $25.00 FOR ACTIVE OR ASSOCIATE $12.50 STUDENT MEMBERSHIP*

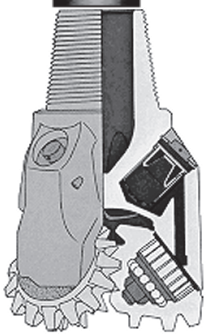
*No intial dues for students in the Sponsorship Program

-- Please mail application to the NOGS office with check payment or Visa/MasterCard/American Express acct# and exp. date --

Committee preference (please indicate choices):

- ❑**AAPG Student Chapter**
- ❑**Advertising**
- ❑**Awards**
- ❑**Ballot**
- ❑**Best Paper**
- ❑**Computer Applications**
- ❑**Continuing Education**
- ❑**Employment Counseling**
- ❑**Entertainment**
- ❑**Environmental**
- ❑**External Affairs**
- ❑**Field Trip**
- ❑**Finance & Audit**
- ❑**Historical**
- ❑**Membership/Directory**
- ❑**Memorial Foundation**
- ❑**NOGS LOG**
- ❑**New Geoscientists (NGNO)**
- ❑**Nominating**
- ❑**Non-Technical Education**
- ❑**Photography**
- ❑**Program/Luncheon**
- ❑**Publication Sales**
- ❑**School Outreach**
- ❑**Scouts: Boy and Girl**
- ❑**Sponsorship**
- ❑**Technical Projects**

DRILL BITS



South Louisiana and Offshore Exploration and Production Activity

- **BP Plc.** (55% and operator), **Anadarko Petroleum Corp.** (25%), and **Devon Energy Corp.** (20%) announced the first oil discovery in Keathley Canyon (KC) on August 31, 2006. The KC 292 #1 BP 2, was drilled to a MTD of ~32,500 feet in 5,860 feet of water. The companies said they encountered 800 net feet of hydrocarbon-bearing Paleogene sands in the well. "Kaskida is Devon's fourth significant discovery in the lower Tertiary trend in the Gulf of Mexico, and we believe it is our largest to date," said Stephen J. Hadden, senior vice president, exploration and production. "Of special interest to us is the discovery's location in the Keathley Canyon area where we hold 108 lease blocks and have identified 12 exploratory prospects in addition to Kaskida." Bob Daniela, Anadarko's senior vice president of worldwide exploration said that, "Kaskida significantly enhances the prospectivity of Anadarko's acreage position..." adding that "Commercializing the lower Tertiary play could substantially elevate Anadarko's already robust deepwater Gulf of Mexico exploration and production profile." The partners expect to resume operations on the block in late 2006. The block was acquired by BP (66.67% and operator) and Anadarko at OCS Sale 187 in August, 2003 for $373,373. South-adjacent KC 336 was acquired by BP at Sale 168 in August 1997 for $193,527. BP also acquired west-adjacent KC 291 and 335 for bids of $193,527 and $321,421 respectively at OCS Sales 168 (1997) and 161 (1996).

- **Chevron** announced September 5 that it successfully completed a record setting production test on the Jack #2 well at Walker Ridge Block 758 in the U.S. Gulf of Mexico. The well was completed and tested in 7,000 feet of water, more than 20,000 feet below the sea floor. This broke Chevron's 2004 Tahiti well test record as the deepest successful well test in the Gulf of Mexico. The Jack #2 well was drilled to a total depth of 28,175 feet.

  The test was conducted during the second quarter of 2006, and was designed to evaluate a portion of the total pay interval. During the test, the well sustained a flow rate of more that 6,000 barrels of crude oil per day with the test representing approximately 40 percent of the total net pay measured in the Jack #2 well. Chevron is the operator with a 50 percent working interest. Devon and Statoil each own a 25 percent working interest. The partners plan to drill another appraisal well in 2007.

  More than a half a dozen world records for test equipment pressure, depth, and duration in deepwater were set during the Jack well test. For example, the perforating guns were fired at world record depths and pressures. Additionally, the test tree and other drill stem test tools set world records, helping Chevron and co-owners conduct the deepest extended drill stem test in deepwater Gulf of Mexico history.

  The announcement set off a firestorm of rumors and innuendos about the play's resources; many of them mistakenly mixing trend / play resources with Jack prospect resources. The significant citation is Meyer et al. (2005) who estimated that, "Over 12 billion barrels of oil equivalent (BBOE) in-place have

been discovered in the early stages of this emerging trend. There is considerable upside potential of up to 15 BBOE recoverable oil reserves for this deepwater turbidite depositional system that covers over 34,000 mi2 in the Northwest GoM deepwater basin". Larry Zarra (CVS) had similar comments at his NOGS luncheon address in April, 2006.

- On September 18, **Statoil** agreed to pay $700 million for rights to two U.S. Gulf of Mexico deepwater discoveries and one exploration prospect from U.S. oil producer Plains Exploration & Production (PXP). The deal, including rights of first negotiation for acquiring other PXP deepwater Gulf of Mexico assets, strengthens Statoil's presence in the region. Existing leaseholders have pre-emptive rights that must be exercised no later than 30 days after they have been notified of the sale. Consequently, the transaction is expected to close in November.

  Statoil has become increasingly active in what is for the company an emerging core area where they target 100,000 BOE/D by 2012. According to a corporate spokesperson, "This acquisition is important to achieving that target." The new assets are in the "greater Tahiti area" of south-central Green Canyon, and include a 17.5 percent interest in the Shell Caeser discovery (GC 683, see Drill Bits, July 2006), and a 12.5 percent interest in Chevron et al.'s Big Foot discovery (WR 29, see Drill Bits, March 2006). Statoil will also gain a 12.5 percent stake in the Chevron-operated Big Foot North prospect. "PXP has a record of successfully gaining access to high quality prospects, and we look forward to an ongoing dialogue with this company as its Gulf of Mexico portfolio matures," said Oeivind Reinertsen, Senior Vice President for Statoil's activities in the U.S. Gulf of Mexico. PXP's remaining deepwater portfolio consists of 15 prospects covering an area in excess of 50 deepwater blocks. Two of these prospects, Norman and Friesian, are currently drilling.

  Following this acquisition, Ole Johan Lydersen, Statoil's vice president strategy international E&P, told Reuters on the sidelines of an oil conference in The Hague, "We are not stopping our expansion there. We will do more acquisitions ... and build a significant position in the Gulf of Mexico."

- An additional sign of **Petrobras**' interest in the GoM was their awarding a contract to Sevan Marine ASA, Tananger, Norway, for the "Sevan Driller". Currently being constructed, the rig will have a capacity of drilling 40,000-ft wells in water depths up to 12,500 ft, a variable deckload of more than 15,000 metric tons and high storage capacity of bulk materials. It will be equipped with an internal storage capacity of up to 150,000 bbls of oil. The drilling contract has a duration of six years and is expected to commence in the first quarter of 2009. Revenues of up to $880 million could be generated over the six-year period, including a bonus arrangement and mobilization fee. To satisfy client specific requirements and to further enhance drilling efficiency and rig uptime for deepwater operations in the GoM, additional investments of $50 million will be made to the unit.

Paul Post

API-Delta Chapter and Local Energy Associations Meeting - Tuesday, November 14th

11:00AM to 1:00PM

Royal Sonesta Hotel South Ballroom

300 Bourbon Street, New Orleans

Guest Speaker: Rayola Dougher, Manager - Energy Market Issues, American Petroleum Institute
Topic: Challenges Facing Our Oil and Gas Industry

Attention: All Joint Society Leaders and members of the Local Energy Associations of the API-Delta Chapter

Please join us for our upcoming meeting of the API-Delta Chapter and Local Energy Associations on November 14, 2006 in New Orleans. Our Guest Speaker will be Rayola Dougher, Manager - Energy Market Issues, American Petroleum Institute. The featured topic will be: Challenges Facing Our Oil and Gas Industry.

If you have any questions, please contact: Carlos Guzman - carlos.guzman@shell.com or Benjamin J. Waring - bwaring@ocsbbs.com.

We look forward to seeing you. Thank you for your participation!

Benjamin J. Waring, JD CPL

NOGS Website Contest

Last month's question: **What was the first storm in this decade to cancel a NOGS luncheon?** If you check the dates, Cindy came in July 4 weekend, and with July 4 on a Monday, our regular luncheon meeting was scheduled to be July 11. Dennis was a threat prior to the following weekend, and we had to make a call based upon the track it was making right toward us. The meeting for Monday the 11th was cancelled on Friday July 8th, rather than risk having to pay the Fairmont for a meeting for which no one might be able to show up. Therefore, despite Dennis turning more north and then eastward away from New Orleans, there was no meeting on July 11th, and just some more hot dry north wind. Little did we know.....

As of this issue's press time, there was no winner for last month. To become a winner, remember to look for the hidden NOGS question on our website, www.nogs.org, and correctly answer the question. You must be a member to play, and the first three members answering correctly will win a special NOGS prize pack. Look for this graphic to help you find the question for this month. Happy surfing, and good luck finding and answering this month's question!

New Orleans
Geological Auxiliary News

Congratulations to President Susie Baker and the Officers and Board for kicking off a wonderful new year for the Auxiliary! Many thanks go to Charter Member Ruth Grimes for opening her beautiful Lakewood Estates home for our September 13 luncheon. Over thirty ladies enjoyed getting together and catching up with events over the summer. Fox Trot Catering did a fantastic job with the food and its presentation. Delicious salads, gourmet croissant sandwiches, quiche and baked brie were some of the highlights and a beautiful Fall decorated cake from Creative Cakes finished off a wonderful meal. Co-Chairmen Mim Brumbaugh, Peggy Rogers and Elizabeth Furlong are to be congratulated for starting us off with a wonderful party. Thanks, ladies, for all of your hard work. It was so good to see Pam Heffner, Betty Youngblood, and Mary Schulte. Betty is living in Alabama now and Pam is in Franklin, LA, so we were really pleased to see them.

I hope everyone is planning on attending NOGA's November 8th trip to Houmas House, in Burnside, LA. We are chartering a bus for the occasion so that we can all ride together and enjoy the day. Houmas House is a beautiful plantation home located about an hour from New Orleans. We'll have a tour of the house and gardens and then enjoy a delicious lunch. Many thanks to Chairmen Alma Dunlap, and Beverly Christina for planning this day for us. Details will be included in your invitation, which you should soon be receiving in the mail.

Copies of the NOGA Directory were distributed at the September luncheon. Thanks to Mary Walther, Judy Lemarie' and Ruth Ingram for once again doing a great job on our annual yearbook. If you have not received your copy yet, please contact Ruth. NOGA is always looking to welcome new ladies to the Auxiliary. Membership is open to wives of the members of NOGS. Please pass the word to old and new members. We'd love to have them join us in some of the fun events planned for this next year!

Beverly Kastler
NOGA Member-at-Large

NOGA Application Form

Dues: $15.00

Name _____

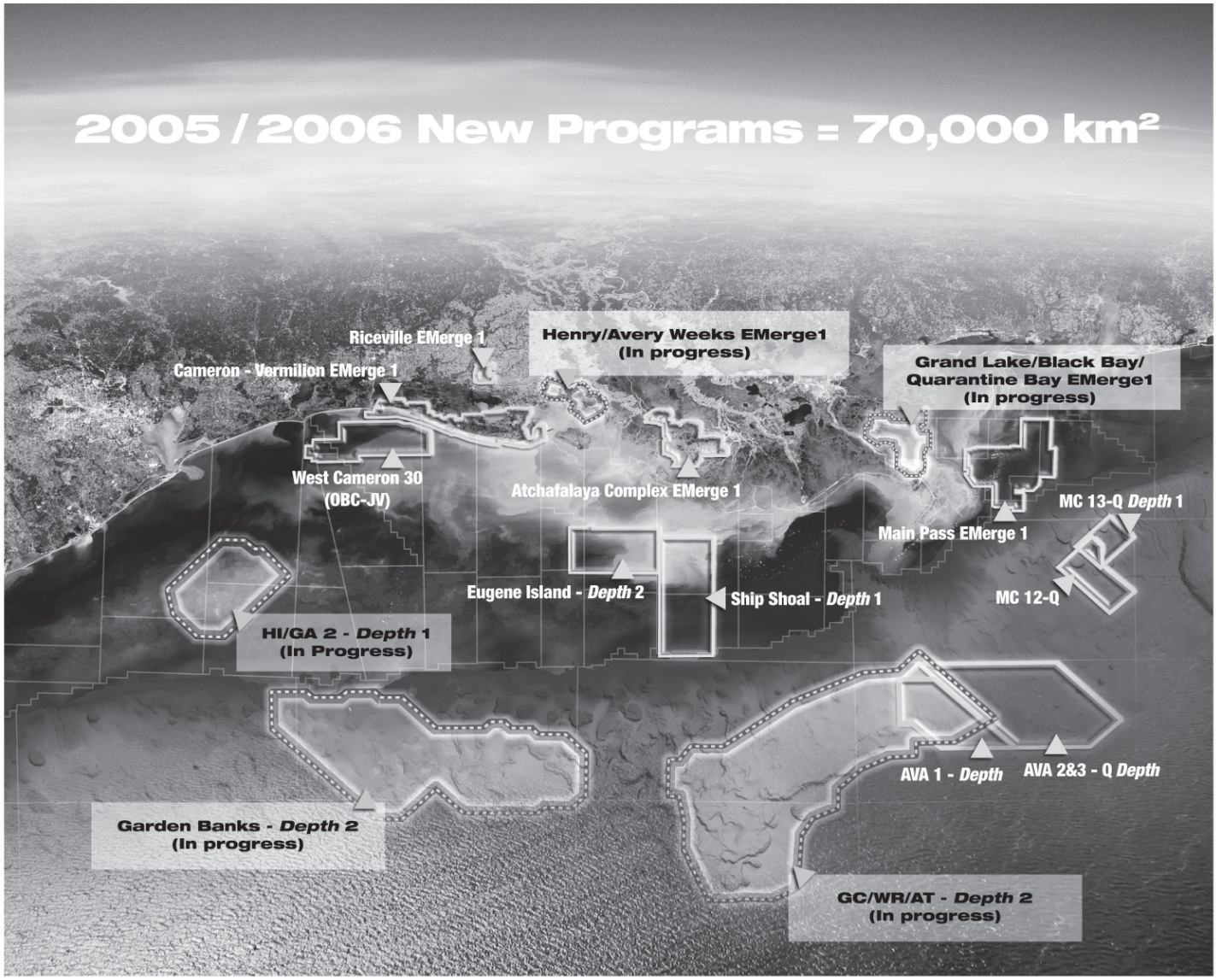
Home Address _____

Home phone _____

Husband's Name _____

Husband's Company _____

Please make check payable to New Orleans Geological Auxiliary and mail with application to: Peggy Rogers
2580 Valentine Ct
New Orleans LA 70131



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2006

- Kirchhoff and wavefield extrapolation migration volumes for deepwater subsalt
- Kirchhoff time and depth migration volumes for deep shelf gas
- Newly reprocessed transition-zone data

For more information, visit **www.multiclient.westerngeco.com**

If you did not precommit with us in 2005, join us in 2006!

The New Orleans Geological Society Memorial Foundation, Inc.

The Memorial Foundation is an IRS Tax Exempt Code #501 (c)(3) organization. The Federal I.D. is: 72-1220999. Please consider making your donation prior to the close of this year's fiscal cycle which is September 30, 2007. Your individual support in any amount will help meet the IRS Guidelines for our Foundation. *Thanks!*

$15,000 AND ABOVE

Gibbett Hill Foundation
In Memory of Steve & Marion Millendorf, William J. Prutzman, Roger G. Vincent & Ron Youngblood

$1,000 TO $3,000

Olga Braunstein Succession
NOGS Golf Tournament May 2006
In Memory of Bill Craig

$500 TO $1,000

Dorothy N. Wise
In Memory of William H. Wise

$250 TO $499

Carlo C. Christina
In Memory of Al Gilreath

UP TO $249

Hilary James Brook
Elisha A. Buckner
F. Robert Bussey
In Memory of Lee Meltzer
Chevron
Matching Funds
Clarence F. Conrad
M. R. "Bob" Douglass
Michael N. Fein
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Laurens Gaarenstroom
Peter G. Gray
Owen R. Hopkins
Dan E. Hudson
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Thomas Charles Klekamp
Richard G. Klibert
William J. Malin
Paul C. McWilliams
Casey R. Mobley
New Orleans Geological Auxiliary
In Memory of June Philpott
Russell H. Nordwell
William J. O'Leary
Richard A. Olsen
Elizabeth M. Petro
Edward B. Picou Jr.
In Memory of Shelby W. Smith
Brenda E. Reilly
Edmund L. Russell
In Memory of Burt Shullaw
Monte C. Shalett
Robert C. Shoup
Dirk L. Smith
Dr. J. O. Snowden
Raymond O. Steinhoff
In Memory of Harold E. Vokes
Thomas A. Tucker
Roy C. Walther
William M. Whiting
Armour C. Winslow
In Memory of Rita Menzel Winslow
Frances A. Wiseman
In Memory of Steve Widdicombe
James W. Yeldell, Jr.
Jim Zotkiewicz

In Memory of Bill Craig

Robin A. Broussard
Chevron
Jeff Jandegian
John C. Scheldt

Luncheon "Roundup" Donations

FONO FUND

The FONO Fund accepts contributions that are invested and the income dedicated to assure sufficient financial resources will always be available to maintain the NOGS business office. To date no funds from this account have been used. Contributors are reminded that donations to the FONO Fund are not covered by the IRS 501 (c)(3) tax exempt classification and should be reported as a business expense on your IRS tax report.

$6,000 AND ABOVE

GCSSEPM Foundation

$250 TO $500

Willis E. Conatser

UP TO $249

Alfred H. Baker Jr.
Joseph E. Boudreaux
Jack G. Bryant
In Memory of Shelby W. Smith
Anthony Carollo Jr.
Arthur F. Christensen
Richard P. Colomes
Joffre J. Crouere
Michael A. Danahy
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Merle J. Duplantis
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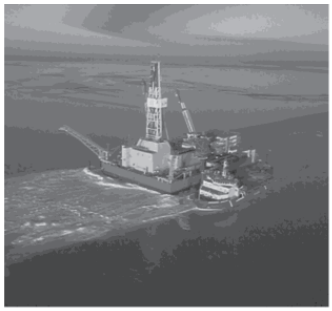
C. R. Rondeau
Monte C. Shalett
Rudolf B. Siegert
Dirk L. Smith
Raymond Stephens
H. Leighton Steward
Roy C. Walther
James W. Yeldell Jr.
Jim Zotkiewicz

Contributions for both funds through October 10, 2006.
Donations are listed for one year.



(Photo courtesy Parker Drilling)

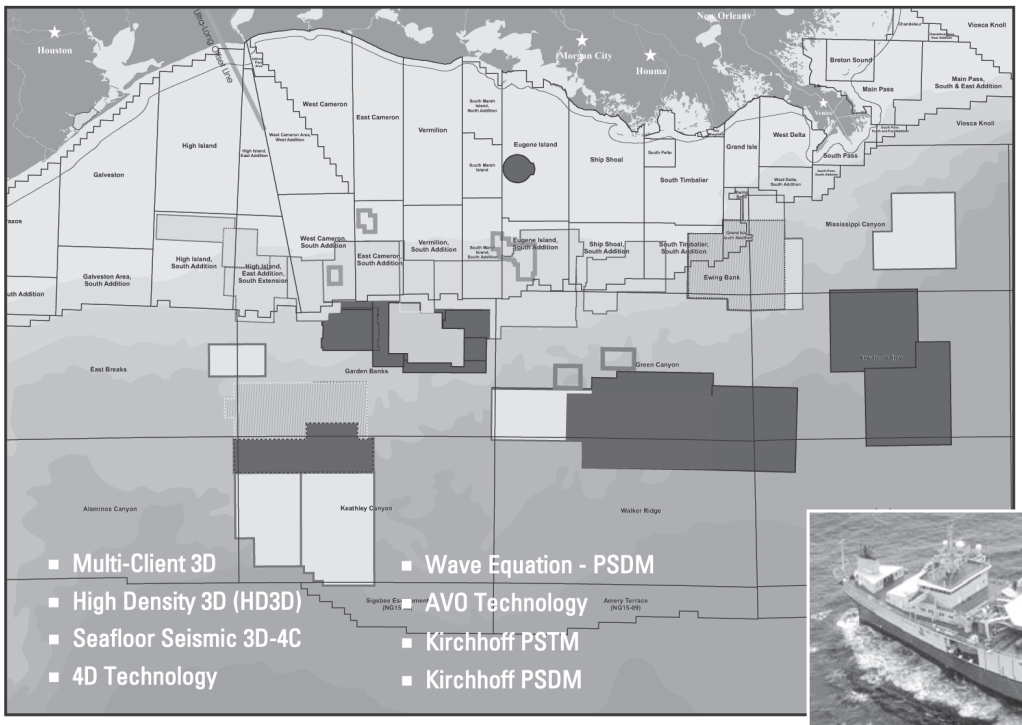
GCSSEPM Foundation 26th Annual
Bob F. Perkins Research Conference
RESERVOIR CHARACTERIZATION: Integrating Technology and Business Practices:

Houston Marriott Westchase Dec. 3-6, 2006

Information and Registration Available at

www.gcssepm.org

The PGS Gulf of Mexico Data Library: For the Reprocessed Data You Need



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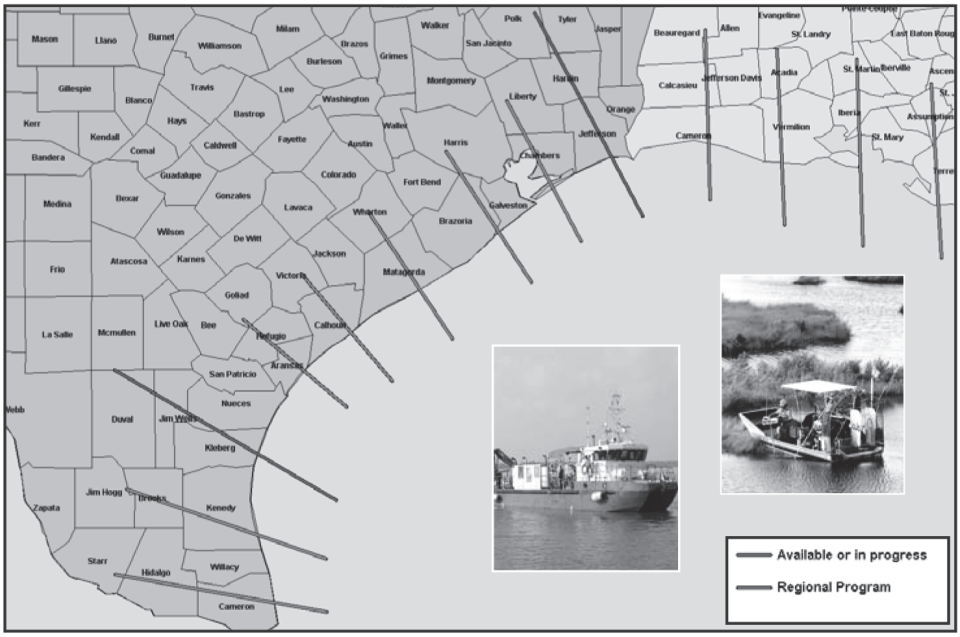
- 125/250 fold (Onshore/Offshore)
- 20 Second Records



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