

NOGS LOG

FEBRUARY 2014

Volume 54, Number 8



FEBRUARY 3 - NOGS LUNCHEON

**Presentation: Facies Analysis and Interpretation of Argillaceous Sandstone
Beds in the Paleogene Wilcox Formation, Deepwater Gulf of Mexico**

Guest Speaker: Bruce Power, PhD

Chevron Energy Technology Company • Houston, Texas

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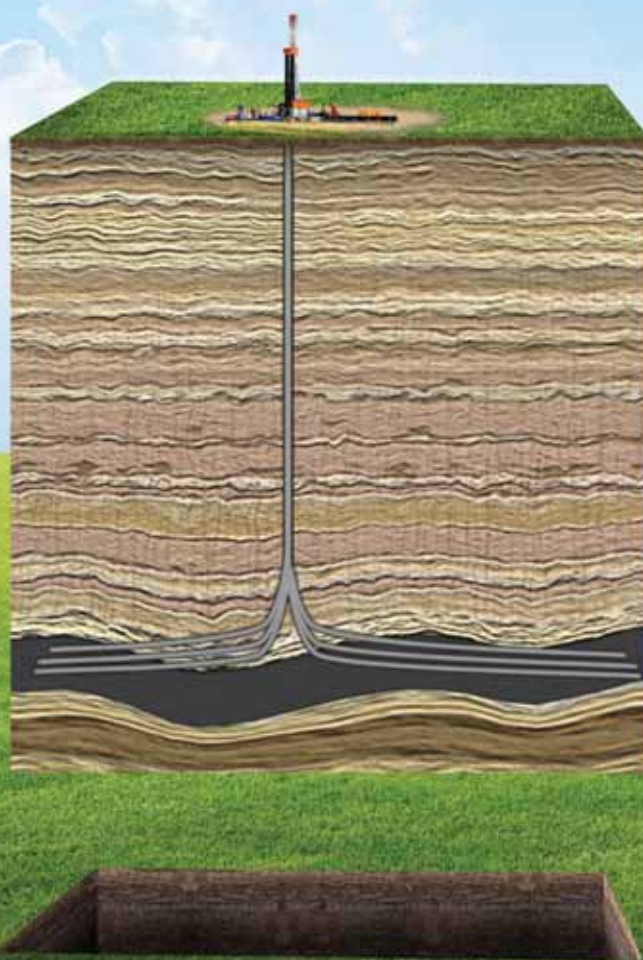
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Interested in contributing to the NOGS LOG? Please submit items by the 1st Friday of the month to nogseditor@gmail.com. Advertising requests should contact the NOGS office at info@nogs.org.

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on the cover:

Cover Photo Submitted by: Philip Richardson

Glacier calving on Margerie Glacier — Glacier Bay, Alaska

Margerie Glacier is a tidewater glacier in Glacier Bay in Alaska and is part of the Glacier Bay National Park and Preserve. Glacier Bay has 16 major tidewater glaciers and provides excellent experiences of both receding and advancing glaciers existing side by side. While Glacier Bay is only accessible by plane or boat, it is a popular stop for cruise ships and the National Park also offers boat tours of Glacier Bay.

Margerie Glacier is about 1-mile wide, 21-miles long, and has a total height of 350 feet (250 feet above the water and 100 feet below the water). It was named for the famed French geographer and geologist Emmanuel de Margerie (1862–1953), who visited Glacier Bay in 1913. Margerie Glacier is one of the most active glaciers where one can witness “calving” (the breaking and dropping of ice from a glacier into the sea). As the glacier calves, rifle-like cracking sounds are heard followed by a thunderous roar as the ice falls into the sea creating turbulent waves.

The beautiful blue color associated with glaciers is created by the density of the ice which absorbs every color of the spectrum except blue, which is reflected – so blue is what we see.

From the Editor

This month I'd like to inform you about four new events that are advertised in this issue of the *NOGS LOG* as well as two date changes for upcoming luncheons.

The first event is for the South Louisiana Exploration Symposium which is being held in conjunction with the Professional Landmen's Association of New Orleans (PLANO) Annual Executive Night. Both events will be on February 27 at the Hilton Riverside in New Orleans. Flyers for both events, as well as a detailed letter from Bubba Sanchez, PLANO President, are on pages 15-17. Carlo Christina, former NOGS president, will speak at the symposium luncheon.

There is an ad on page 24 for a fundraiser benefitting the future Children's Museum of St. Tammany that will be held on March 23. Stay tuned for more information about this topic in the March *NOGS LOG*. A new advertisement for the Subsidence and Land Loss Symposia and the Groundwater and Water Resources Symposia appears on page 29. Both events will be held at LSU in April and are co-sponsored by the Baton Rouge Geological Society and the Louisiana Geological Survey. Last but not least, the advertisement and registration form for the NOGS Annual Golf Tournament is on page 23. Start planning your teams now!

Lastly, the monthly luncheon for March will be held one week later than usual to accommodate for Mardi Gras which is on March 4. The April luncheon will be moved due to the AAPG Convention (April 6-9) in Houston. The tentative date is April 14 but stay tuned for next month's *NOGS LOG* for more information.

Sheri Richardson – NOGS LOG Editor

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From the President

January 6 was our first meeting in 2014 and due to a scheduling problem with the Southeastern Geophysical Society's January speaker; it was also a joint meeting between NOGS and SGS. Professor Martin Cassidy from the University of Houston presented an excellent talk on the occurrence of CO₂ in the subsurface, its association with mantle upwelling, and its economic value in "CO₂ as a Free Gas in the Subsurface, Source and Worldwide Occurrences: Bravo Dome CO₂ Field, NM as a Type Example". Thank you, Martin, for an excellent talk.

UPCOMING EVENTS

February 3 is the date for our next monthly meeting and Bruce Power of Chevron Energy Technology Company, Earth Science Research, Clastic Stratigraphy Research and Development will present: "Facies Analysis and Interpretation of Argillaceous Sandstone Beds in the Paleogene Wilcox Formation, Deepwater Gulf of Mexico." It should be an interesting talk on one of the hottest exploration trends in the Gulf of Mexico.

It is not too early to start planning your foursomes for the NOGS Bill Craig Memorial Golf Tournament. It will be held on Monday April 28 at the Money Hill Country Club outside of Abita Springs. Look for details on page 23.

Since August, I have presented my thoughts about what makes New Orleans and New Orleanians special and different. The rhythms of the city and its people are like nowhere else in the United States. I hope you have enjoyed my observations.

Now I would like to turn to a more serious subject and that is climate change/global warming. As I write this letter (the second week of January) New Orleans is in the last throes of the "polar vortex," which is the newest media phrase to describe "cold weather in winter." The cold weather has brought out people who say that this is proof that global warming is hogwash, and others who say that the change in weather patterns is proof of global warming.

We as Gulf Coast geologists, though, have a unique perspective on the issue of climate change. We see evidence of it every day when we look at well logs, seismic, and paleo data. We see in the well control evidence of sea level rise and fall since the opening of the Gulf of Mexico in the Jurassic. We see the periodicity of the earth's cycles in the paleo data extinction points: Trim A 0.8 mya, Hyal B 1.6 mya, Cris N 2.4 mya, Bul (I) 4.1 mya, Big Hum 12 mya, all great foraminiferal extinction points caused by climate change when sea level dropped after reaching a maximum. Further, the rise and fall is not a steady one, there are little wobbles and perturbations here and there, rises and falls that may be associated with mini ice ages or warming periods. We as Gulf Coast geologists know that climate change over millennia is a given.

Early in my career I noticed repeating patterns on seismic, a strong amplitude reflection followed a zone of weak amplitudes and then another strong amplitude, which on a gamma ray log corresponded to a sandy zone followed by a shaly zone followed by another sandy zone. Not long after, I learned that years earlier a group of geologists, Vail, Mitchum, Sangree, and Snider, had noticed the same patterns in Gulf Coast seismic and logs and had organized their observations into the concept of sequence stratigraphy.

They noticed that depositional features in the Gulf of Mexico were related to sea level rise and fall. When sea level fell to a minimum, the delta deposited large thick basin floor and slope fans the farthest away from the shoreline. When sea level started to rise, the delta retreated shoreward and deposited what they called Transgressive Systems Tracts until sea level rose to a maximum, what they called a Maximum Flooding Surface. Then sea level began to fall and the cycle began anew.

So where are we now? At the present time we appear to be in an interglacial warm period between glaciations. The last Ice Age, the Wisconsin, began approximately 85,000 years ago and ended 10,000 years ago. During the ice age sea level dropped to a minimum of 400 feet lower than present sea level, rose rapidly as the glacial ice retreated, and leveled off about 8,000 years ago, about the same time as our species, *Homo sapiens sapiens*, began to flourish and spread across the globe. So in the Sequence Stratigraphic paradigm we are in a time of Transgressive Systems Tracts moving toward a Maximum Flooding Surface. How much more will sea level rise? I don't know, but when I was a student living in Honolulu, I noticed the land was very flat near the shore and that a mile or two inland, it started to gently rise until it leveled off at 50 to 70 feet above sea level. I suspect that gentle rise was the foreshore of a paleo shoreline and the leveling off was a beach. I also noticed a similar 50 foot rise from the Rio de la Plata along Cordoba and Corrientes Avenues in Buenos Aires. Will sea level rise to that point? The evidence suggests it could. What if we are at or near a Maximum Flooding Surface? Then the rock record indicates we can look forward to cooler temperatures, a gradual and continuing drop in sea level with ocean water going to form polar glaciers that would slowly advance to the temperate northern and southern latitudes.

One thing is certain and that is with all the infrastructure, with all the cities, with all the human habitation near the world's coastlines we, as a species, are heavily invested in the status quo and want things to stay the way they are now.

Chuck

NOGS Office

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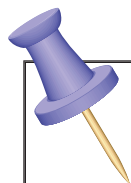
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UPCOMING Events & Activities



February 3 • NOGS Luncheon

Holiday Inn Downtown Superdome

\$3.00 validated parking in hotel garage

Presentation:

*Facies Analysis and Interpretation of Argillaceous Sandstone Beds
in the Paleogene Wilcox Formation, Deepwater Gulf of Mexico*

Guest Speaker:

Bruce Power, PhD

Chevron Energy Technology Company • Houston, Texas

See page 9 for Abstract and Biography

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ADMISSION:

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Without reservation..... **\$35.00**

Student Member with reservations..... **FREE**

February 4-7

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February 27

South LA Exploration Symposium • PLANO Executive Night

Hilton Riverside • New Orleans, LA

For more information, www.planoweb.org

March 5-7

World Heavy Oil Congress

Hyatt Regency • New Orleans, LA

For more information, www.nogs.org

March 29

Supersaurus Saturday -- VOLUNTEERS NEEDED

Louisiana Children's Museum • New Orleans, LA

For more information, www.nogs.org

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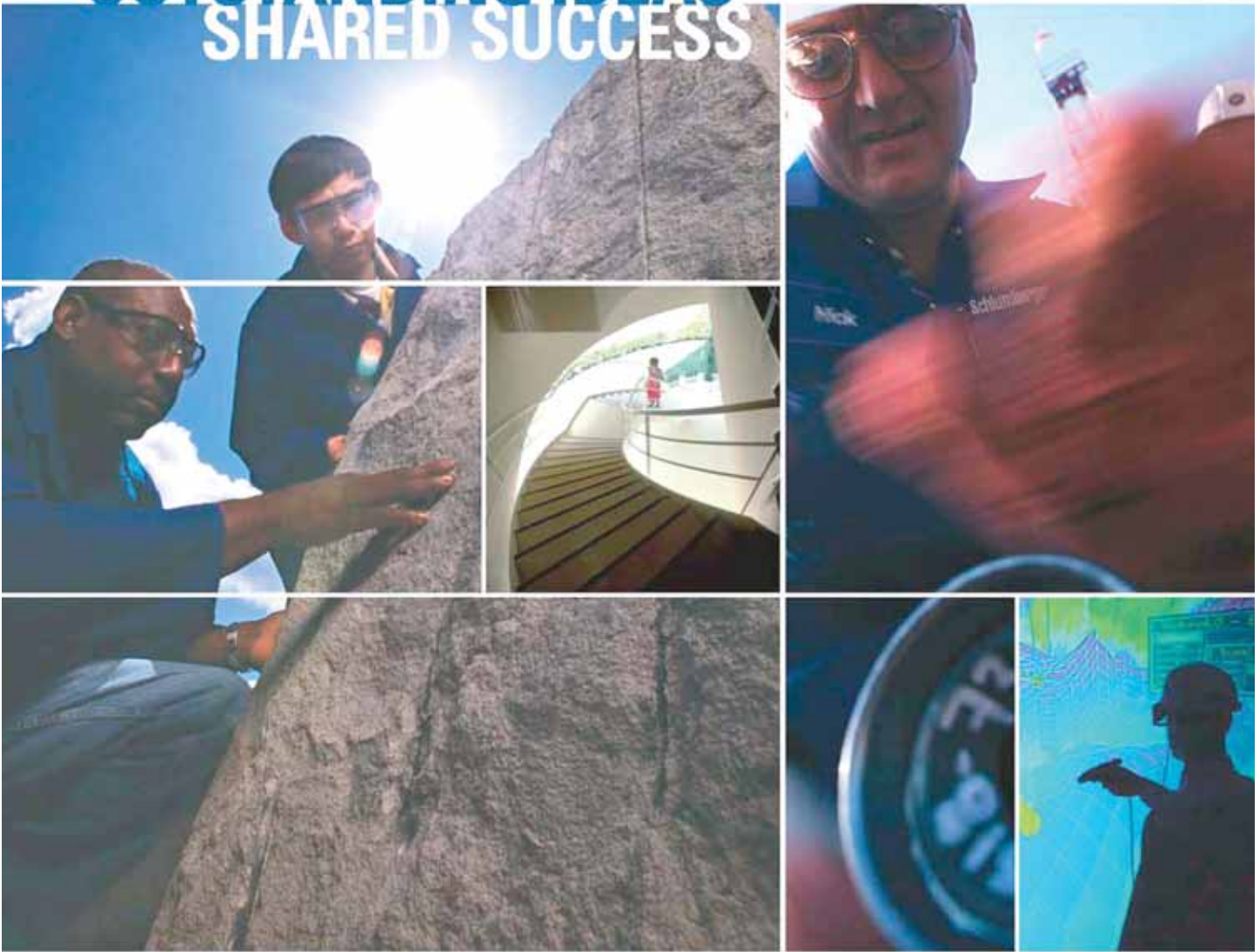
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February 3 NOGS Luncheon Presentation

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Facies Analysis and Interpretation of Argillaceous Sandstone Beds in the Paleogene Wilcox Formation, Deepwater Gulf of Mexico



Presented by

Bruce Power, PhD*

Chevron Energy Technology Company
Houston, Texas

ABSTRACT

The Wilcox Formation (Paleocene-Eocene) in the deepwater Gulf of Mexico comprises a thick (2000-6000 feet), sandstone-rich succession of deepwater sedimentary rocks interpreted to have been deposited in channelized and unconfined lobe/sheet systems in slope and basin floor environments. Over the last decade, the Wilcox Formation has emerged as a major hydrocarbon reservoir, and is the focus of significant exploration and development activity within the petroleum industry.

Argillaceous sandstone beds are a common occurrence in sediments of the deepwater Wilcox Formation. They are interpreted to be deposited by gravity driven flows that are transitional between laminar and turbulent flow, and are classified as hybrid event beds. In the Wilcox Formation, these hybrid event beds are interpreted to occur in two distinct facies associations. They are most commonly interpreted to have been deposited in medial to distal unconfined lobe/sheet environments, an interpretation that is consistent with their observed presence in many other deepwater systems. The argillaceous character of hybrid event beds is interpreted to reflect longitudinal flow evolution of the turbidity current, in which the silt/clay to sand ratio is interpreted to increase with increasing runout length. This change in grain size ratio of suspended sediment dampens turbulence, causing rapid deposition of both sand and argillaceous grains together. The resulting deposits contain significantly greater amounts of argillaceous silt and clay than would be found in a sand bed deposited as a turbidite.

The Wilcox Formation also contains intervals with abundant hybrid event beds that are interstratified with strata interpreted to have been deposited in channel and overbank environments. Interpretation of these hybrid event-dominated intervals as distal lobe/sheet sediments is challenging, as it requires repeated large magnitude shifts of depositional environment from proximal to distal. Equally challenging would be interpreting these intervals as channel margin deposits. Channelized environments are interpreted to be dominated by deposits that reflect higher energy turbidity current processes and through-going flow to more distal environments. These argillaceous intervals with abundant hybrid event beds are interpreted to represent the initial deposits of channel avulsion. The mixture of hybrid event beds, debrites, and turbidite sands and mud is interpreted to have been deposited by the initial flows of an incipient channel that has broken through its confining levee, and is forming an avulsion splay in what was previously an unconfined environment. A distinctive aspect of the interpreted avulsion splay intervals is that they commonly underlie confined channel or levee/overbank intervals, and are interpreted to have a genetic relationship to these overlying channelized strata.

***Co-authors:** Jacob Covault¹, Morgan Sullivan¹, Brooke Carson², Larry Zarra², Julian Clark³, Andrea Fildani³ and Brian Romans⁴

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BIOGRAPHY

Bruce Power, PhD, is a native of Canada and has been employed by the Chevron Corporation since 1991. He began his career working in exploration at Chevron Canada Resources in Calgary, and since then has worked on a wide variety of exploration and development projects in North America, South America, West Africa, and SE Asia. He earned a Ph.D. in Geology in 1993 from McMaster University, in Hamilton, Ontario, Canada, and a B.Sc. in Geology in 1985 from the University of Manitoba, in Winnipeg, Manitoba, Canada. He has published widely on numerous topics in shallow marine stratigraphy, deepwater stratigraphy, and reservoir management. He is currently working as a Senior Staff Research Geologist with Chevron Energy Technology Company, in Houston, Texas, where his main focus is on deepwater stratigraphy and seismic stratigraphy for exploration and reservoir management.

THE LUNCHEON RESERVATION DEADLINE IS JANUARY 30 - CONTACT THE NOGS OFFICE

"And Looking Ahead . . ."

The next luncheon will be held on March 10, 2014. Our guest speaker, Chris McLindon of Stone Energy in New Orleans, Louisiana, will present "Rethinking Coastal Restoration." Contact the NOGS office at 561-8980 or use the PayPal link on the NOGS website (www.nogs.org) to make your reservation.

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| February | | | | | | |
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| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
| | | | | | | 1 |
| 2 Super Bowl Sunday | 3 NOGS Luncheon Holiday Inn 11:30 AM | 4 | 5 | 6 | 7 | 8 |
| | | NAPE Expo - Houston, TX | | | | |
| 9 | 10 | 11 | 12 NOGS Brd. Mtg. NOGA Luncheon | 13 | 14 Valentine's Day | 15 |
| 16 | 17 Presidents' Day | 18 | 19 Greater N.O. Science & Eng. Fair | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 PLANO S. LA Expl. Symposium & Executive Night | 28 | |

| March | | | | | | |
|--|--|-------------------------------------|---|----------|--------|---|
| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
| | | | | | | 1 |
| 2 | 3 | 4 Mardi Gras | 5 | 6 | 7 | 8 |
| | | World Heavy Oil Congress - N.O., LA | | | | |
| 9 | 10 NOGS Luncheon Holiday Inn 11:30 AM | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 St. Patrick's Day | 18 | 19 NOGS Brd Mtg GOM Lease Sale 231 & 225 | 20 | 21 | 22 |
| 23 St. Tammany Children's Museum Benefit 6-10 pm | 24 | 25 | 26 | 27 | 28 | 29 Supersaurus Saturday 11 am - 3 pm |
| 30 | 31 | | | | | |

New Orleans Geological Auxiliary News

"The objective of the Auxiliary is to promote fellowship among the wives of the members of the New Orleans Geological Society and to render assistance to NOGS upon request."

The New Orleans Auxiliary is looking back on a very exciting and interesting 2013 and looking forward to 2014. Our year started off with a luncheon at the home of Trudy Corona in September just in time to enjoy all the Halloween decorations. We enjoyed another Louisiana fall day traveling to Ormond Plantation for a delicious lunch and a bit of the history of St. Charles Parish. In October, the Auxiliary helped NOGS by participating in the GCAGS Convention and managing a lovely Hospitality Room at the Marriott Hotel. Many Auxiliary members ushered in the Christmas season at the NOGS Christmas Holiday Party on December 7th at the Holiday Inn Downtown Superdome, enjoying great food and music for dancing.

Plans are now underway for a luncheon at Porter and Luke's Restaurant on February 12th. Auxiliary members will invite spouses and friends to this event. Mr. Josh Kaston, gemologist, will present a variety of items from his field of expertise, diamond and estate jewelry. Mr. Kaston has a slide presentation which will be very exciting. Maybe we can get some ideas of something we must have!

Mary Ellis Hasseltine and Pat Williamson are chairpersons for this event. Once again we will be joined by spouses and friends when we get together for the annual Spring Social on Saturday, April 5th, at the home of Ann and Louis Gilbert. The Spring Social is always a great evening for food and fun. The committee for this event will be Beverly Kastler, Linda Peirce, and Earleen Rodan.

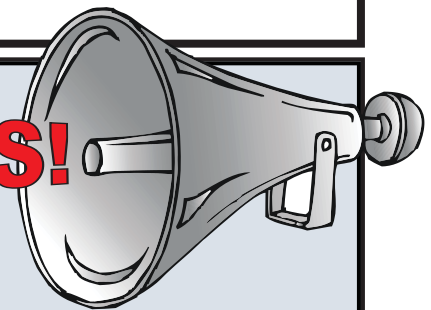
On May 14th Beverly Christina and Camille Yeldell will be the hostesses for the Installation Luncheon at the New Orleans Country Club.

Joining us for the New Year will be Mrs. Martin O. Miller, II (Diane). We are very pleased to have another new member.

It is not too late to join the Auxiliary and participate in all upcoming events.

Peggy Rogers, *NOGS LOG*

CALL FOR VOLUNTEERS!



Volunteers Are Needed:

Judges are needed for the **Greater New Orleans (Region IX) Science & Engineering Fair** at the University of New Orleans on Wednesday, February 19. Please contact Mike Fein at mikef@wtoffshore.com or 504-210-8148 if you can volunteer your time.

Volunteers are needed for the **Supersaurus Saturday** event at the Louisiana Children's Museum on Saturday, March 29. Please contact Tom Bergeon at tom.bergeon@centuryx.com or 504-832-3772 if you can help with this exciting and well-attended event.

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PROFESSIONAL LANDMEN'S ASSOCIATION OF NEW ORLEANS

**PROUDLY ANNOUNCES
ITS
ANNUAL EXECUTIVE NIGHT**

THURSDAY, FEBRUARY 27, 2014 ~ 5:30 P.M. – 8:30 P.M.

SPEAKER: DON G. BRIGGS

President

Louisiana Oil & Gas Association ("LOGA"), Baton Rouge, Louisiana

TOPIC:

Current Issues Affecting Oil and Gas Industry

NEW ORLEANS HILTON RIVERSIDE & TOWERS

Courtyard Assembly, Versailles and Napoleon Ballrooms
Poydras Street at the Mississippi River, New Orleans, Louisiana

TICKETS: \$70.00 PLANO Members \$85.00 Non-PLANO Members
Open to all industry associations and oil and gas industry executives.

Program Format

Opening Reception – 5:30 p.m. – 6:15 p.m.

Presentation of Colors

Speaker – 6:30 p.m. to 7:00 p.m.

Buffet & Cocktails - 7:00 p.m. – 8:30 p.m.

Tickets must be purchased on or prior to Friday, February 14, 2014, to ensure industry executives' names are included in the program.

Tickets **WILL NOT BE AVAILABLE** at the door.

Special PLANO room rates available at the
New Orleans Hilton Riverside & Towers, #2 Poydras Street, New Orleans, LA (Group Code PEN),
call 504-584-3939 (9:00 a.m.-5:00 p.m.) or 1-800-HILTONS,
Hilton (per night) - Single Rate \$189, Double Rate \$189, Triple Rate \$219, Quad Rate \$249,
Royal Sonesta (per night) Deluxe Rooms - Single Rate \$219, Double Rate \$219.

PLEASE MAKE ROOM RESERVATIONS by JANUARY 31, 2014.

Purchase of tickets, please contact lmorgan@hjainc.com, or margaretcameron@charter.net

PLANO Holding South Louisiana Exploration Symposium

Jefferson Ballroom, 3rd Floor, New Orleans Hilton Riverside & Towers

Thursday, February 27, 2014, 9:00 a.m. to 4:00 p.m.

Purchase of an Executive Night ticket will enable you to view offerings at the symposium.



**PROFESSIONAL LANDMEN'S ASSOCIATION OF NEW ORLEANS
("PLANO")**

Proudly announces its...

SOUTH LOUISIANA EXPLORATION SYMPOSIUM

To Be Held In Conjunction With PLANO's *Executive Night Program*

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JEFFERSON BALLROOM, 3RD FLOOR**

Thursday, February 27, 2014, 9:00 A.M. - 4:00 P.M.

COST: 10'X10' Booth, complete with One (1) Table & Two (2) chairs: \$450.00

***Charge includes booth rental fee, continental breakfast, coffee service (morning & afternoon breaks),
two (2) free lunch tickets, and two (2) free tickets
to both the Symposium & PLANO's Executive Night Program.
Executive Night Program commences at 5:30 P.M.***

FOR REGISTRATION/RESERVATIONS, CONTACT: Margaret ("Margo") Cameron at:

(985) 640-0352, or e-mail margaretcameron@charter.net

Please make reservations no later than Monday February 17, 2014.

All payments to be remitted to:

**PLANO
P.O. BOX 51123
NEW ORLEANS, LA 70151-1123**

**PLANO'S SOUTH LOUISIANA EXPLORATION SYMPOSIUM
NEW ORLEANS HILTON RIVERSIDE HOTEL, JEFFERSON BALLROOM
THURSDAY, FEBRUARY 27, 2014**

Registrations/Reservations: _____

Name: _____ Title: _____

Company: _____

Address: _____

PLANO MEMBER: ☐ YES ☐ NO



PROFESSIONAL LANDMEN'S ASSOCIATION OF NEW ORLEANS ("PLANO")

Each year, for the last sixty years, the Professional Landmen's Association of New Orleans ("PLANO") has sponsored its Executive Night to honor the oil and gas executives who have contributed so much to our industry. In the past, many exploration companies had offices in New Orleans and it was easy for PLANO members, executives, and exploration managers to attend the function. Now a large percentage of PLANO members and most company executives reside in Houston. Consequently, it is difficult for many of our members and their company executives to travel to New Orleans to attend Executive Night. It is the objective of PLANO to expand the activities surrounding our function to provide a program of interest to encourage PLANO members, executives, and exploration managers to come to New Orleans for Executive Night.

The last five year cycle has not been kind to exploration in the shallow water Gulf of Mexico and South Louisiana. Low natural gas prices, Macondo, and the exodus of exploration companies to the deep water Gulf of Mexico and the resource plays, have substantially reduced the seismic crews and drilling rigs active in the region. Nevertheless, despite the decreased activity, there have been several substantial discoveries during the last five years and a high percentage of the wells that were drilled were successful. It is the objective of PLANO to bring attention to these exploration successes in order to encourage exploration companies back into the region, and to give companies and individuals still active in exploration a convenient and economical forum to market their ideas.

In the effort to accomplish these two objectives, PLANO, NOGS, and SIPES are hosting an Exploration Symposium in conjunction with PLANO's 2014 Executive Night on February 27, 2014. Companies marketing exploration projects are invited to exhibit their prospects in the Jefferson Ballroom of the Hilton Riverside Hotel (adjacent to the Versailles and Napoleon Ballrooms which will host the PLANO Executive Night). To the extent available, other booths will be available to companies offering seismic, land, engineering, and other services to South Louisiana and the shallow water Gulf of Mexico. The exhibit hours will be from 9:00 am to 4:00 pm, and the Executive Night program will follow. The costs of a booth will be \$450 which will include two tickets to Executive Night and two tickets to the luncheon. Mr. Carlo Christina, President and Co-Founder of C & R Exploration Co., will speak at the luncheon and discuss recent highlights in South Louisiana exploration.

A ticket to Executive Night also provides access to the Exploration Symposium. Tickets to the luncheon can be purchased for \$50 for anyone not attending a booth.

If you have any South Louisiana or shallow water OCS prospects or supply support services, please consider exhibiting. Otherwise, consider purchasing tickets for Executive Night for yourself, any landmen in your company, and any executives or explorationists who would be interested in attending the Symposium and Executive Night.

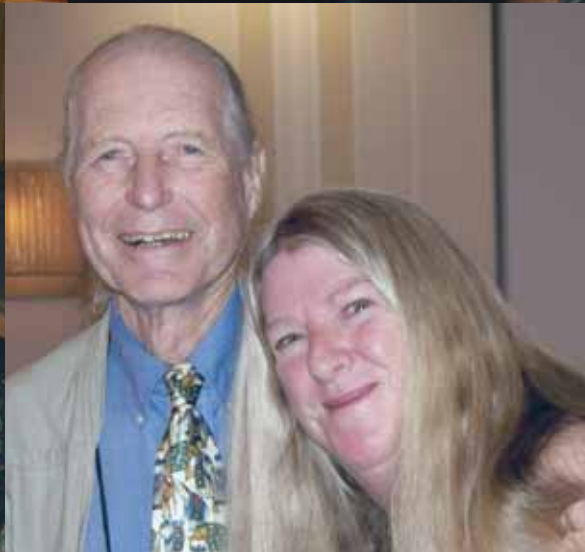


2013 Christmas



NOGS

s Holiday Party



Photos courtesy of Arthur Christensen



COMMITTEE NEWS

Boy Scouts/Girl Scouts Committee:

A Chairman is needed.

This committee promotes and supports the Scouting movement and assists in all matters pertaining to geology, including the Geology Merit Badge Program. If you're interested, please contact Bill Whiting at Bootscon@aol.com or info@nogs.org. If there are any Eagle Scouts looking to assist in this worthy cause, it would be greatly appreciated.

Sponsorship Committee:

A Chairman is needed.

This committee secures funding from sponsors to help finance various activities of the Society. This committee also insures that sponsors are thanked and adequately recognized for their generosity.



**Shell has worked in partnership
with the NOGS for many years, and
is proud to count the society among
its closest business associates.**

The New Orleans Geological Society was organized in 1941 to foster scientific research and advance the science of geology. Particular emphasis is laid on the exploration for and production of petroleum and natural gas. Related objectives include encouraging the adoption of improved methods of exploration, disseminating pertinent geological and technological data, and maintaining a high standard of professional conduct among its members.

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SUPER SAURUS SATURDAY

**Volunteers
Needed**



March 29, 2014

11:00 AM - 3:00 PM

To volunteer contact: Tom Bergeon

tom.bergeon@centuryx.com

504-832-3772

Louisiana Children's Museum

www.lcm.org

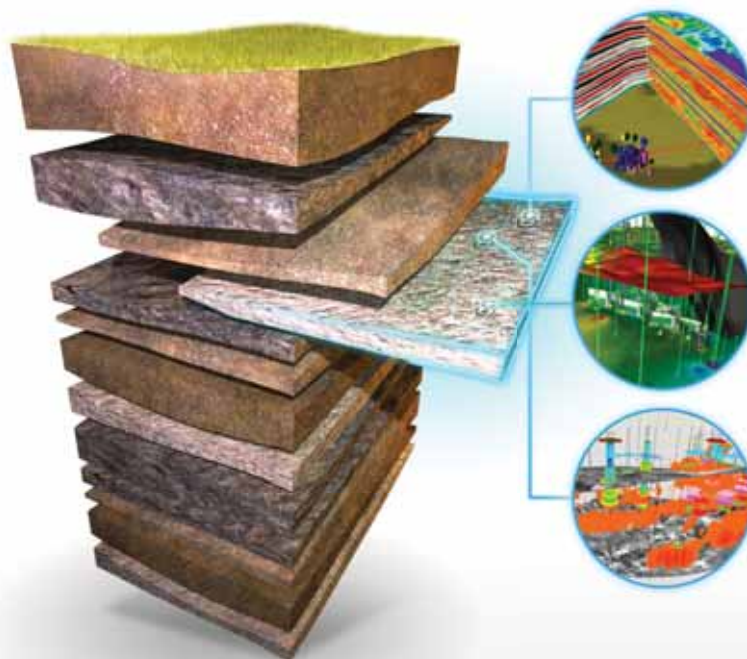


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Presents

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*Proceeds from this event fund the **Bill Craig Memorial Scholarship** 501(c)(3) organization.
Last year the golf tournament generated \$5000. Let's keep it going!*

MONEY HILL GOLF COURSE in ABITA SPRINGS on MONDAY, APRIL 28

Format: 4-person scramble with shotgun start at High Noon

Post tournament dinner sponsored by Diversified Well Logging

Registration opens at 10:00 a.m. with Brunch served until tee time.

Price includes green fees, cart, range balls, food & drinks, flight, prizes, & 2 Mulligans.

What else could you possibly ask for?

Costs: \$140/individual, \$650/corporate. Hole sponsors are \$125.

Please register early! This event always fills up and we are limited to only 120 players. Remember you are not registered until NOGS has received payment and you are confirmed by Annette. Make sure you supply your handicap or a score that typifies a set of rounds of golf over recent time no greater than 2 years in the space provided.

We need volunteers. If you can help out, you will be treated to a day of fun, food, and be eligible for some door prizes.

Donations of any kind are welcome.

FOR REGISTRATION, DONATIONS, OR TO VOLUNTEER, CONTACT:

Annette Hudson: 504-561-8980 or annette@nogs.org

Send cash or check (payable to NOGS): NOGS Office • 810 Union St. • Suite 300 • New Orleans, LA 70112

Credit cards accepted with PayPal: www.nogs.org/payment-center/

| | |
|--------------------------------|-----------------------------|
| Name _____ | handicap _____ @ \$140 each |
| Company _____ | _____ @ \$650 each |
| Phone _____ | Email _____ |
| Names of others in your group: | Cash Donation: \$ _____ |
| _____ handicap _____ | _____ handicap _____ |
| _____ handicap _____ | _____ handicap _____ |
| _____ handicap _____ | _____ handicap _____ |

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MARCH 23, 2014**

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Children's Museum of St. Tammany*
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64th Annual GCAGS Convention

5-7 October 2014 • Lafayette, LA

CALL FOR PAPERS!

Submission Deadline Extended
12 February 2014

www.GCAGS2014.com

Seeking Abstracts for the traditional GCAGS *Transactions*, vol. 64, and the GCAGS *Journal*, vol.3, (a fast track, full peer-reviewed journal of Gulf Coast geoscience).



Session Themes:

Conventional Plays
Energizing Shelf Plays
Renewable Energy
Salt Tectonics

Deepwater Plays
Resource Plays
Water Resources
Environment

Technology
Education
Economics
Politics, Ethics, and Security

A Look Back at NOGS' 2013 Activities...



Special events for NOGS got under way on March 23 when NOGS jointly hosted with the Southeastern Geophysical Society the 11th Annual Supersaurus Saturday at the Louisiana Children's Museum. The event drew about 700 children and their families. In March and April NOGS presented the short course "Petroleum Geology for Non-Geologists." The course drew 21 attendees on the Southshore and 9 on the Northshore. The Annual Bill Craig NOGS Golf Tournament was held at Money Hill Golf Course on April 27. Although it rained on Sunday, the course was ready for play under somewhat cloudy conditions on Monday. Eighteen teams participated in the tournament and enjoyed great camaraderie.

NOGS was one of eight local organizations that came together to play a role in the 6th Annual FETCH Oil and Energy Day at the Louisiana Children's Museum on Saturday, August 3. The event was deemed a huge success. On September 11 NOGS launched an outstanding, modern, new website. The old site was on borrowed time as out-of-date software was being used to maintain the site. On September 21 NOGS volunteers provided many exhibits and instruction stations at the S.T.E.M. Extravaganza Event on the UNO campus. Over 900 Girl Scouts of Louisiana East took part in the hugely successful event.

NOGS was the host society for the 63rd Annual Gulf Coast Association of Geological Societies Convention on October 6-8. Under the capable leadership of General Chairman Art Johnson, with a fantastic crew of volunteers, the convention at the Marriott Hotel was a big success with almost 800 attendees. The event was the culmination of two years of planning by the steering committee. The final special event of the year was the NOGS Christmas Holiday Party held on December 7 at the Holiday Inn Downtown-Superdome. The attendees enjoyed a great buffet dinner and fine "danceable" music by The Profiles. As a closing note, the average attendance at monthly luncheon meetings was 46, with a low of 21 and a high of 64.

South Louisiana and Offshore Gulf of Mexico Exploration and Production Activities

LAFAYETTE DISTRICT, ONSHORE AREA

By Carlo C. Christina

The Office of Conservation, Lafayette District, Onshore Area, issued 26 permits to drill during the month of December 2013. Following are the most significant locations:

NEW LOCATIONS

In Cameron Parish, **Mallard Bay Field**, (A), Alpine Exploration will re-enter a well which was drilled and completed as a gas well in 1985. The well was drilled as the Conoco #3 Long (SN 198485) in Sec. 24, 13S-3W, and was completed through perforations 12,426 to 12,460 feet. Records show that it produced 25,567 million cubic feet of gas and 708 barrels of oil over 2 months. The re-entry will be drilled to 12,600 feet. Only 2 wells are currently producing from relatively shallow sands between 5,800 feet and 9,400 feet. Mallard Bay Field was discovered in 1949 and has 74 wells drilled in the field. (SN 247351)

Lake Ronel Oil Co. will drill the #1 Sabine Outback to a proposed depth of 13,150 feet in **Phoenix Lake Field**, (B), Cameron Parish, approximately 3 miles south of production in the field. The surface location is in Orange County, Texas, with the bottom hole located in Sec. 7, 12S-13W. Lake Ronel recently plugged and abandoned its #1 Brown located 4 miles to the north at a depth of 11,530 feet. (SN 247403)

Anglo-Dutch Energy is drilling below 11,932 feet in the #1 Wilbert in **White Castle Field**, (C), Iberville Parish, in Sec. 1, 11S-12E. The well is projected to test Cibicides hazzardi sands at a depth of 13,853 feet. It is located on the north flank of the field approximately 1 mile southwest of nearest production at 12,600 feet. (SN 247349)

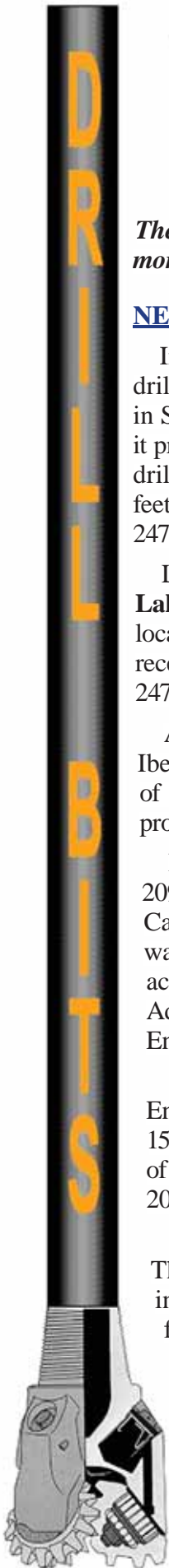
In **West Lake Salvador Field**, (D), St. Charles Parish, Tri-C Resources has permitted the #1 SL 20936 in 16S-21E to a proposed depth of 14,125 feet to test Cris I sands. This field was discovered by Castex Energy in April 2011 with a completion in the Cib op section at 12,700 feet. This discovery was highlighted in my presentation, "Geological Hot Spots in Our Own Backyard," and has been actively developed since that time. Currently, 10 wells are producing oil and gas and 2 wells are shut in. Additionally, 5 wells are permitted to be drilled. The operators in the field are Tri-C Resources, Castex Energy, and Square Mile Energy. (SN 247321).

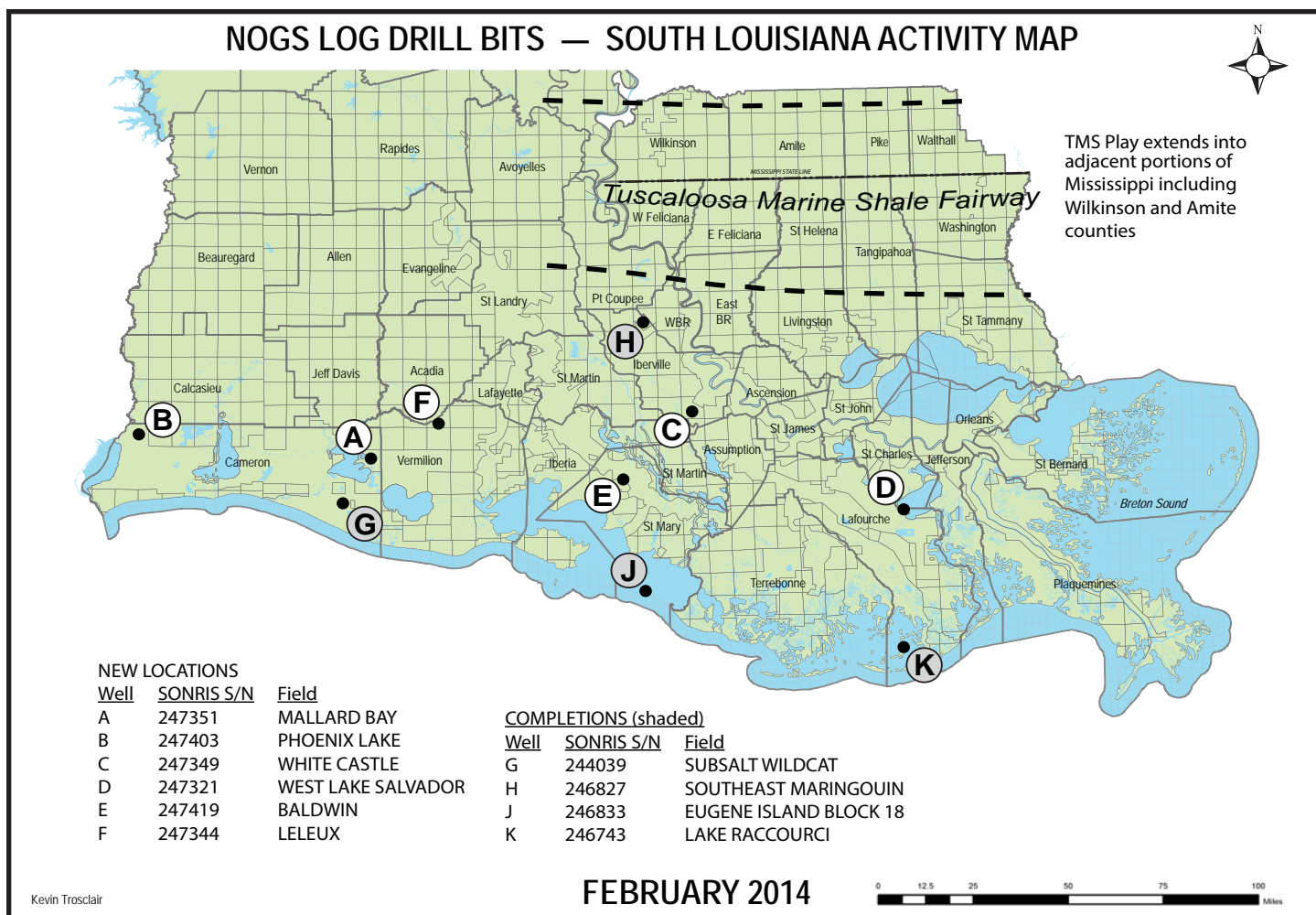
In St. Mary Parish, **Baldwin Field**, (E), Radiant Oil & Gas will re-enter the Energy XXI #2 Ensminger which was drilled in Sec. 55, 14S-9E, on the northwest flank of the field. It was drilled to 15,705 feet and plugged and abandoned in May 2011. The #1 Ensminger is located 2 miles northwest of depleted Planulina production. The field was discovered in 1972 and has been off production since 2007. (SN 247419)

Key Operating Co. will re-enter a well in **Leleux Field**, (F), Vermilion Parish, and drill to 18,400 feet. The Reef Exploration #1 Adams was drilled to a depth of 18,251 feet and was plugged and abandoned in 2008. The #1 Adams is located in Sec. 26, 11S-1E, 2 miles south of the nearest production at 13,400 feet. (SN 247344)

COMPLETIONS

Chevron U.S.A. has suspended operations on the **sub-salt prospect, Lineham Creek**, (G), in Cameron Parish in Sec. 19, 15S-4W. The well was spudded on December 31, 2011, and has been drilled to a depth of 29,426 feet. In February 2013, while drilling below 27,000 feet, the well attracted considerable attention with the announcement that independent reserve engineers, engaged for the sole account of McMoRan, estimated proved, probable, and possible oil and gas of 546.7 billion cubic feet of gas equivalent reserves from sands encountered above 24,000 feet.





No tests have been performed on the well at this time, although it is rumored that testing will begin within the next month or two. (SN 244039)

Vitol Resources has completed an interesting well in **Southeast Maringouin Field**, (H), Iberville Parish, as a **successful horizontal well in a Cockfield sand**. The #6 Row was drilled to 15,000 feet and **perforated from 11,697 to 14,929 feet** in a 5,400 foot horizontal leg. The well was completed flowing 351 BOPD and 974 MCFD following a 14-stage hydraulic frac. As previously reported the well is located in Sec. 4, 7S-10E, one-half mile east of 2 Cockfield completions which have produced more than 524,000 barrels of oil. (SN 246827).

Castex Energy has extended production in **Eugene Island Block 18 Field**, (J), with the completion of its #1 20532 as a gas well in the Cib Carst Sand. The well was drilled to 14,841 feet and completed flowing 3,261 MCFD and 44 BCD through perforations 10,796 to 10,817 feet. (SN 246833).

In Lafourche Parish, **Lake Raccourci Field**, (K), Hilcorp Energy has plugged and abandoned the #1 SL 1480 at a depth of 15,718 feet, although the well was permitted to 17,585 feet. As previously reported, the well is located 2 ½ miles east of Hilcorp's excellent new gas well in 22S-21E, which was completed flowing 14,788 MCFD and 1,115 BCPD. It has produced more than 3.2 billion cubic feet of gas and 152,000 barrels of oil in less than 8 months. (SN 246743)

OFFSHORE GULF OF MEXICO SHELF AND DEEPWATER ACTIVITIES

by Al Baker

During December 2013, the BOEM approved 77 Gulf of Mexico drilling permits. Of these, **41** were for shelf wells and **36** were for deepwater wells. Of the total number of permits, there were **16 new well permits** issued. There were **8 shelf** (4 exploratory and 4 development), and **8 deepwater** (5 exploratory and 3 development) **new well permits** given.

On the shelf, the four exploratory new well permits were granted to **Walter Oil & Gas** for their **East Cameron 352 #1** well, **Arena Offshore** for their **South Timbalier 131 #2** well, **Apache** for their **West Cameron 210 #1** well, and **Contango Operators** for their **Ship Shoal 255 #1** well. Three of the four development well permits were issued to **Arena Offshore** for their **Eugene Island 338 #K-7** and **#K-8** wells, plus their **Eugene Island 314 #C-15** well. **Energy XXI GOM** obtained the other new well permit for their **Main Pass 61 #C-12** development well.

In deepwater, **Union Oil Company of California (Chevron)** was awarded two permits to drill their **Walker Ridge 143 #2** and **#3** exploratory wells. **Statoil Gulf Properties** received a permit to drill the **Desoto Canyon 231 #1** exploration well, plus **Statoil Gulf of Mexico** obtained a permit for the **Mississippi Canyon 718 #1** exploration well. **LLOG Exploration Offshore** was granted a permit to drill their **#1** exploration well on **Mississippi Canyon 705**. **Shell Offshore** was granted a permit for their **Green Canyon 248 #GL-8** development well. **BP Exploration & Production** received a new well permit to drill their **Mississippi Canyon 777 #8** development well. **Stone Energy** was given a new well permit for their **#4** development well on **Mississippi Canyon 29**.

On December 27th, IHS-Petrodata reported that the Gulf of Mexico mobile offshore rig supply stood at **111**. The marketed rig supply consisted of **85** rigs, of which **81** were under contract. The contracted versus total rig supply utilization rate is **73.0%**, while the marketed contracted versus marketed supply utilization rate stands at **95.3%**. These figures reflect an increase of 4 rigs each as to those reported last month. They also compare to 82 out of the 107 rigs that were available during December 2012, for a 76.6% fleet utilization rate.



On December 27th, the BakerHughes Rig Counts indicated that there were **61** active mobile offshore rigs in the Gulf, which is **75.3%** of the rigs under contract mentioned above. This active rigs number is four more than reported last month. The current active rigs count compares to 51 active rigs during the same period last year, representing a **19.6%** increase in yearly activity.

In December, **Castex Offshore** logged an apparent gas discovery on **High Island 117**. The company drilled their **#1** well to 18,000 feet total depth in 50 feet of water. Castex plans to install the "A" Platform and lay a 6-mile pipeline that will connect their discovery to the High Island 116 "A" Platform.

On December 4th, the **BOEM** announced that it will hold a lease sale (**OCS Sale 225**) for the **Eastern Gulf of Mexico** acreage on **March 19, 2014**, immediately following the proposed **Central Gulf of Mexico** sale (**OCS Sale 231**).

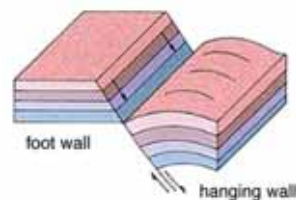
On December 4th, **Noble Energy** announced a discovery at their **Dantzler** prospect on **Mississippi Canyon 782**. The discovery well encountered over **120 feet of oil** in two high-quality **Miocene** reservoirs. The well was drilled to a total depth of 19,234 feet in 6,580 feet of water. Dantzler is located 12 miles west of the company's Rio Grande development area, which includes discoveries at Big Bend and Troubadour. Dantzler's gross reserves are estimated between 55 and 95 million barrels of oil equivalent.

On December 18th, **BP** reported a significant deepwater discovery at its **Gila** prospect, which is located on **Keathley Canyon 93**. The exploratory well was drilled to a total depth of 29,221 feet in a water depth of 4,900 feet. The well penetrated multiple Paleogene-aged reservoir sands. The discovery is approximately 25 miles west of BP's Tiber discovery in the Keathley Canyon area.

| | |
|---|---|
|  <p>100 Northpark Blvd. Covington, LA 70433 (985) 773-6000</p> |  <p>LaBay Exploration Co., L.L.C.</p> <p>111 Veterans Memorial Blvd. Suite 1550 Metairie, Louisiana 70005</p> <p>Office (504) 371-5967 Fax (504) 371-5969 www.labayexploration.com</p> |
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Baton Rouge Geological Society & Louisiana Geological Survey

Fourth Annual Louisiana Subsidence & Land Loss Symposia Focus on Coastal Protection



April 16, 2014

Eighth Annual Louisiana Groundwater & Water Resources Symposia Focus on Salt Water Intrusion



April 17, 2014

Dalton Woods Auditorium
Energy, Coast & Environment Building
Louisiana State University
Baton Rouge, Louisiana

Presentation:
Titles due March 10, 2014
Abstracts due April 1, 2014

For more information, email dcarlson@lsu.edu or go to www.brgs-la.org/

FOR EARLY REGISTRATION:

Fill out the registration form below, detach and send the form with a check made out to Baton Rouge Geological Society to cover all costs to the address below.

Baton Rouge Geological Society
L.S.U. Box 19151
Baton Rouge, LA 70803

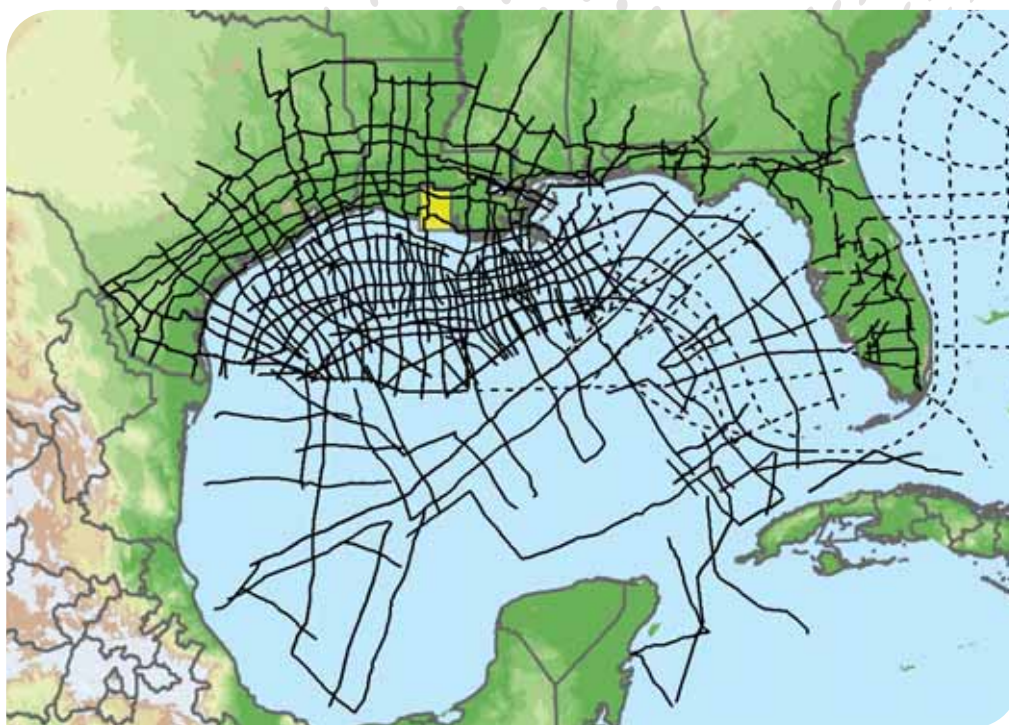
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Address _____
City _____ State _____ Zip Code _____
Day Time Phone Number _____
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Signature of Advisor: _____

REGISTRATION FOR:

Groundwater & Water Resources Symposia: Student \$10 _____ Professional \$50 _____
Subsidence & Land Loss Symposia: Student \$10 _____ Professional \$50 _____
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Submitted by Sheri Richardson

API.org - Brian Straessle

"API Welcomes Congressional Approval of U.S.-Mexico Agreement." December 18, 2013

<http://www.api.org/news-and-media/news/newsitems/2013/dec-2013/api-welcomes-congressional-approval-of-us-mexico-agreement>

API welcomed the passage today of an agreement between the U.S. and Mexico to allow joint energy development projects along our shared maritime border as a part of the final approval of Congress' budget deal.

"The energy production made possible by this agreement will put Americans to work and raise more revenue for the government," said API Director of Upstream and Industry Operations Erik Milito. "American companies will now have the certainty they need to invest confidently along our maritime border with Mexico."

The Transboundary Hydrocarbon Agreement between the U.S. and Mexico establishes a cooperative process for managing oil and gas reservoirs along the boundary region in the Gulf of Mexico. It provides legal certainty to American companies, which will encourage them to invest in new energy development, creating jobs and spurring economic growth. Approval of the agreement is part of the bipartisan budget bill approved today by the Senate and last week by the House of Representatives.

"Offshore oil and natural gas development in the U.S. today is largely limited to the Western and Central Gulf of Mexico," Milito said. "Opening up new areas in the Atlantic, Arctic, Pacific, and Eastern Gulf of Mexico could produce even more energy, job creation and money for the government."

Sci-news.com - Sergio Prostak

Top 20 Fossil Species Discovered in 2013. Dec 31, 2013

<http://www.sci-news.com/paleontology/science-2013-top-fossil-species-01655.html>

1. *Deinogalerix masinii*, a giant hedgehog from the Late Miocene of Italy: *Deinogalerix masinii* lived in what is today the Gargano peninsula of Italy during the late Miocene, about 10-7 million years ago. It was about one and a half [sic] the size of the common hedgehog *Erinaceus europaeus*, around 1 to 1.5 feet long.
2. *Lythronax argestes*, a new species of tyrannosaur from the Late Cretaceous of Utah: *Lythronax argestes* was about 24 feet long and weighed around 2.5 tons. It lived on Laramidia, a landmass formed on the western coast of a shallow sea that flooded the central region of North America, during the Late Cretaceous Period between 95-70 million years ago.
3. *Ocepechelon bouyai*, a giant sea turtle from the Late Cretaceous of Morocco: *Ocepechelon bouyai* lived in shallow seas about 67 million years ago, during Late Cretaceous. It is one of the biggest marine turtles that ever lived on Earth. Its striking anatomy suggests the turtle was adapted for suction feeding, never seen in known turtles.
4. *Siats meekerorum*, a giant dinosaur from the Late Cretaceous of Utah: *Siats meekerorum* lived in what is modern-day Utah around 100 million years ago. It was over 9 m long and weighed more than 4 tons. It belongs to the carcharodontosaurian group of theropods, whose more famous members include giants like the Argentinean *Giganotosaurus*.
5. *Panthera blytheae*, a snow leopard from the Miocene/Pliocene of Tibet: A 6 to 4 million-year-old skull of *Panthera blytheae* is the oldest big cat fossil ever found.
6. *Nasutoceratops titusi*, a big-nosed, long-horned dinosaur from the Late Cretaceous of Utah: *Nasutoceratops titusi* lived on Laramidia – a landmass formed when a shallow sea flooded the central region of North America. This herbivorous dinosaur was about 15 feet long and weighed 2.5 tons. It had several unique features, including an oversized nose relative to other members of the family, and exceptionally long, curving, forward-oriented horns over the eyes. The bony frill, rather than possessing elaborate ornamentations such as hooks or spikes, is relatively unadorned, with a simple, scalloped margin.
7. *Otus frutuoso*, a species of scops owl from Azores: *Otus frutuoso* lived on São Miguel Island, the Portuguese archipelago of the Azores, until about 500 years ago.
8. *Archicebus achilles*, a tree-dwelling primate from the Eocene of China: *Archicebus achilles* lived in what is now central China during Eocene, about 55 million years ago. Its fossil is the oldest known fossil primate skeleton. This primate likely weighed about 1 ounce, and was smaller than today's smallest primate, the pygmy mouse lemur.
9. *Aurornis xui*, a bird-like dinosaur from the Middle-Late Jurassic of China: *Aurornis xui* lived during the Middle-Late Jurassic period around 160 million years ago. It was about 50 cm from its beak to the tip of its tail – the size of a pheasant.
10. *Proapteryx micromeros*, a kiwi-like bird from the early Miocene of New Zealand: A 19 to 16-million-year-old fossil of *Proapteryx micromeros* was unearthed at St. Bathans, New Zealand. At an estimated 234–377 g, this bird was only 0.27-0.43 times the mass of the smallest individual of *Apteryx owenii*, the smallest extant kiwi species.

For part 2 of this list (fossil species 11-20), visit <http://www.sci-news.com/paleontology/science-2013-top-fossil-species-part2-01656.html>



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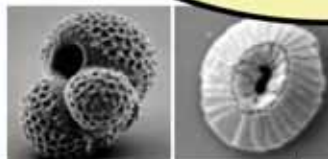
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