

September 2010

Volume 51, Number 3



Upcoming Events and Activities

September 12-15 - AAPG 2010 International Conference & Exhibition

Calgary, CAnada. See short courses and field trips information on page 14.

September 13 - NOGS Luncheon

*** At the Holiday Inn Downtown Superdome ***
 \$2.00 validated parking in hotel garage

Activities include Foundation Scholarship Awards and introduction of New Orleans Geological Auxiliary Officers – Spouses and Significant Others are welcome.

(See page 7 for Announcement)

HOLIDAY INN DOWNTOWN SUPERDOME Check with concierge or front desk for location Lunch served at 11:30am Admission:

with reservation \$30.00 without reservation \$35.00 Student Member with reservation Free

October 4 - NOGS Luncheon

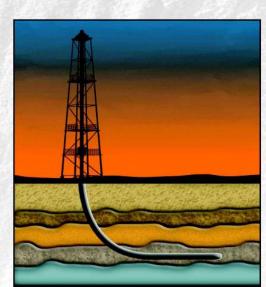
Holiday Inn Downtown Superdome. Guest speaker Terrence A. McCloskey, LSU School of the Coast and Environment, will present "Long-term variability in hurricane activity: using the study of ancient hurricanes to improve both long-term hazard risk assessment and short-term forecast of landfall location."

October 10-15 - GCAGS 2010 Convention

60th Annual Convention in San Antonio, TX. Check the "NOGS website" for updated information and see information on pages 22-23.

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NOGS LOG

SEPTEMBER 2010



from the President

One of the few constants is change. We experience change personally, as an industry, as a nation, and as a professional society. Naturally, we all want to have only positive change in each of these areas but it doesn't always happen like that. We recognize we have no choice but to experience change. What we do have is some control over how we deal with or manage the impact of change in our lives.

The first change that I want to address is that my good friend and long time colleague, Mr. David Reiter, has transferred with his firm, Eni Petroleum to Houston, Texas. He had to resign as President of NOGS, a position from which he had long wanted to serve the society. David will try to return for a number of NOGS meetings and events so he's not "gone-gone." David's resignation placed me as your new president with a direct charge from David to take care of and improve NOGS. I will do my best to fulfill this commitment with the assistance of the current board, past presidents, and our many experienced and helpful members. So change one is that NOGS has a new president.

Change two is that BP's Mocondo well is no longer spewing oil and gas unrestricted into the Gulf of Mexico. In fact, the blowout has been successfully stopped and the well plugged with cement via a "top kill" process. There is currently a lot of debate as to the amount of hydrocarbons and dispersant still in the Gulf waters, as well as where it is located. But this a huge positive change! We all recognize that what we cannot see can still hurt us, our environment, our industry, and our nation. How do we handle this change? We need to voice intelligent, educated, experienced and constructive comments across the board. One of our members, Director Art Johnson, has been asked several times by the media to bring such insight, and he has done so in his unique style. If given the opportunity I encourage you do the same within the limitations imposed by your employer and within the context of your personal and professional ethics.

Another positive change is the forthcoming NOGS publication, "Oil & Gas Fields of South Louisiana 2010." I was fortunate to sit in on a recent committee meeting and want to praise this team for their excellent efforts at a considerable and difficult task. We can all be proud of the new volume and our colleagues. The committee exhibits the highest levels of professionalism and ethics under the leadership of Carlo Christina and Charley Corona. We can all be proud of the "Oil & Gas Fields of South Louisiana 2010!" Thanks to Art Johnson for his fine job of previewing this publication in his lecture at the August luncheon meeting. I for one intend to order the CD as soon as possible, and note that the graphics on the CD are in color!

The most rapid change in our industry that I have seen in my career struck us unexpectedly when President Obama ordered the immediate cessation of all drilling activity in the deepwater Gulf of Mexico. The mandate has expanded to include the shelf waters also for a period of six (6) months following the Mocondo blowout. The President has appointed a board to study how to go forward, and that group has begun their efforts, but what will be left of our personnel and drilling rigs by the time their work is completed and the mandate is lifted? Deepwater rigs are leaving the Gulf of Mexico for other deepwater areas such as offshore Brazil and West Africa. The rigs leaving won't be returning any time soon. There were eight (8) new rigs set to move into the GOM before the end of this year, now those are not coming. The rigs remaining in the Gulf are for the most part "hot stacked" and those holding their contracts are playing a waiting game.

The result of the President's moratorium is that many, many people are going to be leaving this area and some leaving the petroleum industry. How do we find a way to turn this into a positive? Well we can do a number of things:

1) We can exert whatever influence we have to have the moratorium terminated as soon as possible.

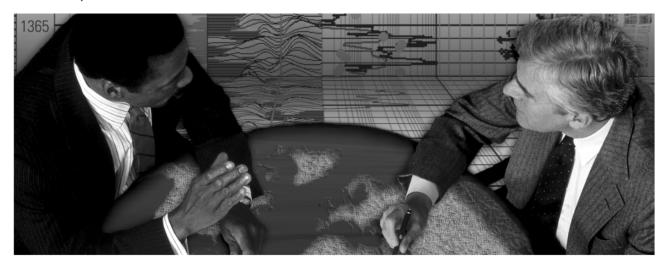
2) We can assist our friends, colleagues and associates in securing employment within the industry but possibly with a different firm, a new role, or in a new location.

3) We can turn our focus to land exploration and development. The new NOGS publication "Oil & Gas Fields of South Louisiana 2010" definitely gives us a strong push to pursue this avenue.

--- continued on page 30 ---

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NOGS Kick Off Luncheon

Holiday Inn 330 Loyola Ave. @ 11:30 am Admission \$30.00 - \$2.00 Validated Parking Cash Bar Reservations: info@nogs.com

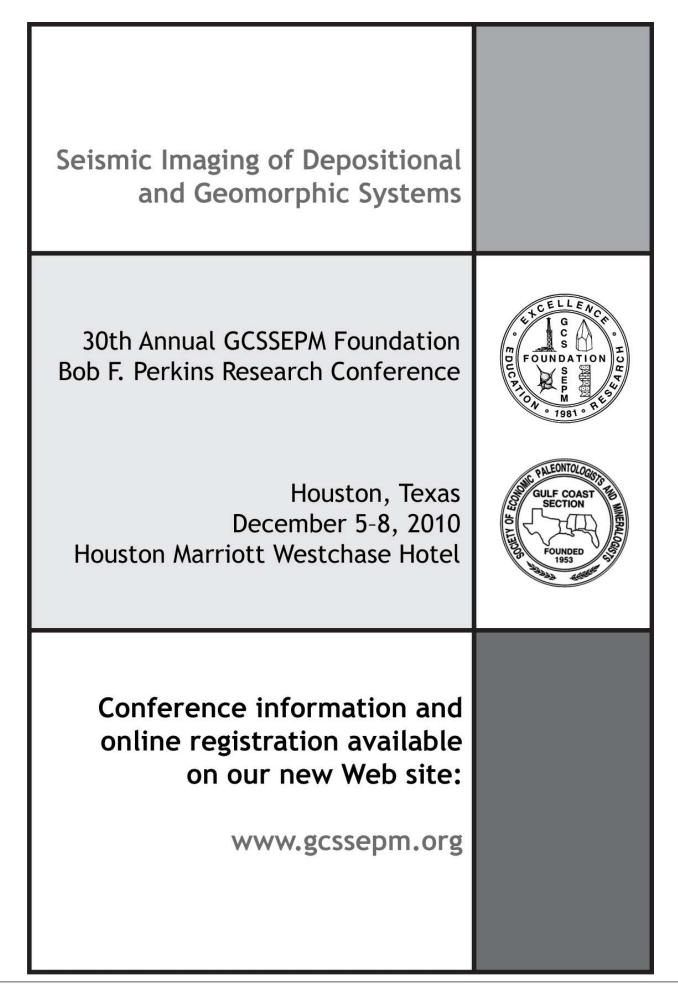
Special event as you will have an opportunity to meet and mingle with the new NOGS Board. Activities include: Foundation Scholarship Awards, presentation of the NOGS Best Paper Award to Bryan Stephens of the BOEMRE for his June paper, and introduction of the New Orleans Geological Auxiliary Officers. Spouses and Significant Others are welcome! Cost: \$30.00 per person Cash Bar





Invite a geoperson to join NOGS and come to the Kickoff Luncheon

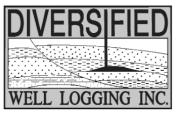






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--- continued from page 3 ---

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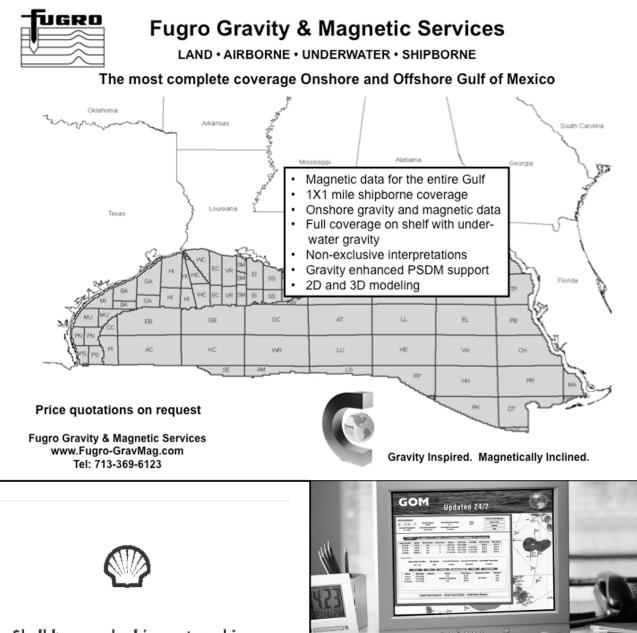
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Shell has worked in partnership with the NOGS for many years, and is proud to count the society among its closest business associates.

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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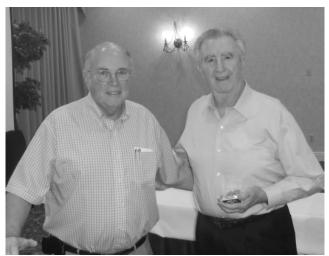
Awards Presentations at July NOGS Luncheon



Al Melillo receives the 2010 NOGS Outstanding Service Award from Tom Klekamp



Bill Whiting presenting Memorial Foundation honorarium to outgoing President Tom Klekamp



Tom Klekamp presenting his president's Award to Carlo Christina



Tom Klekamp presenting Honorary Lifetime Member award to Art Johnson



Tom Klekamp presenting Vice President award to Bob Hafner



Tom Klekamp presenting Chuck Holman the Treasurer's Award for 2009 -2010



Frontiers of Unconventional Thinking: Saddle Up for the Ride

For more information and to register, visit: http://www.aapg.org/calgary/

Conference at a Glance

Sunday, September 12

- Opening Ceremony
- Icebreaker Reception
- Exhibition

Monday, September 13

- Technical Program and Posters
- Exhibition
- Plenary Session Canada: Our Resources to International Exploration
- Management Forum E&P Challenges in Complex Environments: From the Arctic to Deep Water
- Special Lecture Burgess Shale Tales Mud Volcanism and Chemosynthetic Communities on the Middle Cambrian Seafloor of Southeastern British Columbia
- Featured Speaker Luncheon The Unconventional Future: Where Ideas and Technology Converge
- Student Reception
- James Joyce Pub Social Activity

Tuesday, September 14

- Technical Program and Posters
- Exhibition
- Business Forum Unconventional Exploration and Development Geoscientists' Toolbox
- Special Lecture Geology of a Major SAGD Bitumen Development A Case Study from Long Lake, Northwestern Alberta
- Unconventionals Day Topical Luncheon Global Challenges in Shale Reservoir Development
- Calgary Zoo Social Activity

Wednesday, September 15

- Technical Program and Posters
- Exhibition
- Forum The Value of Diversity in Leadership: Global Perspectives
- DPA Luncheon Evaluation and Classification Issues of Unconventional Resources
- Exhibitor-Sponsored Luncheon

Recharge Your Mind, Body and Career with Timely Training with AAPG!

Popular Online Course Available Again: Introduction to Geological Reservoir Characterization, will begin September 13 and run through December 17, 2010. This course is taught by Dr. Roger Slatt with University of Oklahoma, and covers the principles and practice of characterizing petroleum reservoirs using geologic and engineering data, including well logs, sample descriptions, routine and special core analyses, and well tests. There are weekly assignments, and interaction with the instructor on a regular basis. The price is \$1495 per person.

Short Course with Field Trip: Application of Structural Geology in Prospecting in Thrusted and Extensional Terrain is scheduled for November 8-12, in Las Vegas, Nevada and is taught by industry experts Chuck Kluth and Wayne Narr. Participants will learn to apply sound structural principles and techniques, and integrate a variety of data types to understand and predict overall trap shape, the character and impact of distribution of secondary structures (e.g., fractures) that may have a critical impact on reservoir performance, and identify likely exploration targets in each of the structural styles covered. Registration is \$1695 for AAPG members, \$1795 for non-members up until October 11

Fall Education Conference on Unconventional Resources

AAPG's Fifth Annual Fall Education Conference will take place October 4-8, in Houston, with all 10 courses revolving around the topic of Unconventional Resources. There will be 3 concurrent sessions each day, and topics include Reservoir Characterization and Production Properties of Gas Shales; Source Rocks 101 – What Geoscientists and Engineers Need to Know about Petroleum Source Rocks; The Varying Role of Natural Fractures in Unconventional Reservoirs; Log Analysis of Shaly Sand Reservoirs, and MORE! Registration for the week is \$1595 for AAPG members, \$1695 for non-members, and badges are transferrable. Courses are also individually priced if you can't attend the entire week. Hurry and reserve your spot before courses fill up. The early-bird prices expire September 6.

New Ways to Look at Old Data: New Pay Zones, Increased Production, Expanded Regional Plays is planned for November 8-9, in Houston. How are new ways to look at old data resulting in new pay zones, increased production, and even new regional plays? How can you find and determine the best way to produce oil that's been "left behind?" This AAPG Geoscience Technology Workshop provides you with answers, ideas, and opportunities. Opportunities are still available if you'd like to give a presentation – contact Susan Nash snash@aapg.org at AAPG if you are interested. Registration to attend is \$695 for AAPG members, and \$795 for non-members, but only through October 11, so sign up now to save!

coming Features

Drill Bits will return in the *NOGS LOG* next month written by Carlo Christina. He is looking for a few good "scouts" to assist him. Contact Carlo at carlocc398@aol.com.

The new membership directory will be published in the near future. If you are not a member please see our membership form in this issue or refer to the NOGS website at www.nogs.org.

Geological data can be used to predict storms: Answers found in layers of earth

By Kari Dequine Times-Picayune Contributing writer

While the methods and data may seem abstract to those not trained in the sciences, the implications of the research presented at the flood protection symposium in the Jefferson Parish Council chambers in Gretna could not be of greater consequence for the long-term survival of southeastern Louisiana.

The "Geological Facts of Life for Flood Protection in Coastal Louisiana" discussion was the second held in front of the Southeast Louisiana Flood Protection Authorities, a joint meeting of the West Bank and east bank panels. The idea to discuss the local geologic research was born as a result of Hurricane Katrina in an effort to keep decisionmakers informed on the best ways to ensure flood protection from the perspective of the ground on which we stand — and the layers far beneath.

The panel, moderated by Baton Rogue attorney and former television anchor Julie Baxter, included Terrence



LSU's custom-crafted "Seismeauxmobile" and sound generators displayed at the Fourth NOGS Flood Protection Symposium in Gretna. The research instruments are used to detect weak/problem spots in levees in south Louisiana.

McCloskey, Stephen Nelson, James Sothern and Kathleen Haggar.

While there were more questions asked than definitive answers given, the questions are critical ones.

The first question, called a "literally a multi-billion dollar question" and presented by McCloskey from the School of Coast and Environment at Louisiana State University, was "How likely is New Orleans to take a direct hit by another intense hurricane like Katrina?"

Layers of earth

Records have only been kept since 1851, which for geologists, is far too short of a time period to accurately predict storm cycles that span thousands of years.

Thus comes into play the data collected from a relatively new field of study, paleotempestology, the study of ancient hurricanes, or by definition, the study of "past tropical cyclone activity by means of geological proxies as well as historical documentary records."

To delve thousands of years into the past, McCloskey, filling in for his colleague Kam-biu Liu, whom he called the "father of paleotempestology" presented photographs and diagrams showing the layers of earth taken in core samples. Certain layers, described McCloskey, give evidence of a "high energy event" coming ashore. When an oceanic sand layer is found sandwiched between mud at a certain distance inland, for example, it can be inferred that the sand was washed ashore by a hurricane. Along with carbon dating, other information can be deducted about the ancient storms, including frequency, intensity and the direction of travel.

McCloskey and Liu concluded that a "Gulf of Mexico coast catastrophic hurricanes of category 4-5 intensities typically have return periods in the order of 300 years."

McClosky also detailed how the research can help designate the active and quiet periods over thousands of years. On a long term scale, we are in a quiet period now, he said, but warned that people must be aware of potential dramatic changes, in which activity could increase five- or tenfold.

Increased vulnerability

Nelson, from the department of Earth and Environmental Sciences at Tulane University, explored the geological and historical factors that make New Orleans vulnerable to hurricanes and addressed the question of what can be done to reduce that vulnerability, as well as "Why did the levees break." Nelson noted the natural causes of vulnerability, like location and subsidence, but also pointed out that "human endeavors have increased the vulnerability substantially in the last 100 years." Nelson spoke about how the levees protect from flooding, but also prevent the accumulation of sediment necessary to sustain and build land in the river delta.

Other factors that have increased vulnerability, Nelson said, are population growth and expansion into low-lying areas and invasive species especially the notorious nutria, brought from South America in the 1960s. He also detailed the factors that have led to erosion and thus the massive land loss over recent decades. Nelson also criticized the manmade components of the hurricane protection system as, "inadequate, poorly designed, incomplete," and a structure that did not sufficiently consider geology in its construction.

Nelson, whose primary area of study is volcanoes, said that because Tulane was closed in the weeks after Katrina, he had a lot of time on his hands and decided to seek out the geological component of the problem that led to the levee failures.

Nelson became passionate about educating people on just what happened with the levee breaks, taking students on field trips to each rupture site.

"The geology underneath is very important and can't be ignored," he said. All breaches occurred on man-made levees, and not all were overtopped, he noted, showing diagrams of each break and his assessment of what went wrong.

When constructing the levees, Nelson felt strongly that the makeup of the soil, which can vary considerably in short distances, was not taken in account. Problematic weak material, like sand that is highly permeable (thus compacts and shifts when wet), and certain types of clay and peat must be taken into serious consideration when constructing levees.

Nelson also criticized the use of the less expensive but also less sturdy I-walls versus the T-walls. By building stronger and smarter, taking geology into account, Nelson said, we can reduce vulnerability.

Extraction and elevation

Sothern, adjunct instructor of geology at Fletcher Technical Community College in Houma, asked the hopeful question, "Is the rate at which we are sinking slowing down?"

Sothern showed the correlation between oil and gas extraction and elevation in Houma, Chauvin, Grand Caillou, Savoie and Bourg. Nearly all of Terrebonne Parish he said, is "a virtual oil field."

Using Army Corps of Engineers elevation benchmarks beginning in 1942, Sothern showed that when extraction

(L to R) Jason Jicks, Mike Merritt, Riley Milner, Paul Henrich, Rick McCulloh to back, Juan Lorenzo and Kathy Haggar standing in front of the LSU Seismeauxmobile.



was at it peak in the 1960s, subsidence was also at its peak, with elevations dropping approximately three feet. As extraction slowed, Sothern said, so did elevation loss. From the 1980s to 2000, subsidence appeared to have slowed considerably.

And if indeed the rate is slowing, said Sothern — then it will be much more likely to get approval for coastal restoration funds and projects, giving a counter response to the question "Why spend all this money on coastal restoration when we are sinking?"

Haggar presented a detailed study of Goose Point — an area on the Northshore just south of Lacombe that juts out into Lake Pontchartrain. Haggar chose the location because it is not an area that has experienced much human meddling, yet had gone through changes over time.

Haggar's concern and question was with the current models used to justify marsh-restoration projects. There are natural factors contributing to subsidence not being taken into enough consideration, she argued, chiefly tectonic forces associated with the Baton Rouge Fault system.

"This place is riddled with faults," Haggar stated — a fact likely unknown to many residents. Based on her observations of Goose Point, including changes in plant communities, Haggar concluded that it would be dangerous and potentially a waste of time and resources to address restoration without taking tectonic forces into account.

Editor's note: This article was published in the July 22, 2010, edition of the Algiers Picayune section of the Times Picayune and is published here with their permission.



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New Orleans Geological Auxiliary News

Oops, sorry for the last month's computer glitch!!! Now to finish my "bio" on our "Madam President", Jean Jones. Jean enjoys playing Bridge, Golf and serves on the Board of her Garden Club. Jean, this job should be a "piece of cake" for you. Thank you for allowing us to convince and harass you into becoming President. You have a great sense of humor...

Mark your calendars for our upcoming Events for 2010-2011. I know we all extend our heartfelt appreciation to everyone who has agreed to donate their time in acquiring the various venues, and once again, thanks to the Chairs and Hostesses for welcoming us into their homes. Thank you Ruth Grimes for hosting our September 8th Coffee. I know Peggy Rogers and Dolores Murphy will make this a very special day. November 10th Luncheon will be held at Austin's with Jim Henderson as our Guest Speaker. Guests will be invited, what a turnout this will be! February 9th will find us at Café Adelaide. As far as our Spring Social is concerned, Shirley Moseley has graciously offered her home on March 26th and finally our

Installation Luncheon will be held at the Southern Yacht Club on May 11th. I, along with others, am very excited about these future events, and thanks to our Planning Committee for securing the dates, times and places for us.

Lastly, congratulations to Pat Williamson and Jean Jones on receiving the Loyalty and Service Awards (respectively) presented at our Installation Luncheon. To all of you who are very loyal and always lend a helping hand, we are rewarded by your generosity.

See you in October,

Susie Baker

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International Energy Outlook 2010 presents an assessment for the international energy markets through 2035. U.S. projections appearing in IE 2010 are consistent with those published in EIA's Annual Energy Outlook 2010 (AEO2010) (April 2010). For more information go to http://www.eia.doe.gov/oiaf/ieo/

Oil Industry Rethinks Cost, Risk Of Drilling In U.S. - The BP spill in the Gulf of Mexico is bound to have repercussions for the oil industry and America's energy future, but experts say it could be a while before they are all sorted out - and the final consequences could prove surprising. For more information go to http://www.npr.org/templates/story/story.php?storyId=128831285

Horizontal Drilling for Natural Gas in Shale - Marcellus Shale Coalition - The Marcellus Shale Coalition website has a video that presents the process used to drill and hydrofracture a horizontal well in a formation such as the Marcellus Shale. To see the video go to http://marcelluscoalition.org/2009/01/drilling-process-video/

New Madrid Quakes Caused by Mississippi River Erosion - Over the last several thousand years the Mississippi River has removed millions of tons of clay, silt, sand and gravel from the continent. This unloading has caused the earth to adjust to the lower weight level and those adjustments have produced earthquakes. For more information go to http://www.msnbc.msn.com/id/38454786/ns/technology_and_science-science/

BOEMRE has nothing to do with barrels of oil or meals ready to eat. The is the new acronym for the MMS. It stands for Bureau of Ocean Energy Management Regulation and Enforcement, a real mouthful.



Photos from the NOGS Golf Tournament



















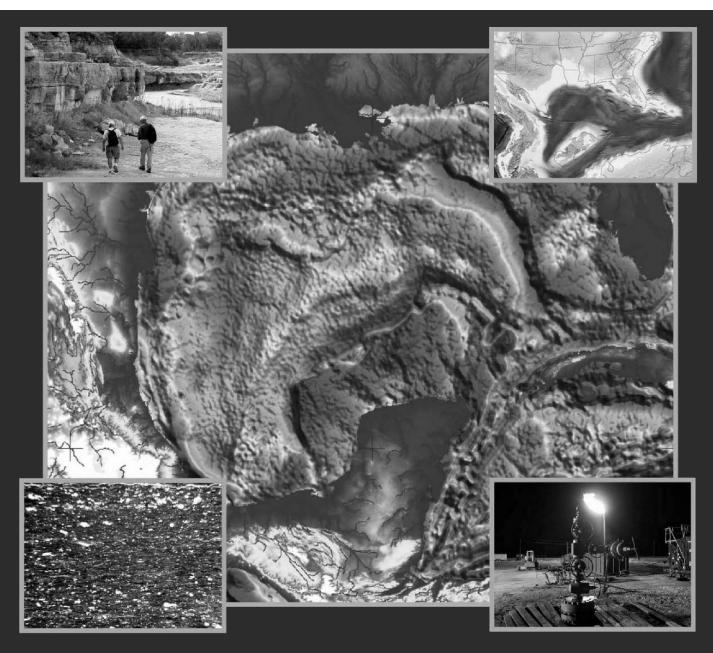












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Symposium Conveners:

T. E. Ewing, Frontera Exploration Consultants, San Antonio, Texas E. A. Mancini, Texas A&M University, College Station, Texas

- 8:20 **Thomas Ewing:** Introduction to the Stricklin Symposium
- 8:30 **James Pindell:** History of Tectonic Modeling and Implications for Depositional Architecture in the Gulf of Mexico (GOM): Where we Should Go from Here
- 9:00 **Jim Harris, Rob Crossley, Nick Stronach, Paul Valdes, and Roger Proctor:** The Plate Tectonic, Paleogeographic, and Paleoclimatic Context for the Development of the Mesozoic Gulf of Mexico
- 9:30 **Steve Creaney:** A View of the Genetic Development of Gulf of Mexico Petroleum Systems
- 10:00 Break
- 10:30 Ernest Mancini and Wayne Ahr: Jurassic Depositional Systems, Facies, and Reservoirs of the Northern Gulf of Mexico
- 11:00 **Thomas Lovell and Amy Weislogel:** Detrital Zircon U-Pb Age Constraints on the Provenance of the Late Jurassic Norphlet Formation, Eastern Gulf of Mexico: Implications for Paleogeography
- 11:30 1:00 *GCSSEPM and Stricklin Symposium Luncheon (<u>ticketed event</u>): Roger Sassen: Preservation of Methane in Deep, Hot Reservoir Rocks*
- 1:10 **Robert Scott:** Cretaceous Stratigraphy, Depositional Systems, and Reservoir Facies of the Northern Gulf of Mexico
- 1:40 Thomas Ewing: Pre-Pearsall Geology and Exploration Plays in South Texas
- 2:10 **Marco Flores Flores, Jorge Lavín, Noemí Aguilera, Marco Peña:** The Kimmeridgian Oolitic Banks and their Exploration Potential in the Marina de Campeche Zone, Southeastern Mexico: Biostratigraphical and Sedimentological Implications
- 2:40 **Roger Sassen:** Laminated Lime Mudstone of the Upper Jurassic Smackover Formation: Source of High-Sulfur Oil and Gas
- 3:10 **Andrew Petty:** Stratigraphy and Petroleum Exploration History of the Smackover Formation (Oxfordian), Northeastern Gulf of Mexico
- 3:40 Russell Dubiel, Peter Warwick, Lauri Burke, James Coleman, Kristin Dennen, Colin Doolan, Catherine Enomoto, Paul Hackley, Alexander Karlsen, Matthew Merrill, Krystal Pearson, Ofori Pearson, Janet Pitman, Richard Pollastro, Elisabeth Rowan, Sharon Swanson, and Brett Valentine: Geology and Assessment of Undiscovered Oil and Gas Resources in Mesozoic (Jurassic and Cretaceous) Rocks of the Onshore and State Waters of the U.S. Gulf of Mexico Region

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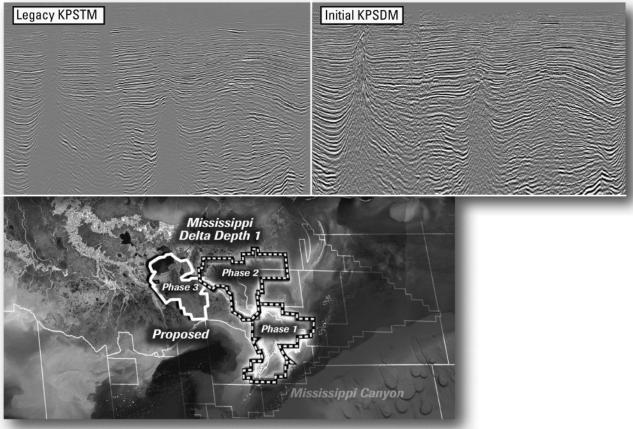
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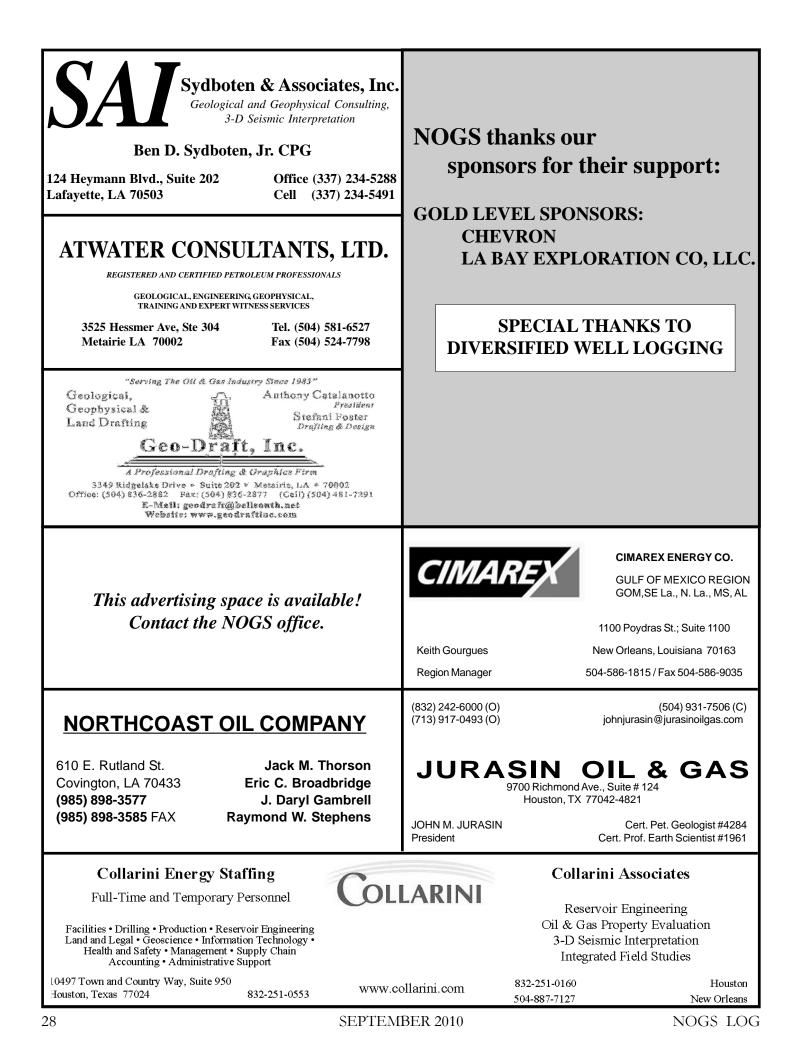
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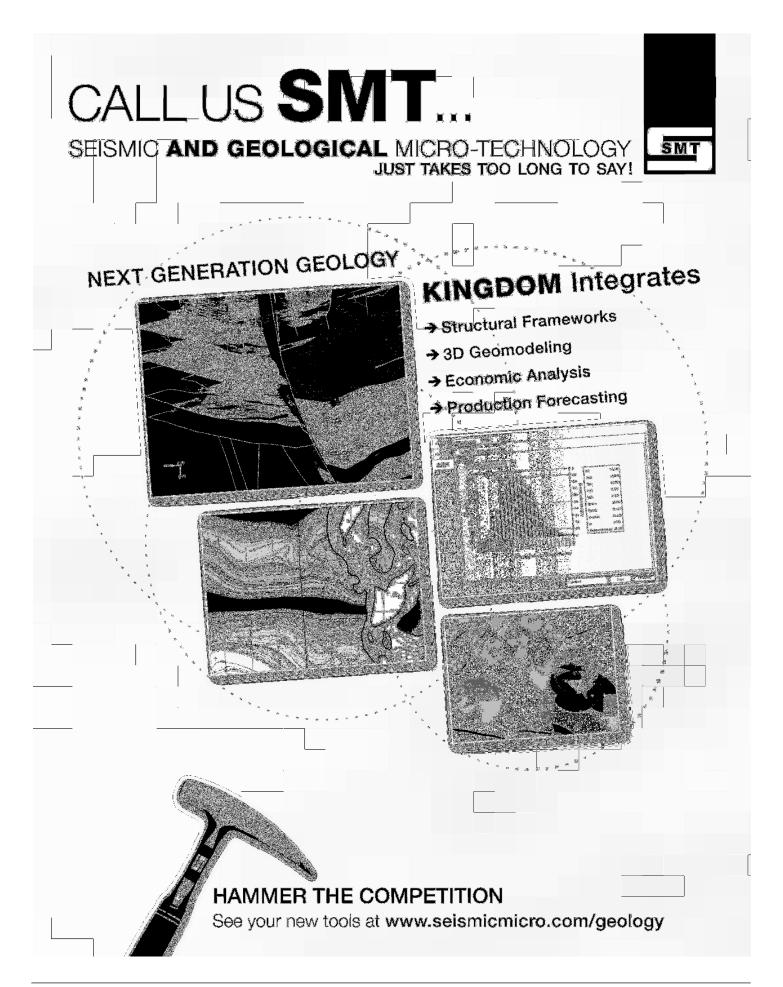
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President's Letter (continued from page 5)

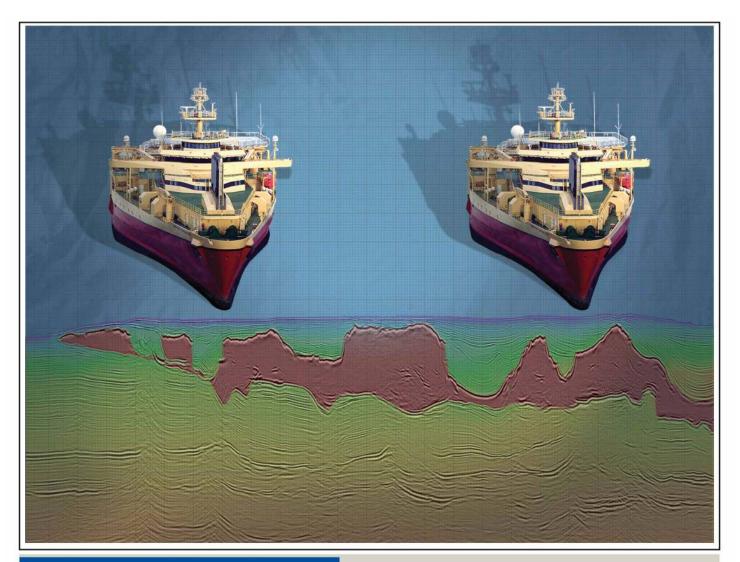
4) We can encourage and make valid business cases for oil & gas companies to locate and operate out of South Louisiana. This takes work and doesn't come quickly, but it is doable.

5) Reach out and invite colleagues, associates, and representatives from our local universities to attend our meetings and join us as new members.

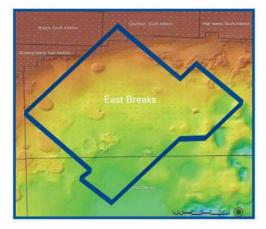
Let's face it the worst fear is the fear of the unknown and we are "knowing" more as we go forward. I would hope you take advantage of every available opportunity to learn and to network. Several such opportunities are coming up. The Louisiana Oil and Gas Symposium: "The BP Gulf" will be held August 16th and 17th in Baton Rouge. Symposium Chair, John Johnston, Louisiana Geological Survey, moved the Symposium so as not to conflict with another opportunity, the 14th Annual Gulf of Mexico Deepwater Technical Symposium at the Hilton Riverside August 18th and 19th of which NOGS is a co-host. The 60th Annual Convention of GCAGS will be held in San Antonio, Texas October 10-12, 2010. Consider cooling off a bit by attending the AAPG International Conference and Exhibition in Calgary, Canada September 12-15th. Definitely do not miss our September "NOGS Kickoff Luncheon" on September 13th with the presentation of the NOGS Foundation Scholarship Awards and the introduction of the New Orleans Geological Auxiliary Officers. Please consider bringing your spouse or significant other to this event. We have interesting speakers lined up for our October and November Luncheon meetings which you will want to hear.

We have much to do to create positive change, let's get to it! God bless,

Rick



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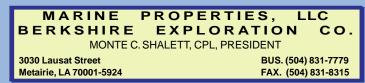


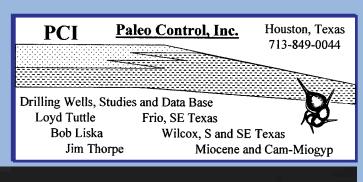
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