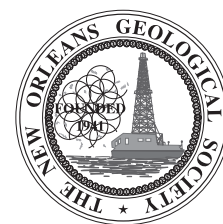


# NOGS LOG

WWW.NOGS.ORG



Official Publication of the New Orleans Geological Society, Inc.

February 2007

Volume 47, Number 8

## FEBRUARY AND MARCH ACTIVITIES

### NOGS Events

#### February 5 - NOGS Luncheon

Dr. Mike Blum of LSU's Department of Geology and Geophysics will present "Holocene Sea-Level Change along the Northern Gulf of Mexico Shoreline and the Flexural Ups and Downs of the Mississippi Delta."

(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

#### February 12 - Call for Papers Submission Deadline

Call For Papers deadline to submit abstracts for the October 21-23 GCAGS and GCSSEPM Convention. See page 17 for submission information.

#### March 5 - NOGS Luncheon

Guest speaker and topic were not available at time of press.

Please check the NOGS website, [www.nogs.org](http://www.nogs.org), for updates.

#### March 28 - NOGS Continuing Education Seminar

NOGS Spring 2007 Continuing Education Seminar "Depositional Environments and Systems, Northern Gulf of Mexico Basin" presented by Dr. Mike Blum of the LSU Department of Geology and Geophysics, 8:00AM to 4:00PM in the Shell Auditorium, One Shell Square. See announcement on page 11.

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Look at Subsidence Issues" ... Page 16

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## FROM THE EDITOR

I apologize for the accidental omission of several lines of text from the memorial for Bob Sabate' in last month's Log. The memorial is published again in this issue as it was originally received from Claude Baker.



Robert Rooney  
Editor *NOGS Log*

25 months and 30 days ago this well hit TD  
**TOMORROW MORNING YOU WILL  
KNOW WHAT THEY KNOW.**



### **GOM New Release Data**

Beginning August 1st, A2D Technologies will be the sole provider of Gulf of Mexico New Release digital LAS well log data resulting from its contract with the Minerals Management Service. Every well drilled in the Gulf of Mexico will be available immediately online the day it is released.

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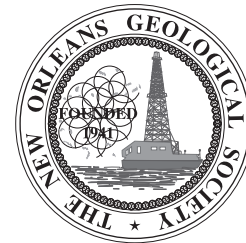
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The office is located at Suite 300, 810 Union Street, New Orleans, LA 70112.

Correspondence and all luncheon reservations should be sent to the above address.

Sent to press on January 16, 2007.

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*from the President*

## CHALLENGES

Why do we not go to events? What motivates us to get out of the house and go to them?

I am very blessed in many ways. I have a great job with a great company, and great management. For many of us, that's not always been the case, and I am certain there are very few people on the planet, especially in our profession, who have had the perfect ride, from start to finish. There was the time in the early 90's, following a particular management change, when I was never so glad to lose a NOGS election. Nevertheless, there was the immersion into petroleum geology that brought relief, and being successful in spite of someone's best attempt to have us fail was an incredible reward in itself.

In business, the challenge of motivating employees is assisted by reward economics....or is supposed to be. In a service organization, motivating members to join, and then to participate, should bring the rewards of learning, networking, and increasing an individual's potential for economic gain. Like business, a discretionary membership service or fraternal organization, must evolve in this, the information/electronic age.

The WW2 generation got its information from radio and newspapers. However, it was not until the advent of television's 6PM news that Uncle Walter and Huntley-Brinkley consistently brought us the images of world events as they occurred, and we grew up with that. When we wanted to get specific information about topics and events, we joined like-minded organizations, got their newsletters and attended their functions. We learned new concepts, met new people, and had a good time.

Many people of my generation (and older) have embraced the Internet, and still continue to regularly attend meetings. I have found the analogy of the personal trainer to have some validity. I always get a better workout when challenged, although I have obviously not had the time for sufficient challenging in way too long. In the same way, face-to-face meetings, not to mention live field trips, provide a better medium for mental retention than reading an electronic version and looking at some pictures. I need stuff explained to me. I need a demonstration. However, those younger people who have grown up with the Internet have replaced monthly newsletters and the face-to-face meetings with high-speed communication and bullet

presentations. How much of the print media many of us formerly received, are now electronically sent to us?

How many of us want to go out again after we get home from work? For that matter, how many of us enjoy driving anymore, especially now that most of us realize traffic law enforcement is non-existent?

So how do we convince you to attend any given NOGS event? First, the event must provide value to you. If it is a social event, then you and your spouse, partner, or date must realize something from the event, other than dutifully attending as your better half or designated driver. We also need to consider "children issues" timing for child-care providers (or whatever baby sitters are now called) so that the event does not run too late or conflict with any of the many things that people of that age do. We need to provide you with quality food and drink at a reasonable cost in pleasant surroundings. We need the venue to be accessible to the majority, or at least a significant percentage of our members. We need to know you will have a good time, be entertained, and be able to network.

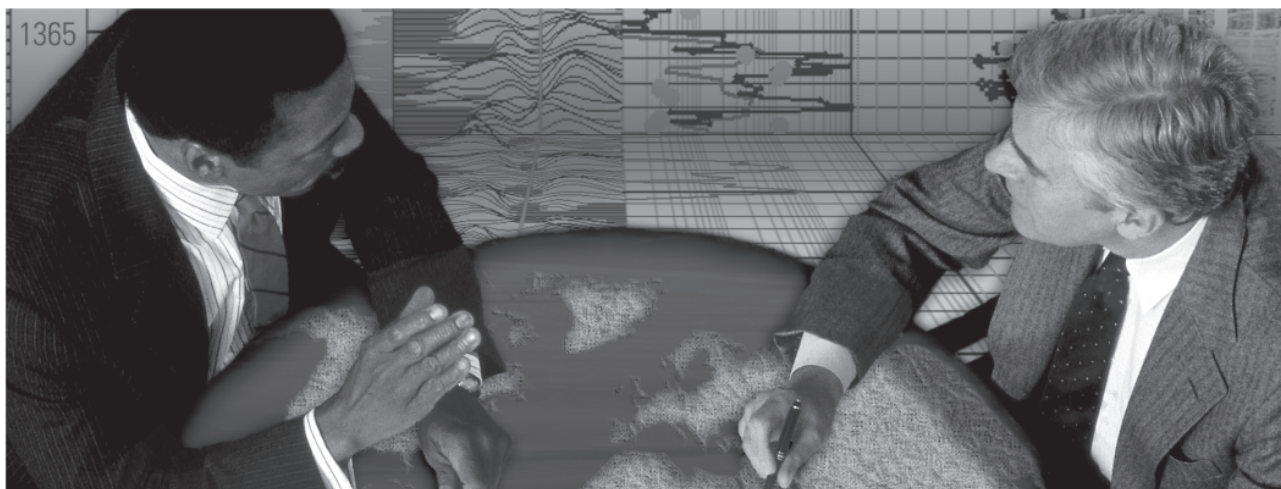
Second, if a technical program is involved, we must provide you with new, timely, or updated information whose bottom line will increase your personal profit potential, or value to your employer. We may again need to feed you at a reasonable cost (notice our emphasis on food). We need to upgrade your skills, as well as provide you with networking opportunities. Obviously, networking is, at least in my mind, a big deal. Why? Because even though networking may not get you the job, it can often get you to the interview stage. This has helped me get most of the jobs I have held during my career.

Third, if what we are doing is a field trip, it needs to be within reasonable driving distance, or we need to provide transportation. We cannot tie up your entire day. Time is too valuable, especially if you have child issues, or are down to one car. In addition, we cannot conflict with major industry events such as AAPG conventions or lease sales, or local events such as Jazz Fest, or in the fall, LSU home games. Try as hard as we can, we still make mistakes in scheduling.

Obviously, NOGS needs to become more electronic, and my rudimentary attempts to move in that direction, while somewhat successful, have had less than spectacular results. I have realized I am not smart enough, nor do I have the time to work the website upgrade the way I think it should be. That will be my first challenge to Art Johnson, when he assumes the NOGS Presidency in late June. If we are to keep you involved, we will need to provide you with as much information as possible as fast as we can, and help you keep your skills as up-to-date as possible while still working to convince you that doing these things face-to-face is even better. It really is hard to network electronically, just look at the horror stories of electronic dating. Would you believe it...people exaggerate. There is one other thing that just can't be done electronically...we can't feed you.

*Michael Fein*

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## February 5 Luncheon Presentation

# Holocene Sea-Level Change along the Northern Gulf of Mexico Shoreline and the Flexural Ups and Downs of the Mississippi Delta

presented by

**Dr. Mike Blum**

LSU's Department of Geology and Geophysics

### ABSTRACT

Patterns of sea-level change and subsidence in the Mississippi delta region have become front-page news in the wake of Hurricanes Katrina and Rita, and it is important to reconcile historic trends from geodetic and GPS data, longer-term time-averaged trends derived from the stratigraphic record, and the record of sea-level change itself. This presentation reviews current controversies regarding sea-level change along the Gulf of Mexico (GOM) shoreline, and proposes a new geodynamic element for the Mississippi delta, which has significant implications for sea-level reconstructions and subsidence analysis, and should be taken into account in future discussions.

Longstanding controversies in Holocene sea-level change for the GOM coast have reemerged in light of recent work. One end member would be the middle Holocene sea-level highstand

model of Blum and others from LSU, where sea level essentially reached present elevations by ca. 6 ka, and may have oscillated within 1-2 m of present since that time. Two separate areas, the central Texas coast and the Alabama shoreline, have produced data in support of this view; however, data bearing on this model are sparse and poorly constrained in terms of precise age vs. elevation. The opposite end-member would be the continual submergence model, with sea-level gradually rising through the middle to late Holocene and not reaching present elevations until today. This model was defined in early work on the Mississippi delta, and has been reinforced recently by Tornqvist and others from Tulane, with a large and precisely defined set of age vs. present depth indicators.

--- continued on page 13 ---

### BIOGRAPHY

**Mike Blum** grew up in Nebraska and Texas. He received his Bachelors, Masters, and PhD. from The University of Texas at Austin, with backgrounds in meteorology and climatology, geomorphology and Quaternary geology, and sedimentary geology, finally finishing in 1991. His Ph.D. research focused on examination of the responses of rivers of the Texas coastal plain to interacting climate and sea-level change, and developed new views on sequence stratigraphy in fluvial systems. Since that time, he has conducted field research on Quaternary fluvial and coastal systems in the US (Texas, lower Mississippi valley and delta, Alabama and Florida coasts, the South Carolina coast), Greenland, North Africa, and Western Europe.

Upon graduation from UT, Mike took a job as Assistant Professor in the Department of Geology at Southern Illinois University at Carbondale from 1991-1995, and developed his

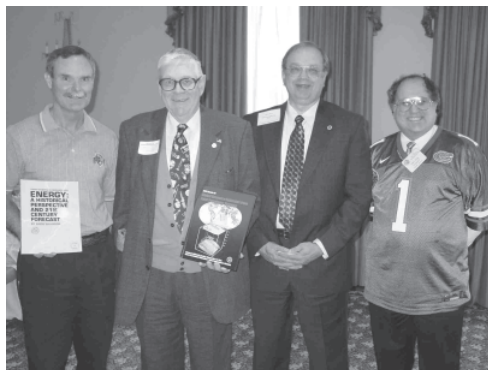
research interests in the Mississippi valley at that time. In 1995, Mike moved to the University of Nebraska-Lincoln, where he was Associate Professor of Geosciences from 1995-2003. While at Nebraska, he developed interests in Gulf of Mexico coastal systems and the record of sea-level change. Mike moved to LSU in 2003, where he is now the Frank W. and Patricia Harrison Professor in the Department of Geology and Geophysics, and is actively engaged in research on fluvial and coastal systems of the northern Gulf of Mexico and elsewhere.

Mike is a fellow of the Geological Society of America (GSA), a lifetime member of the American Geophysical Union (AGU), and a member of the Society for Sedimentary Geology (SEPM), and the International Association of Sedimentologists (IAS).

**THE LUNCHEON RESERVATION DEADLINE IS FEBRUARY 28, SO CALL THE NOGS OFFICE - TODAY!**

### “And Looking Ahead...”

The next luncheon will be March 5. Guest speaker and topic were not available at time of press. Please check the NOGS website, [www.nogs.org](http://www.nogs.org), for updates. Contact the NOGS office at 561-8980 or use the e-link on the NOGS website ([www.nogs.org](http://www.nogs.org)) to make your reservation.



January's Luncheon speaker Rick Fritz (third from left) is greeted by Mike Fein (far right) at Le Pavillon. Also present were door prize winners Dave Balcer (left), and Bill Furlong (second from left).

# BLAST FROM NOGS PAST

## 45 Years Ago

(February 1962) **Atwater Elected AGI President** It doesn't seem often that our Society has a genuine "national celebrity" within the membership, but with the election of Gordon Atwater to the Presidency of the American Geological Institute, such distinction has been achieved. – Excerpt from Tom Fails' column

(February 1962) .....Who put the Gris-Gris on the Oil and Gas Building? With cars driving in reverse thru Brazo's office, and bullet holes in the windows and motorcycles smashing corners – it sort of makes you think twice before you cross that corner..... - Excerpt from Ernie Roth's *Seen and Heard* column

(February 1962) Treasurer Robert Ingram's NOGS Financial Statement reported a total balance of \$4,908.29.

## 30 Years Ago

(February 1977) **NOGS Public Affairs Committee** ....During WWII, from May 12, 1942, to August 13, 1942, German submarines sank 17 ships, of which 12 were tankers off the southeast Louisiana coast.....In some areas, The Louisiana shoreline reportedly was a frothy, oily mess. No attempt was made to clean up the wartime spills, either here or along the Atlantic Coast where many other tankers were sunk but nature did its job, and no evidence of this pollution remains. -Excerpt from J.E. Ryall's *Help Us Spread the Word* column

(February 1977) **RAM SAXENA** came back to New Orleans after spending a month and a half in Egypt, Nigeria, Europe, and India. Ram represented Texaco in the Egypt General Petroleum Corporation's exploration seminar at Cairo in November, where he gave a paper on "Exploration Models for Deltaic Sandstone Reservoirs". His paper was acclaimed the best paper in the Conference. He also presented a talk in the November meeting of the Lagos Geological and Geophysical Society at Lagos, Nigeria. - From Rich Hathaway's *NOGS Notes* column

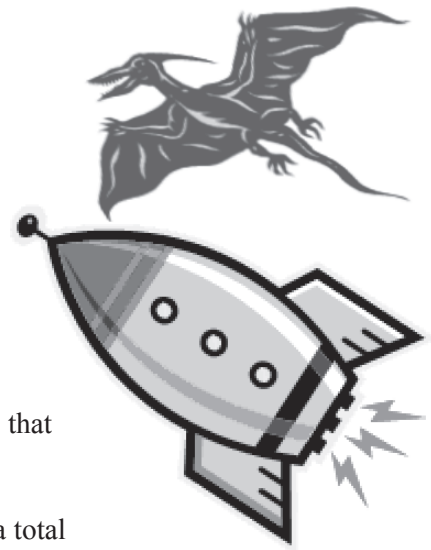
(February 1977) Treasurer Joseph G. Meinert's NOGS Financial Statement reported a total balance of \$29,257.14

## 15 Years Ago

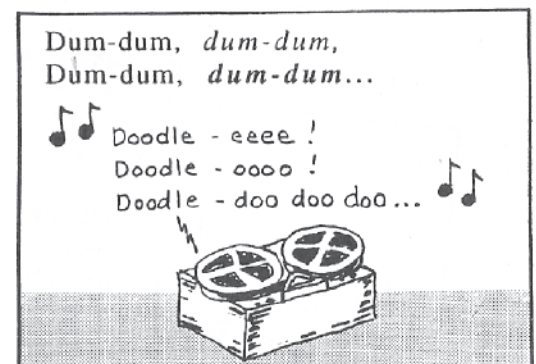
(February 1992) **NOGS Charter Members Recollections** ....Offshore development began in the late forties ie Bay Marchand 1948. A short time later drilling activity was halted when the State vs Federal ownership was questioned. Was it three or ten miles, and was it from coastline or shoreline? When offshore activity ceased on-shore drilling activity increased. Things were simple then. - From Jack C. Langford's article *New Orleans and Our Oil Industry During the 1940's*

(February 1992) **NOGS Field Trip to Winnfield Dome** ....After a grueling trek in search of elusive Eocene outcrops through thorn-infested underbrush, the thirstier members of our group (who shall remain nameless eh?) led the charge back to the van and raided the cooler containing liquid refreshments generously provided by Core Laboratories. - Larry Lemke

-Robert Rooney, filling in for Tim Piwowar



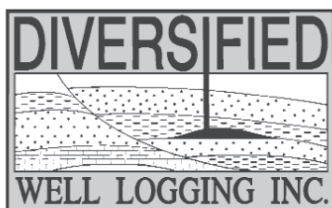
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NOGS Spring 2007 Continuing Education Seminar  
**DEPOSITIONAL ENVIRONMENTS  
AND SYSTEMS,  
NORTHERN GULF OF MEXICO BASIN**

Dr. Mike Blum  
Department of Geology and Geophysics  
Louisiana State University

Wednesday March 28, 2007  
8:00 am—4:00 pm  
Shell Auditorium, One Shell Square

This course is targeted for students, new hires, and those who would like a refresher of depositional systems common to the northern Gulf of Mexico Cenozoic basin fill. Major topics to be discussed during lectures include:

- Sediment Dispersal Systems – General Concepts
- Depositional Environments and Facies
- Fluvial Systems
- Deltaic Systems
- Incised Valleys and Estuarine Systems
- Regressive Barrier Island and Strandplain Systems
- Clastic Shelves
- Slope and Deep Water Systems
- Paleogeography and GOM Depositional Systems Through Time

Coffee, sodas, and snacks will be provided. The full agenda, location, parking, and lunch ideas can be viewed at [www.nogs.org](http://www.nogs.org). Each attendee will receive a handout and cd.

Reservations can be made by calling or emailing the NOGS office at 504/561-8980 or [info@nogs.org](mailto:info@nogs.org) with your credit card information or sending a check to the NOGS Office at Suite 300, 810 Union Street, New Orleans, LA 70112. Please include your contact information for verification.

- First 20 students who sign up will attend free
- Until March 15, 2007 all NOGS Members -\$100 after that date \$125
- Non Members—\$150 (includes 2007-2008 NOGS membership for qualified individuals)
- Day of Seminar (if space is available) —\$175

# NOGS Memorial

## Robert W. Sabaté



On November 4, 2006, NOGS and the science and profession of geology lost one of their most distinguished members with the death of Robert Sabaté. After a brief but hard-fought illness, he lost his battle with cancer. He was 75.

Bob was born in Los Angeles and raised in New Orleans, where he moved with his family in 1940 and where he was educated in parochial schools. Bob earned his B.S. in geology from Tulane University in 1952. He then served in the U.S. Navy as an officer before receiving his M.S. in geology from Louisiana State University in 1957.

Bob began his career with Shell Oil Company, where he spent 15 years, first in Baton Rouge and then New Orleans, working on various geological assignments in the Gulf Coast onshore and offshore. During this period, Bob somehow found time to continue his schooling at night. He received a Certificate in General Commerce from Tulane in 1963, an M.B.A. from Loyola University of the South in 1967, and a J.D. from Loyola in 1972. In 1969, Bob married Judith Kennedy. He and Judy have two fine sons, Pierre and Etienne.

Bob left Shell in 1972 to join Koch Exploration Company and eventually became Vice President-Exploration, Gulf Coast. In 1986, he left Koch and practiced as an independent geologist until late 1987 when he became co-founder and President of the San'Doil Company. At the time of his death he was President of Energetix Petroleum L.C., a company he co-founded in 1998.

Since the late 1960's Bob tirelessly contributed his many talents to geological professional organizations. He served the New Orleans Geological Society as President, Vice President, and Secretary. He chaired numerous NOGS committees and contributed a paper to a NOGS publication. In 1989, he was awarded an Honorary Life Membership by NOGS. He also received two President's Awards.

Bob was ever-active in the AAPG from whom he received three Certificates of Merit. He served two terms in the House of Delegates, was Chairman of its Constitution and Bylaws Committee, and served twice on the Advisory Council, for his first term having been chosen by the GCAGS as its representative. He was General Chairman of the National Convention in 1993. Bob was a DEG member, was past President of the DPA, and was Chairman of the joint SIPES-DPA Model Forms committee. Bob drafted its Confidentiality and Consulting agreements.

His GCAGS activities were many. He was Secretary in 1987-88, Vice Chairman of the 1988 Convention, Co-Chairman of the Levorsen Award Committee, Co-Chairman of the Tectonic Map of the Gulf Coast Committee for which he received a 1972 GCAGS Outstanding Service Award, twice contributed to the Transactions, and in 1990 received its Distinguished Service Award. In 2002 he was presented Honorary Membership by GCAGS.

Bob's professional affiliations included SIPES National (Notable Services Award) and New Orleans Chapter (Vice Chairman and Chairman), Gulf Coast Section of SEPM, PLANO, SGS, and the Louisiana State Bar Association.

As a geologist, lawyer, and businessman, Bob's talents and interests were many and varied. I knew him well, as he was my business partner and close friend of 65 years. What particularly set him apart was his willingness to get involved. He was a man of conviction and truly a gentleman. He was always willing to help and always willing to serve.

Now, let me tell you about the Bob I knew. We first met when he moved to my uptown neighborhood a year or so before WWII. We were both the same age and we shortly became good friends although a lot of our interests differed as did the grammar and high schools we attended. As a result, we saw less of each other until we reunited at LSU. I was married, he was not. My wife and I lived on the LSU Campus in hutments that the school considered to be marriage dormitories. Bob lived in a regular dorm, but for security reasons kept his motorcycle behind our hut. He would come for lunch or dinner with us once or twice a week. We had two children at the time, so Bob was exposed to little babies for the first time. We had a daughter that was just trying to turn over on her own. One day when he was there, my wife screamed in delight that our baby daughter had turned over by herself so much earlier than her brother.

She went on and on about it until Bob looked up and said, sheepishly, “I turned her over.” Another time we asked Bob to hide our son’s first small two-wheel bike before Christmas. Bob decided to give the bike a try on Christmas Eve and broke the handlebars. He called and was very upset because he had quite a time finding someone to weld the handlebars, however, he did. Our son never even noticed that his bike had had a problem.

Bob’s other interests involved various items including motorcycles, watches, and cameras, among other items. Not too long ago I commented to him that he must have had forty cycles in his lifetime. He said he thought it was about fifty. After Bob and I became partners at Energetix we had come full circle.

Among our differences, Bob was a hunter and I am not. I am a golfer and he was not. We ended up on a Christmas day going duck hunting in the middle of a south Louisiana marsh. Our destination was an old hotel which had been converted to a plush hunting lodge. To make a long story short, we were assigned a guide with a hound dog. We were all in a large pirogue maneuvered by the guide and were within about ten yards of our duck blind when the dog decided to jump out of the pirogue. In so doing, he swamped the pirogue and left us and our shotguns in waist-deep water. A little earlier, a lodge worker had awakened us shortly before dawn and announced that the temperature was 22 degrees. Given the opportunity, Bob would have gone back to our objective blind with the same guide, the same dog, in that same pirogue!

Bob also had a musical talent. He was adept at playing jazzed-up versions of mostly military pieces on his harmonica. He also on occasions played the mandolin.

As to motorcycles, Bob loved going out on one of his bikes on a nice day and going two or three hundred miles. He traveled all over the country on a bike, including at least four trips to California alone.

These stories were meant to illustrate how Bob would get involved in things. He had an insatiable appetite for knowledge. My wife and I have such good memories of all the years of this friendship and know of many more stories that we could relate.

All of us will miss Bob, but we’ll never forget him. After they made Bob, they threw away the mold. He was one of a kind and will never be forgotten!

Claude C. Baker

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## **February 5 Luncheon Presentation Abstract**, continued from page 7

The Tulane workers use their data to argue that the record from the delta is representative of the northern GOM as a whole, that subsidence is due to compaction of Holocene sediments and sea-level rise, and that the pre-Holocene depocenter is stable. An intermediate view of sea-level change along the GOM shoreline has been presented by Otvos of U. Southern Mississippi, based on a variety of data gathered along the shoreline between the Mississippi delta and the Florida panhandle.

Regardless of whether sea-level curves from other parts of the GOM shoreline are robust, I suggest the geodynamics of the delta depocenter have been underappreciated. Existing interpretations of subsidence patterns and rates treat vertical motion as unidirectional and down, and look only to the delta region and offshore for explanations. Clearly, there is net long-term subsidence due to a number of factors; however, a significant component of Holocene land surface dynamics in the delta region, and along the Gulf of Mexico shoreline, must also reflect isostatic responses to the excavation of Mississippi valley sediments during the last glaciation when sea level was low, and subsequent valley filling occurred during the early to middle Holocene. Due to recent work on the Mississippi alluvial valley and delta plain, we now understand the magnitude and timing of this excavation and filling. A simple 1-d flexural model illustrates that the mass of sediments removed during the last glacial period and subsequent period of deglaciation and meltwater flooding (ca. 30-12,000 yrs BP) would have been sufficient to induce 10-15 m of flexural uplift of the delta depocenter, dissipating along the adjacent northern GOM shoreline only over distances of >100 km from the valley margins. As valley filling progressed during the early to middle Holocene, uplift would have been followed by equally large amplitude subsidence over those same distances.

One unfortunate consequence of this view would be that data from the Mississippi delta cannot be interpreted to represent a sea-level curve of any kind, let alone a curve that would be representative of the GOM shoreline, without accounting for the effects of flexural uplift and subsidence. Moreover, sea-level curves constructed from data collected over long stretches of the coastline, as presented by Otvos, mix sites with different flexural uplift and subsidence histories and are inherently flawed. Ongoing research along the non-subsiding Alabama/Florida and Texas Coasts, sufficiently removed from the flexural effects of the depocenter itself, will continue to test and refine the record of sea-level change as a benchmark to develop current and future coastal restoration efforts on the Mississippi delta.

- ✎ **Yin and Yang:** "The concepts of Yin and Yang originate in ancient Chinese philosophy and metaphysics, which describes opposing but complimentary forces found in all things in the universe". - [www.wikipedia.org](http://www.wikipedia.org).

So it seems it can also be said that Federal and State tax revenues obey this same concept. On December 9, 2006 Gov. Kathleen Blanco announced that the Federal Government will share OCS oil and gas royalties with Louisiana. One month Later on January 9, 2007, the Federal Government announced that the MMS has increased the royalty rate for Deepwater Gulf of Mexico OCS leases from 1/8th to 1/6th beginning with the August 2007 Western Lease Sale.

- ✎ **Also: New Exploration Acreage Possibly Opening Up Pending Environmental Reviews, Study, and Public Comment:** The Minerals Management Service is considering offering additional acreage for oil & gas leasing in the Eastern Gulf of Mexico and in Alaska's Aleutian Basin. Details are included in the MMS press release on the following page.

The entire "2006 Oil and Gas Assessment of North Aleutian Basin Planning Area, Kirk W. Sherwood, John Larson, C. Drew Comer . . . February 2006" is located at <http://www.mms.gov/alaska/re/reports/NAB06/nab2006.htm>.

**Robert Rooney**



Release Date: December 09, 2006

## Gov. Blanco praises Congressional delegation on passage of OCS

"This is an historic day for Louisiana. For the first time, the Federal government will share a portion of the royalties from Outer Continental Shelf oil and gas production with our state, its number one partner.

"I congratulate our Congressional delegation for their tireless work and commend Senator Landrieu, the bill's author, for keeping the pressure on Congress since she began leading this issue in Washington years ago. Our House and Senate Members each played key roles in getting this measure passed and, on behalf of the citizens of Louisiana, I thank you.

"This bill is the critical first step we've been waiting for as we go forward with our long-term coastal protection and restoration efforts. This dedicated revenue stream will provide the foundation of financial support we need to ultimately complete what will be the largest public works project in our nation's history.

"The voters of Louisiana overwhelmingly approved a Constitutional Amendment that ensures these funds will be used for the sole purpose of protecting and restoring our coastal communities and wetlands and the state is hard at work developing a comprehensive coastal restoration plan to protect our citizens and our unique coastal environment. However, we must be ready to start as quickly as possible and as Governor, I will do everything I can to make sure Louisiana moves quickly with the work needed to protect and restore our coast.

"I will work to clear any legal obstacles in leveraging new OCS revenues through a variety of long term financing mechanisms. Making these dollars go as far as they can in the near term can ensure that we put projects and programs to work as soon as possible.

"Again, I congratulate our Congressional delegation on this landmark legislation that gives us confidence that we can protect our communities and restore the unique coastal landscape that defines Louisiana and gives so much to the rest of America."

Source: [www.dnr.louisiana.gov](http://www.dnr.louisiana.gov)



## NEWS RELEASE

For Release: January 9, 2007

Contact: Gary Strasburg, 202-208-3985  
Shane Wolfe, 202-208-6416  
Nicolette Nye, 703-787-1011

### **Kempthorne May Offer Areas in North Aleutian Basin, Central Gulf of Mexico for Leasing Increases Royalty Rate for Offshore Oil and Gas Leases**

WASHINGTON — Interior Secretary Dirk Kempthorne today announced that President George W. Bush has modified the leasing status of two areas in the Outer Continental Shelf in response to Congressional action and the requests of state leaders. In addition, Kempthorne announced that he has increased the royalty rate for most new offshore deepwater federal oil and gas leases to 16.7 percent (1/6th).

"Together, these actions will enhance America's energy security by improving opportunities for domestic energy production, and will also increase the revenues that the federal government collects from oil and gas companies on behalf of American taxpayers," Kempthorne said.

#### *New Areas*

The areas were withdrawn from consideration for leasing through 2012 by President Bill Clinton in 1998. By modifying that Presidential withdrawal to remove these two areas, President Bush's action allows the Secretary of the Interior the option of offering these areas during the Minerals Management Service's next five-year OCS oil and gas leasing program (2007-2012).

"Both OCS areas – one in the North Aleutian Basin of Alaska, known as Bristol Bay, and the other in the Central Gulf of Mexico – would receive thorough environmental reviews," Kempthorne said. "There will be significant opportunities for study and public comment before any oil and gas development could take place in these areas."

Congress had imposed moratoria on oil and gas activities in the North Aleutian Basin from FY 1990 through FY 2003, but discontinued the yearly moratorium in FY 2004. In 2006, then-Alaska Governor Frank H. Murkowski and other local government and Native Alaskan leaders expressed support for modifying the Presidential withdrawal in the North Aleutian Basin.

Accordingly, the 2007-2012 OCS Oil and Gas Proposed Program, developed by Interior's Minerals Management Service (MMS), includes options for one or two lease sales in a small portion of the North Aleutian Basin – an area of about 5.6 million acres that was previously offered during Lease Sale 92 in 1988. The area would be subject to environmental reviews, including public comment, before any lease sale proceeds. There are no existing leases in the North Aleutian Basin.

The area in the Central Gulf of Mexico, referred to as the 181 South Area, comprises about 5.8 million acres in the Central Gulf of Mexico Planning Area, south of the 181 Area and west of the Military Mission Line and more than 125 miles from the coast of Florida. The 181 South Area was included in the 2007-2012 OCS Oil and Gas Proposed Program. In December 2006, Congress passed and President Bush signed the Gulf of Mexico Energy Security Act, which requires leasing in that area. MMS must conduct a detailed environmental review of the area before any leasing can occur there.

The 2007-2012 OCS Oil and Gas Proposed Final Program and Final Environmental Impact Statement are scheduled to be released in spring 2007.

#### *Royalty Rate Increase*

The royalty rate increase to 16.7 (1/6th from the present 1/8th) percent for new offshore (excluding Alaska) deepwater federal oil and gas leases will take effect with the first 2007 Gulf of Mexico lease sale scheduled for late August.

Most federal oil and gas is leased at a 12.5 percent royalty rate both onshore and offshore. The Outer Continental Shelf Lands Act (OCSLA) grants the Secretary of the Interior discretion to establish a higher royalty rate.

MMS estimates that the increased royalty rate of 16.7 percent for new deepwater offshore Gulf of Mexico leases will increase revenue from royalty payments by \$4.5 billion over 20 years. MMS estimates that, by 2017, this increased revenue would offset any decline in bonus and rental revenues and any revenue losses from a decline in production. MMS estimates a decline of bonus and rental revenues at \$820 million over 20 years and decline in production at 5 percent, or 110 million barrels of oil equivalent, over 20 years.

More information, including a fact sheet, maps of the areas and the President's memorandum is at <http://www.mms.gov>.

## A New Look at Subsidence Issues

By Michael Strecker

(Published with permission of the *Tulanian*)

While erosion and wetland loss are huge problems along Louisiana's coast, the basement 30 to 50 feet beneath much of the Mississippi Delta has been highly stable for the past 8,000 years with negligible subsidence rates, according to an article in the August issue of *Geology*, a journal published by the Geological Society of America.

Studying sediment core samples, Torbjörn Törnqvist, an associate professor of earth and environmental sciences at Tulane University and lead author of the article, made detailed reconstructions of what sea levels were in different sections of the delta over the past 8,000 years.

Törnqvist's study covered areas near the Louisiana cities of New Iberia, Franklin, and Lusher-Gramercy. Törnqvist and his students are currently investigating sediments in New Orleans, including an area close to one of the levee breaches along the London Avenue Canal.

"Our research could have major implications for rebuilding plans that are currently being debated," Törnqvist said. "Over the long term, comprehensive understanding of subsidence will better support rational coastal management and successful urban and land-use planning for all low-lying areas along the Gulf Coast."

Recent research has suggested that the basement of the Mississippi Delta is subsiding by about half an inch a year, but Törnqvist's study shows subsidence rates that are at least 10 times lower. A stable basement could allow rebuilding in low-lying areas thought to be sinking too rapidly to justify reconstruction.

With funding mainly from the National Science Foundation, Törnqvist and his team reconstructed the rate of sea-level rise over the past 8,000 years from three separate areas in the Mississippi Delta. Peat samples were used as sea-level indicators. According to Törnqvist, peat formation begins as soon as water levels rise above the land surface.

Carbon isotope analyses verified that accumulation of the samples was directly controlled by sea-level rise. Determining precise elevation of sampling sites was accomplished with a combination of Global Positioning System measurements and optical surveying.

The team then compared its results with sea-level data spanning the same time period from areas in the Caribbean regarded as tectonically stable, including Florida and the Bahamas. Törnqvist and his colleagues were surprised to find no difference, suggesting that large portions of the delta basement are stable. They also inferred from the data that long-term subsidence rates are more on the order of a fraction of a millimeter per year rather than 10 millimeters.

Törnqvist points out that these numbers do not necessarily apply to the entire delta. He also notes that well-documented high-subsidence rates in and near the birdfoot of the delta indicate that different conditions prevail there. "It remains to be demonstrated how rapidly the basement under metropolitan New Orleans subsides," he said.

The study's imaginative approach is timely and a step in the right direction, said H. Richard Lane, program director of the National Science Foundation's sedimentary geology and paleobiology program. "If we are to reverse the loss of Louisiana wetlands and the protection they afford New Orleans, we must think outside the box. These scientists demonstrate that innovative research can open many new possibilities for addressing environmental issues," he said.

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New Orleans, LA 70118  
(504) 865-5210  
mstreck@tulane.edu



Torbjörn Törnqvist conducting subsidence studies near New Orleans levees.

# Call for Papers and Posters



## Gulf Coast Association of Geological Societies and Gulf Coast Section of SEPM

57<sup>th</sup> Annual Convention, Corpus Christi, Texas

October 21-23, 2007

HOST: CORPUS CHRISTI GEOLOGICAL SOCIETY

With our presence on the sparkling Gulf Coast of Texas, the Corpus Christi Geological Society has set the theme of the 57<sup>th</sup> Annual Convention of GCAGS as EXPLORING THE THIRD COAST. Better product pricing has sparked a tremendous growth in our industry. We anticipate papers and posters that will reflect aspects of today's exploration and exploitation and will stand as a legacy to those just entering our profession. In keeping with our recent publication, *Wooden Rigs, Iron Men – History of South Texas Oil and Gas*, we would like to create a SPECIAL SESSION specifically for historical purposes – “INDUSTRY HISTORIES.” This is the time for all you old-timers to record your memories of significant discoveries, drillers, drilling, blowouts or darn good stories. But please, keep those excellent papers on geology, sedimentology, etc., coming as well.

### TOPICS MAY INCLUDE, BUT ARE NOT LIMITED TO:

**Back to Basics – Geology Integrated With 3-D**  
**Old Plays New Ideas**  
**Application of New Technologies**  
**Sequence Stratigraphy**  
**Environmental Geology**  
**Hurricanes & Coastal Impacts**

**Case Histories**  
**Salt Plays / Offshore Plays**  
**Industry Histories – SPECIAL SESSION**  
**Gas Hydrates/Seeps**  
**Coastal Aquifers & Ground Water**  
**Modern Depositional Processes**

Prepare Abstracts in Microsoft Word using AAPG guidelines (see [www.gcags2007.com](http://www.gcags2007.com)), and include specific applications to Gulf Coast area geology. Include with your abstract your full mailing address, telephone and fax numbers, email address, and whether you are submitting for an **oral** or a **poster** presentation. If **either** presentation mode is acceptable, which allows greater flexibility for the technical program committee, please indicate that with your abstract submission.

**Submit abstracts by February 12, 2007 to the following Program Chairs :**

#### **GCAGS abstracts:**

Dr Jennifer Smith-Engle  
361-825-2436  
[gcags2007@suemaur.com](mailto:gcags2007@suemaur.com)  
(include **GCAGS** in subject)

#### **POSTER abstracts**

Leighton Devine  
361-510-8872  
[ldevine@stx.rr.com](mailto:ldevine@stx.rr.com)  
(include **GCAGS** in subject)

**We will notify of acceptance by Mar 1, 2007.** All accepted authors are expected to submit a paper of 10-12 pages (as published in the *Transactions*) or an extended abstract of 2-4 pages. **Completed papers are due by April 2, 2007.**

## NOGS Website Contest

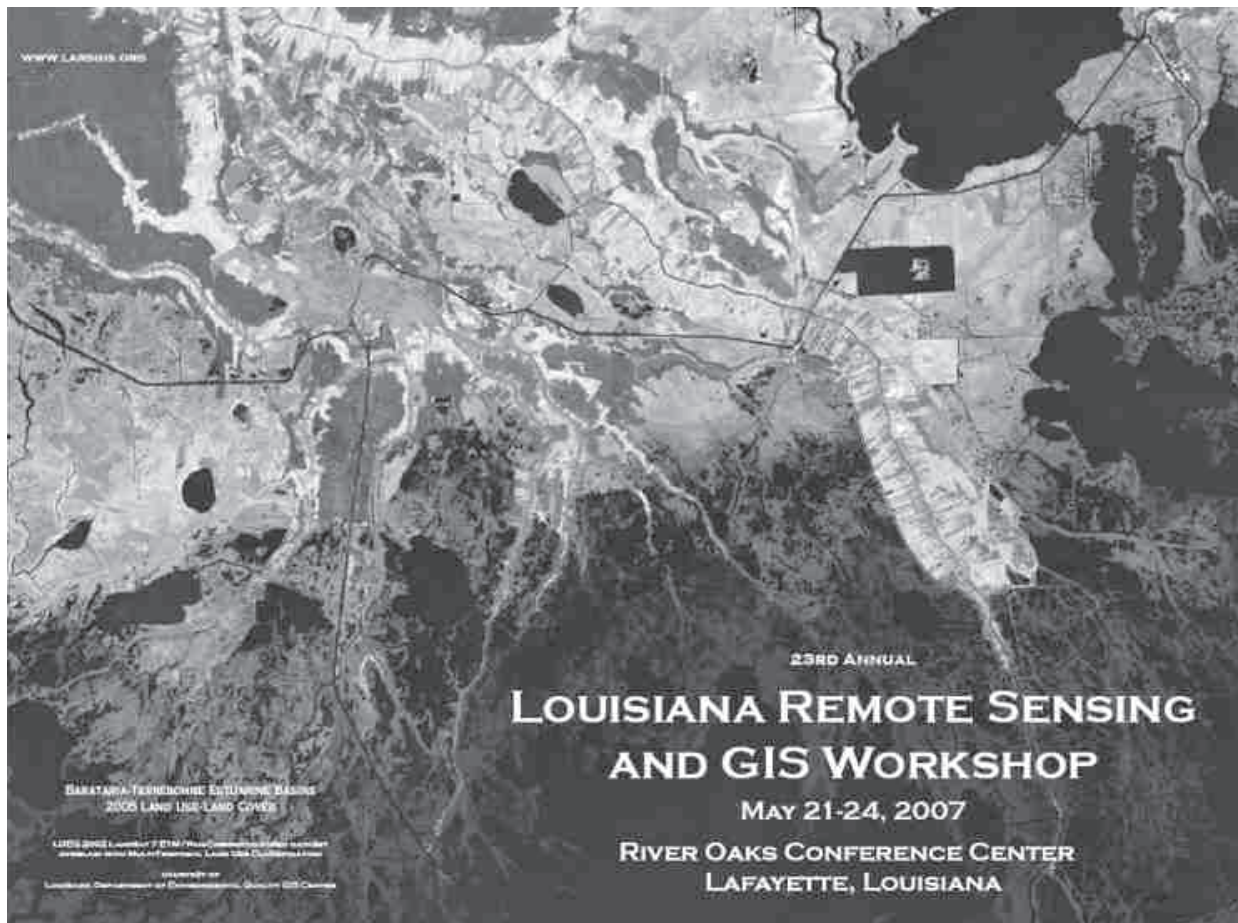
Last month's question: **Name the mineral at the top of the Mohs hardness scale.** The answer is talc. According to the website <http://geology.about.com/library/bl/blmohsscale.htm>, "the Mohs scale was devised by Friedrich Mohs in 1812 and has been a valuable aid to identifying minerals ever since." The ten standard minerals in the Mohs scale are:

- |             |             |
|-------------|-------------|
| 1. Talc     | 6. Feldspar |
| 2. Gypsum   | 7. Quartz   |
| 3. Calcite  | 8. Topaz    |
| 4. Fluorite | 9. Corundum |
| 5. Apatite  | 10. Diamond |

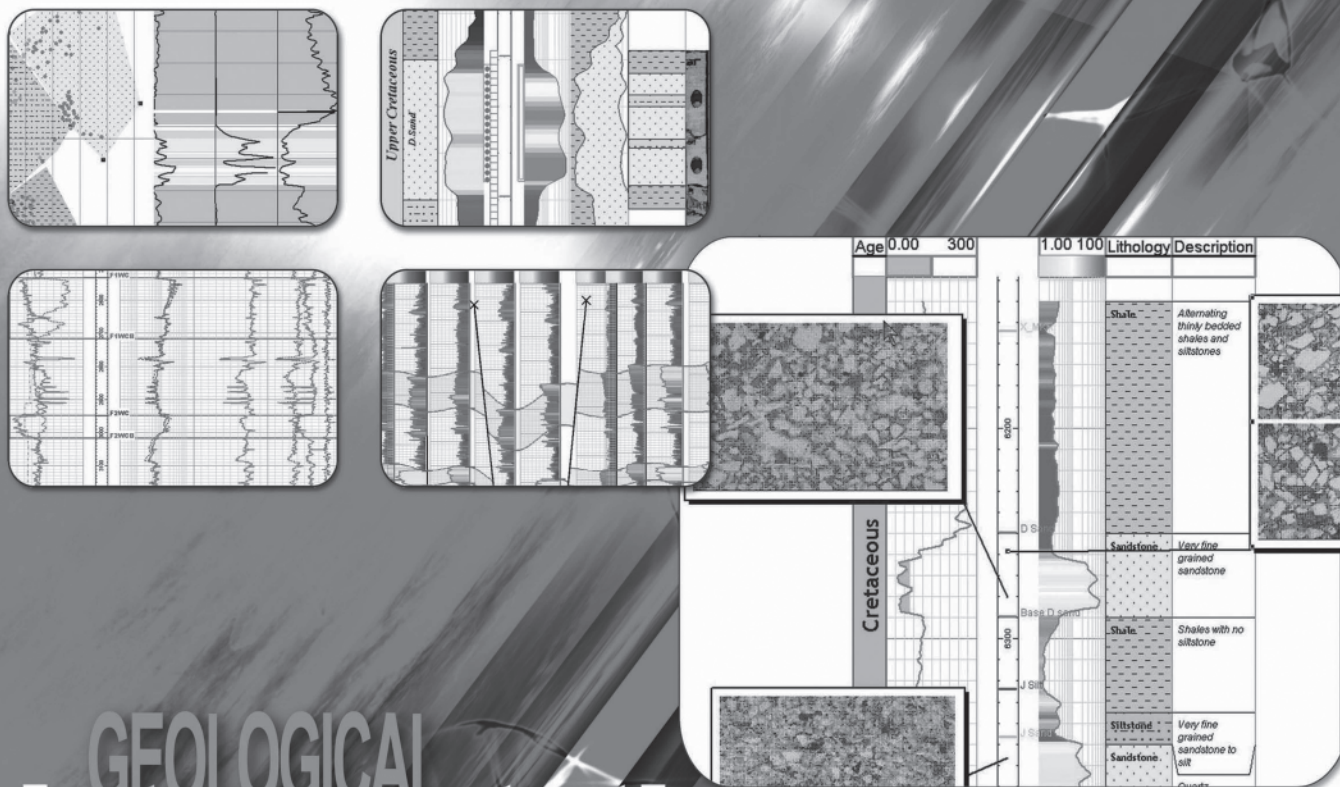


"In terms of absolute hardness, diamond (hardness 10) actually is 4 times harder than corundum (hardness 9) and 6 times harder than topaz (hardness 8). Because it isn't made for that kind of precision, the Mohs scale uses half-numbers for in-between hardnesses. Dolomite, which scratches calcite but not fluorite, has a Mohs hardness of  $3\frac{1}{2}$  or 3.5. There are a few handy objects that also fit in the Mohs scale. A fingernail is  $2\frac{1}{2}$ , a penny is just under 3, a knife blade is  $5\frac{1}{2}$ , glass is  $5\frac{1}{2}$ , and a good steel file is  $6\frac{1}{2}$ . Hardness on the Mohs scale is just one aspect of identifying minerals. Along with hardness, you need to consider luster, cleavage, crystalline form, color, and rock type to zero in on an exact identification."

To become next month's winner, remember to look for the hidden NOGS question on our website, [www.nogs.org](http://www.nogs.org), and correctly answer the question. Happy surfing, and good luck finding and answering this month's question!



**Early registration due March 15th. For more information, visit [www.larsgis.org](http://www.larsgis.org).**



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## 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](mailto:log@nogs.org).*

Dave Balcer (Ohio State - left), and Mike Fein (Florida - right) find common ground on game day at the January 8th monthly luncheon at LePavillon.



### The 2007 Deepwater Symposium is coming!!

It needs volunteer NOGS help. Please call Tom Hudson at 504-592-7163 or email [tom.hudson@chevron.com](mailto:tom.hudson@chevron.com)

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Lisa Dwyer Kennedy  
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Geophysicist  
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### Super Science Saturday Returns!

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Louisiana Children's Museum

For more information or to volunteer, contact:  
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[tom.bergeon@centuryx.com](mailto:tom.bergeon@centuryx.com)

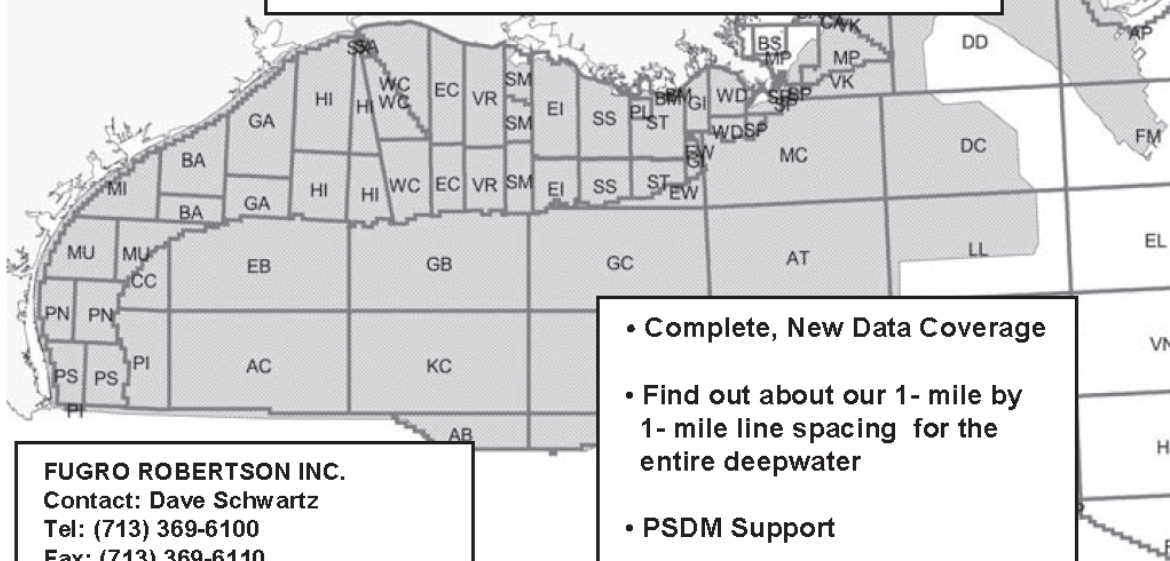


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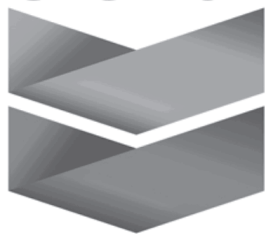
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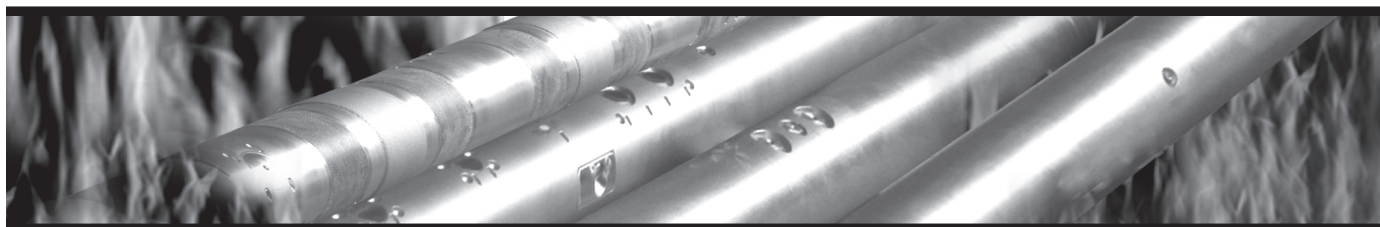
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--- continued from page 3 ---

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2007-08 Trustee	George T. Froming	Consultant	504-799-1918	<a href="mailto:gfroming@eplweb.com">gfroming@eplweb.com</a>
2008-09 Trustee	David E. Balcer	Chevron	504-592-6752	<a href="mailto:dbalcer@chevrontexaco.com">dbalcer@chevrontexaco.com</a>
2008-09 Trustee	Tom Klekamp	Amber Resources LLC	985-845-4046	<a href="mailto:klekamp@bellsouth.net">klekamp@bellsouth.net</a>

### AAPG DELEGATES

#### Term Ends

		Company	Phone	E-mail
2007	Thomas C. Bergeon	Century Exploration	504-832-3772	<a href="mailto:tom.bergeon@centuryx.com">tom.bergeon@centuryx.com</a>
2007(a)	J. Stephen Tissue	Chevron	504-592-6030	<a href="mailto:stevetissue@Chevron.com">stevetissue@Chevron.com</a>
2008	Irion Bordelon, Jr.	Cimarex Energy	504-586-3023	<a href="mailto:lbordelon@cimarex.com">lbordelon@cimarex.com</a>
2008	Carol Rooney	Consultant Geologist	504-835-1909	
2008(a)	James Cearley III	Chevron	832-854-2655	<a href="mailto:james.cearley@chevron.com">james.cearley@chevron.com</a>
2008(a)	Arthur T. Cerniglia	CIG Exploration	504-780-0097	<a href="mailto:cigexploration@yahoo.com">cigexploration@yahoo.com</a>
2009	David E. Balcer	Chevron	504-592-6725	<a href="mailto:dbalcer@Chevron.com">dbalcer@Chevron.com</a>
2009	William Whiting	Consultant	504-947-8495	<a href="mailto:bootscon@aol.com">bootscon@aol.com</a>
2009(a)	Nancye Dawers	Tulane University	504-862-3200	<a href="mailto:ndawers@tulane.edu">ndawers@tulane.edu</a>
2009(a)	David Cooke	MMS	504-736-2609	<a href="mailto:david.cooke@mms.gov">david.cooke@mms.gov</a>

# DRILL BITS

## South Louisiana and Offshore Exploration and Production Activity

- On November 30, **Murphy Oil Corporation** announced that its Thunder Ridge exploration well located in Mississippi Canyon Block 737 had been temporarily plugged and abandoned. The primary objective sands were wet; a small oil accumulation was encountered in a secondary shallower objective. The exploration well and subsequent sidetrack were drilled in ~6,100 feet of water. Post-drilling analysis will continue to determine if the resource found can be commercially viable as a tie-back to another facility. Thunder Ridge is close to Murphy's recently sanctioned Thunder Hawk development that will include a stand-alone semi-submersible floating production unit. Interests are Murphy 37.5% and operator, Dominion Exploration & Production, Inc. 25%, Hydro Gulf of Mexico, L.L.C., 25%, and Marubeni Offshore Production (USA) Inc. 12.5%. Pre-drill reserve estimates for the prospect were 100-200 MMBOE.

- Also on November 30, **McMoRan Exploration Co.** updated its exploration and development activities. The Zigler Canal exploratory well onshore in Vermilion Parish, Louisiana, spudded on June 17, 2006, was sidetracked to a TVD of 13,635 feet (14,792 feet MD). LWD logs indicated a potential 30 net feet of hydrocarbon bearing sands over a 125 foot gross interval. Production is expected to begin in the first quarter of 2007. McMoRan has a 50% WI.

In St. Mary Parish, the Laphroaig exploratory well (spudded on April 8, 2006) was also sidetracked and was being drilled below 17,600 feet TVD (18,500 feet MD) to a planned TVD of 18,200 feet (MD 19,300 feet). McMoRan has a 37.5% WI.

The Marlin exploratory well at Grand Isle Block 18 was spudded October 25, 2006, and was being drilled below 10,300 feet TVD to a PTVD of 16,000 feet (17,100 MD). The prospect is located in 55 feet of water, 7.5 miles offshore Louisiana in an area where McMoRan has rights to 17,700 gross acres. McMoRan has a 26% WI.

The Hurricane Deep well at South Marsh Island Block 217 (spudded October 26, 2006) was being drilled below 10,100 feet to a PTVD of 21,250 feet. The prospect is in twelve feet of water in OCS 310, one mile northeast of the Hurricane discovery well which is currently producing. McMoRan controls 7,700 gross acres in this area, with a 25% WI.

A rig is on location to test the Blueberry Hill well at Louisiana State Lease 340. As previously reported, the Blueberry Hill well encountered four potentially productive hydrocarbon bearing sands below 22,200 feet. McMoRan has a 35.3% WI in the prospect. Information obtained from testing of the Blueberry Hill well will be incorporated in future plans for the JB Mountain Deep well, as both areas demonstrate similar geologic settings and are targeting deep Miocene sands equivalent in age.

McMoRan also announced that it had entered into an exploration agreement with **Plains Exploration & Production Company (PXP)** whereby PXP will participate in up to nine of McMoRan's Miocene exploratory prospects in 2007 for approximately 60 percent of McMoRan's interest. Under the agreement, PXP paid McMoRan \$20 million for leasehold interests and associated prospects. PXP currently is participating in the drilling of the Marlin prospect at Grand Isle Block 18 and the Hurricane Deep prospect at South Marsh Island Block 217.

The spending commitments under McMoRan's exploration venture with a private partner have been met, and McMoRan has agreed to an \$8 million reimbursement for certain exploration rights.

- On December 6, at **Norsk Hydro's** Capital Markets Day, Tore Torvund (Hydro's executive vice president of oil and energy) said that disappointing output from Hydro's recently purchased portfolio of Spinnaker properties was the primary cause of an output cut in 2006 to 20,000 BOE/D from earlier estimates of 30,000 BOE/D for Hydro's Gulf of Mexico properties. Torvund cited production cuts at the Front Runner field complex (GC 338, 339, and 382) in ~3,500 feet, whose ownership includes Murphy 37.5% and operator, Dominion 37.5%, and Hydro 25%, as "the main reason we're lagging behind." He went on to add that "There are definitely problems at Front Runner. Output is much lower than we anticipated (this time) last year," due to the complexity of the reservoir. In 2002 Murphy estimated the resources for Front Runner and Front Runner South at 120-150 MMBOE and 60+ MMBOE respectively. Murphy, Dominion, and Spinnaker announced the discovery of Front Runner in March 2001 stating that "the exploratory well testing its deepwater "Front Runner" prospect in Green Canyon Block 338 encountered in excess of 850 feet true vertical thickness of pay." Production at the Front Runner complex is through a truss spar facility with design capacity of 60,000 BO/D and 110 MMCFG/D located in 3,300 feet of water. The field began production in December 2004. As of 30 September 2006, five of

the eight production wells were on-line, while the other three were shut-in. Production from the Front Runner field for the first nine months of 2006 was 20,250 barrels per day (Hydro's share 5,063 barrels per day), significantly below Hydro's planned production for this period. Hydro has developed an internal project team to improve production from Front Runner, by increasing drainage points and employing alternative well completion strategies, Torvund said. Hydro acquired Spinnaker Exploration and its oil and gas portfolio in a \$2.45 billion deal in 2005. Assets secured under the deal included Front Runner, Spiderman, San Jacinto, Q and Thunder Hawk.

- **Devon Energy Corporation and Anadarko** on 11 December announced an oil discovery at the Mission Deep prospect on Green Canyon (GC) Block 955. The well encountered more than 250 feet of net oil pay in the primary middle Miocene objective. The well, in ~7,300 feet of water, was drilled to a total depth of ~25,000 feet. Future plans include deepening the well to a secondary objective and drilling a sidetrack well to further delineate the extent of the reservoir. Devon has a 50% WI in Mission Deep having paid 100% of the well cost pursuant to the terms of a joint venture agreement entered into with Kerr-McGee Corporation prior to its acquisition by Anadarko. Mission Deep is the final well subject to the joint venture. Anadarko Petroleum 50% is the operator. Pre-drill resource assessments ranged from 80-250 MMBOE. Mission Deep is a 3-way sub-salt structural trap. Kerr-McGee interpreted that Mission Deep and Big Foot (WR 29 and 30) are on the northeast and southwest sides of the same salt body. The block was acquired in Sale 169 in 1998 by Statoil and Sun (each 50%) for a bonus of \$28,005,120. Eleven bids totaling \$90,513,881 were made on the tract.
- **Petrobras** announced on 11-December that it had received MMS approval for its Conceptual Plan for the subsea development of Cascade and Chinook fields in Walker Ridge (see Drill Bits&&&). This is the first approval at this level of a plan that includes the deployment of a floating production, storage and offloading (FPSO) system in the Gulf of Mexico. Petrobras, one of the world's leaders in deepwater oil exploration, currently uses 15 FPSO facilities, mostly converted tankers, offshore Brazil, with another 9 under construction for deployment in that area.

Petrobras has proposed the use of six technologies new to the GoM, including a disconnectable turret buoy allowing the FPSO to move offsite during hurricanes and severe weather, crude transportation via shuttle tanker, free-standing hybrid risers, subsea electric submersible pumps, torpedo pile vertical loaded anchors and polyester mooring systems. The plan consists of the installation and operation of a FPSO vessel in ~ 8,200 feet of water. The plan provides for at least two subsea wells at Cascade and one at Chinook, each drilled to an approximate depth of 27,000 feet and tied back to the FPSO. Based on reservoir performance, the development plan could be expanded to include additional wells on each unit. More detailed engineering studies will now be carried out; including the preparation of the Deepwater Operations Plan that will include all technical details demonstrating that these technologies will meet or exceed the current requirements for operations in the Gulf of Mexico. Petrobras is the operator of the Cascade and Chinook Units owning 50% and 66.67% respectively. Devon Energy Corporation owns the remaining 50% of Cascade Unit and TOTAL E&P USA, Inc, a subsidiary of TOTAL SA, owns 33.33% of Chinook Unit.

FPSOs are an appealing concept in the GoM because of the facility destruction by hurricanes Ivan, Katrina and Rita. As repeatedly done in cyclone-prone areas offshore Western Australia, FPSOs can be disconnected and moved offsite in the event of severe weather events with no damage to the facilities, and relatively minimal downtime. In several cases; e.g., Jabiru, the time offsite can be used for FPSO maintenance or refurbishment.
- **Anadarko** continues selling properties to reduce debt incurred with its purchase of Kerr-McGee and Western Gas Resources. The company announced on 12-December that it will sell off additional oil-field assets valued at up to \$9 billion and may create a separate partnership for its pipeline holdings as part of a sweeping plan to raise cash to pay down debts. Among the properties going on the block are projects in northern Louisiana, West Texas, in the northern Rockies, and Venezuela. It will also sell up to a 25% interest in its K2 Complex of fields that cover parts of Green Canyon Blocks 518, 561, 562, 563, 605, 606, and 607. The divestitures could generate between \$5 billion and \$9 billion after taxes, while a new master limited partnership, which would issue stock and buy the firm's pipeline assets, could add another \$1.3 billion to company coffers for debt reduction, Anadarko said. With the additional asset sales outlined, Anadarko is well on its way to reducing its \$26 billion debt by \$15 billion. The company also expects to take a one-time charge of between \$160 million and \$200 million in the fourth quarter for an unspecified number of job reductions across the company, although many of the job cuts will be tied to the sales of Anadarko assets, a company spokesman said. In those cases, employees may retain work with the business units that will be sold.
- **The US Department of the Interior** announced on December 14 that five Gulf of Mexico producers had signed agreements agreeing to pay royalties on their 1998 and 1999 deepwater leases that were originally issued without price thresholds. BP PLC, ConocoPhillips, Marathon Oil Corp., Shell Oil Co., and Houston independent Walter Oil & Gas Corp. signed agreements under which they will pay royalties for production from Oct. 1, 2006 onward, said C. Stephen Allred, DOI assistant secretary for land and minerals management. "While these agreements we signed today are a step in the right direction, we look forward to continuing to work with Congress on this issue," Allred said. "We appreciate and commend these companies for voluntarily signing these lease amendments. We encourage the remaining companies that have not yet agreed to sign to join us in resolving this issue."

-- continued on the following page --

Leases issued under the Deepwater Royalty Relief Act of 1995 included an incentive suspending royalties until a specific amount was produced to encourage producers to explore in areas where costs were high. The incentive did not apply if prices reached a certain level in most years, but was apparently accidentally omitted for leases issued during 1998-99.

Members of Congress demanded that the US Minerals Management Service move aggressively to correct the error when it was discovered early this year and recover revenues that were lost due to the oversight, but some lessees argued that being forced to renegotiate would violate contract law. After consulting with DOI lawyers, MMS Director Johnnie Burton asked holders of the 1998 and 1999 leases to renegotiate terms voluntarily.

US House members came within two votes of amending the Senate's Outer Continental Shelf leasing reform bill on Dec. 8 and inserting language which would have required holders of the 1998 and 1999 deepwater leases to renegotiate if they expected to bid on future federal OCS tracts. While the vote fell short and the OCS bill passed both the House and Senate, it clearly signaled that deepwater royalty lease renegotiation was a major issue with lawmakers. Given the intense media storm surrounding the issue of the absent price thresholds, potential pressure from the upcoming US Congress, or opting to settle the matter in the courts, the signing companies took the path of least resistance.

In a September 14 written statement of Ms. Lynn Scarlett, Deputy Secretary of the Department of the Interior and Ms. Johnnie Burton, Director Minerals Management Service before the Committee on Government of the US House of Representatives; it was stated that "On June 30, 2006, MMS Director Burton sent letters to all 55 companies that own interests in these leases, inviting each of them to come in and talk to MMS to see if we can reach a mutual agreement that would resolve the price threshold problem. Approximately 20 of the recipients responded to the letter. To date, approximately half of those have met or have scheduled meetings with Departmental representatives. Overall there were 1,032 deep water leases issued in 98-99. Our most recent data indicates that approximately 17 of these leases are currently producing; approximately 27 leases have indications of discovery that are not yet producing; over 500 leases are still active with no indications of discovery at this time, and over 450 leases have been relinquished or have expired at the end of their lease term... As a result of our early discussions and, in preparation for follow-up meetings and further initial meetings with more lessees, we have developed proposed terms. We believe that a voluntary negotiation process is a fair and appropriate way to resolve the price threshold problem for the 1998 and 1999 leases and is consistent with the overall objectives of the Act."

Just to summarize, as of mid-December, only 5 of 55 leaseholders have signed agreements to pay royalties on leases granted in 1998 and 1999 that lacked a price threshold. Significantly, Anadarko (purchaser of Kerr-McGee who filed a lawsuit against the government regarding deepwater royalties) and has since put a hold on the lawsuit, stating that mediation would take place, was not one of the initial signing companies.

- On 18-December, the Board of Directors of **Hydro** and **Statoil** agreed to recommend to their shareholders a merger of Hydro's oil and gas activities with Statoil, creating the world's largest offshore operator with a strengthened platform for future growth. The cost to Statoil will be ~\$30 billion. In 2007, the combined company would have production of 1.9 MMBOE/D, and estimated proven oil and gas reserves of 6.3 billion BOE. Both companies are Norwegian-based and have been recently active in the GoM. Hydro had recently expressed disappointment with its purchase of Spinnaker (noted above). Statoil has made the GoM one of the core areas in its global E&P portfolio. Hydro would continue as a global aluminum company. The Norwegian government would hold ~62.5% of the merged entity, with Hydro and Statoil shareholders holding 32.7% and 67.3% respectively of the open market shares in new company. The proposed merger is subject to approval by the general meetings of the two companies as well as by regulatory authorities. The general meetings are expected to be held during the second quarter of 2007. Final closing is expected to be in the third quarter. In the meantime, Hydro and Statoil will be managed as separate companies.

A new name for the merged company, which would be based in Stavanger, Norway (Statoil's current headquarters), will be selected as part of the integration process. "Both Hydro and Statoil have developed competence and technologies acknowledged to be among the best in the global energy industry," said Jan Reinås and Jannik Lindbæk, chairmen of Hydro and Statoil, respectively, in a joint statement. "By combining forces, the new company will be a highly competent and financially strong Norwegian-based energy champion, well positioned to ensure continued domestic excellence and pursue international business opportunities for long-term growth. The industry faces an increasingly challenging international landscape. To merge now makes perfect sense." The companies' boards have proposed that Eivind Reiten become chairman of the board of the new company, while Helge Lund is proposed as president and chief executive officer. Reiten currently is president and chief executive officer of Hydro; Lund is president and chief executive officer of Statoil.

- Making good on the statement of Ole Johan Lydersen, Statoil's vice president strategy international E&P, in September, "We are not stopping our expansion there (with the purchase of interests in the U.S. GoM from Plains E & P for \$700 million). We will do more acquisitions ... and build a significant position in the Gulf of Mexico." Statoil announced on 6-November that it agreed to buy offshore oil field assets in the U.S. Gulf of Mexico from Anadarko Petroleum Corp. for \$901 million. Stavanger-based Statoil, with a GoM focused office in Houston, said the agreement covers two oil discoveries and one prospect in the Gulf. "This deal is an excellent strategic fit with our deep water (Gulf of Mexico) portfolio," said Statoil's President and Chief Executive Helge Lund. "We have used an assumption slightly above the \$30-35 price band," Statoil spokeswoman Rannveig Stangeland said. "But we see this transaction as robust."

*Paul Post*

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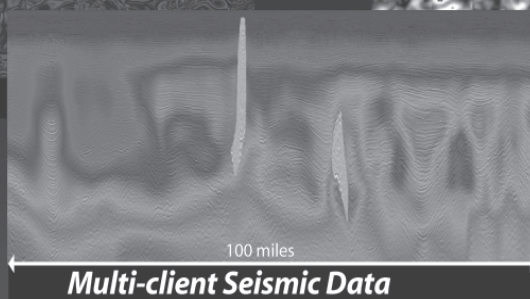
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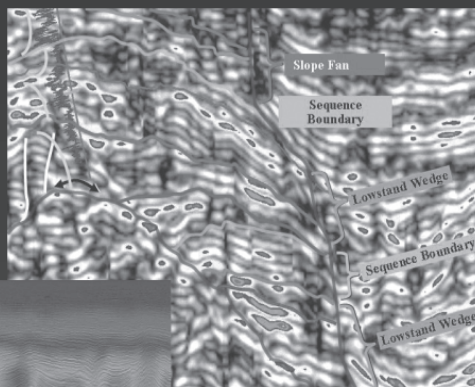
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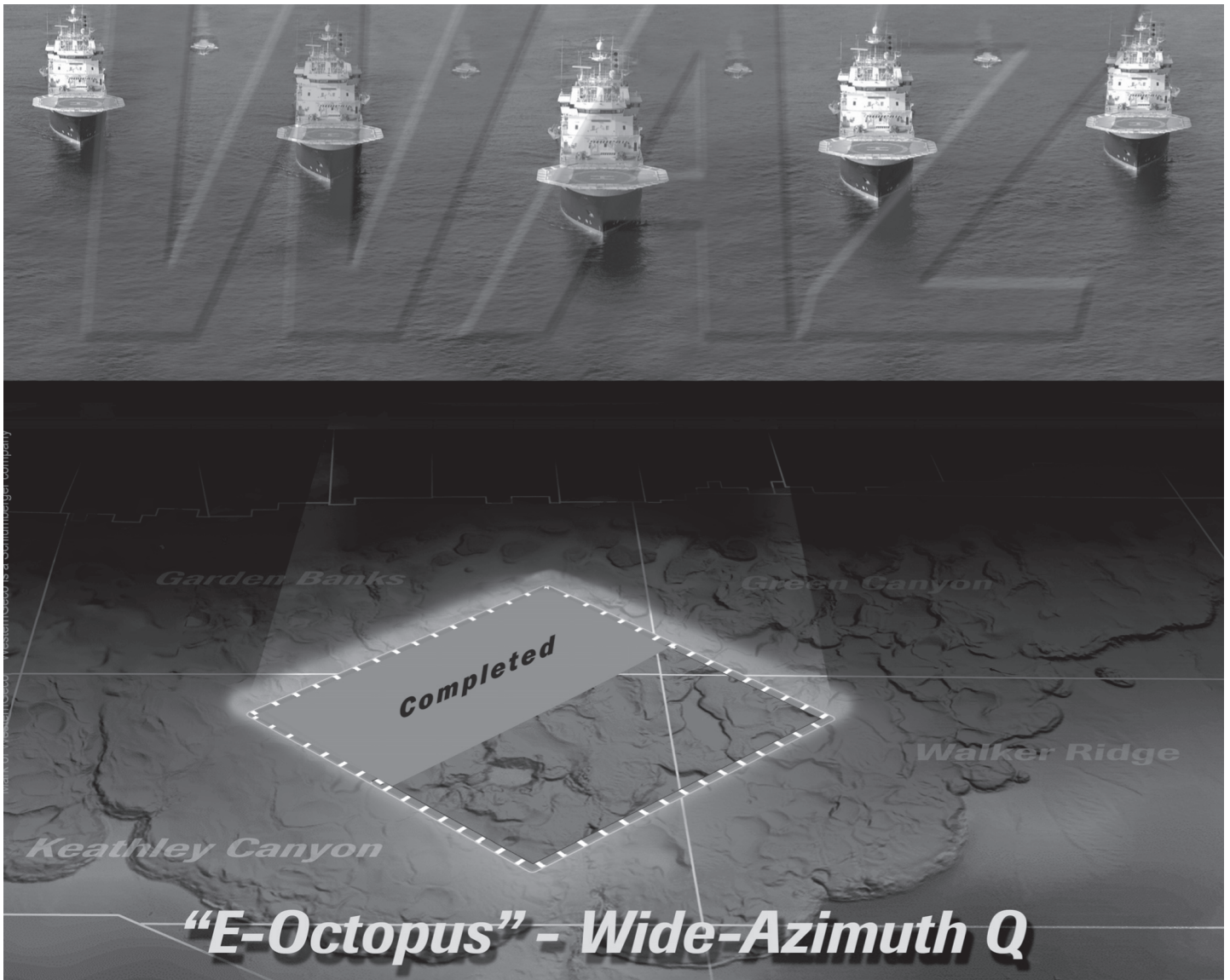
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## NOGS Wine and Cheese Party

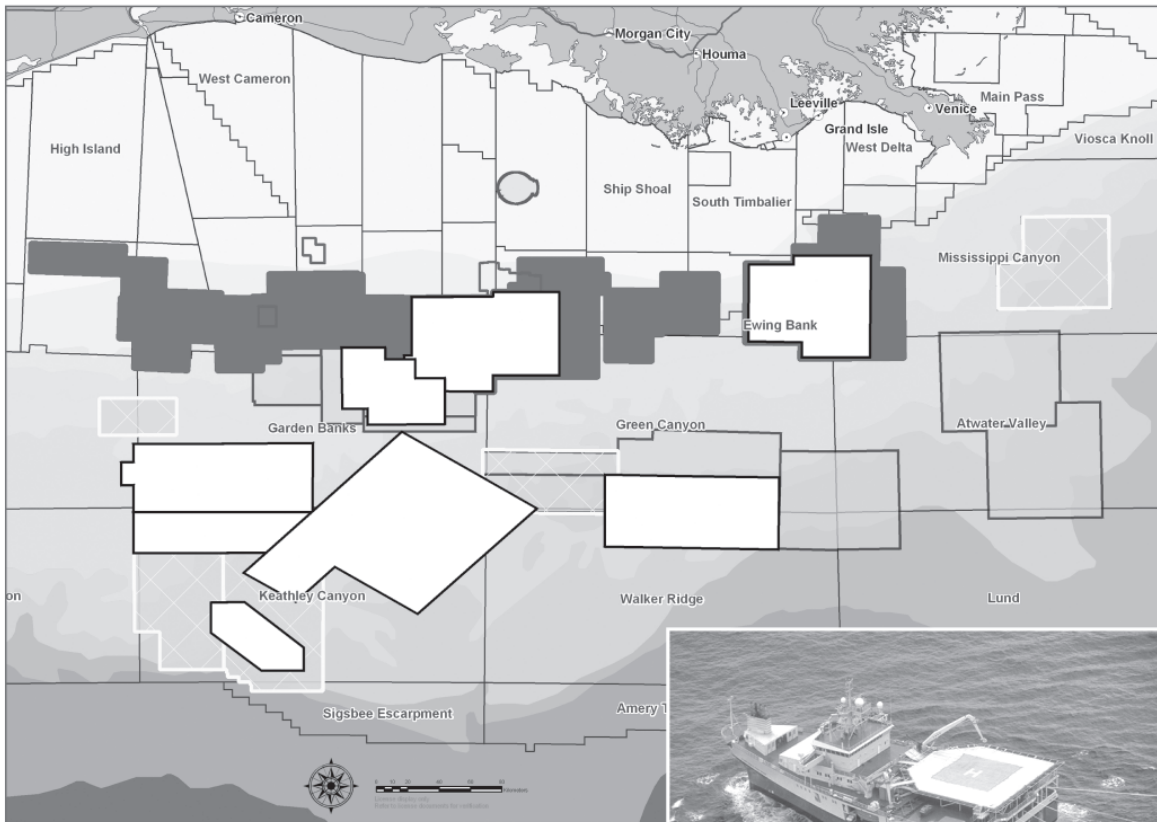
Saturday, April 21  
4:00-6:00 pm

(Our first dual location social event)  
On the North Shore:  
Cru Wine Boutique Cellar, Mandeville  
On the South Shore:  
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### Map Legend

- PreSDM Full Volume
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