

Volume 53, Number 12

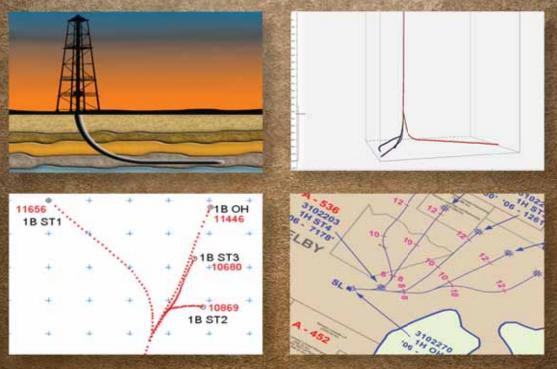
JUNE 3 - NOGS LUNCHEON

Presentation: Hydrocarbon Migration: What We Know, What We Don't Know and Why It Is Important

Guest Speaker: **Barry Katz** Chevron Energy Technology Co. Houston, Texas



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on the cover:

Cover Photo Submitted by: Bill Hintze, NOGS President (1965-66)

The Treasury - Petra, Jordan

It will require a three mile hike down a 1000 foot deep slot canyon cut into 500 million-year-old gritty sandstone to view Petra's "Treasury." This facade, carved from top to bottom, was used for burial rites in a city that flourished on caravan trade during the first century B.C. It is believed that the monument received its name from the Bedouins who thought that treasure was hidden in the giant stone urns carved on the second level of the temple.

The Nabataeans carved the Treasury and the other temples of Petra from Nubian Sandstone. They also harnessed the power of water with a system of dams, cisterns, and water channels which prevented erosion and provided them with water for irrigation.

Careful examination of the picture's lowest part will reveal walking tourists, by which to judge the impressive size of the carvings.

> For an interesting article about the erosion of Petra, see www.agiweb.org/geotimes/june04/feature_petra.html.

From the Editor

Hello fellow NOGS members! It is a privilege to be your new editor of the NOGS LOG for the coming year. I have taken over the duties as acting editor a little earlier than usual since Jordan Heltz and his wife, Katherine, welcomed their newest little girl into their family on May 10th.

I want to congratulate Jordan Heltz and Kristee Brown; for it is through their hard-work and collaboration which produced such an exceptional, full-color volume of the NOGS LOG for the 2012-2013 year.

I strive to work hard and to continue the tradition of generating an outstanding edition of NOGS LOG. I will continue to work closely with Annette Hudson, the NOGS Staff, NOGS Board, and NOGA to provide you with timely and informative articles about the activities and members of the Society. Remember that you can be a part of the success of this publication as well. Please send in your comments, suggestions, and news items that you want to share. In addition, all NOGS members are invited to e-mail me their geological pictures, whether they are vacation, field-work or industry related, for a spot on a LOG cover.

> Thanks. Sheri Richardson - NOGS LOG Editor

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From the President

Nothing is more valuable to one's development than personal experience. As president of NOGS for the 2012–2013 fiscal year, I have grown more sympathetic about the requirements necessary to maintain and grow an organization of such magnitude. Thankfully our membership is engaged to the point where, whenever help is needed or wanted, support is readily available from past presidents and senior members. Therefore, if you have contemplated volunteering either as a board member or committee person, I would highly

recommend it. The people you meet along the way will undoubtedly accelerate your progress to becoming a genuine leader. I would like to send a sincere and heartfelt "Thank you" to you all for offering advice and direction throughout the year.

I believe progress was made in the realms of diversity and inclusiveness, which will be paramount to the longevity of this organization. As large oil companies have ventured out of New Orleans, I see a growing population of environmental and engineering geoscience professionals filling the membership gap. It is not a matter of diminished earth sciences students at universities, for a trend of increasing enrollment is quite evident. If we continue our track of inclusiveness, and enjoy the variety of disciplines contained within geology, I know this society has the potential to grow to pre-1990s levels.

From a full-color *NOGS LOG* to a NOGS Facebook page to up-to-date photos on our website, we have all the tools necessary to reach out to the population. In addition, each month Ed Picou publishes an advertisement in the *Times-Picayune* with information of our monthly luncheons. These tools are available, they are relatively simple to manage, and they have proven effective.

To the 2013-2014 Board Members: For my departure, I will share this proverb that a very wise and distinguished gentleman advised me at the commencement of my presidency: "Never let a camel stick his nose in your tent, for his hump and rump are soon to follow." Accept advice from others, but keep control of the situation. You have been elected because we believe in your ability to lead NOGS into the future, so do what you believe is best for the organization.

God bless those heroes who gave the ultimate sacrifice so that we are able to live the lives we lead and exercise the freedoms we enjoy. Happy Memorial Day!

Thank you all for allowing me to be President of NOGS this past year.

Happy trails to you, and I hope to continue seeing everyone at our monthly luncheons.

NOGS Office

Office Manager: Annette Hudson

Phone: 504-561-8980 • Email: info@nogs.org • Website: www.nogs.org The office is located at 810 Union Street, Suite 300, New Orleans, LA 70112. Correspondence and all luncheon reservations should be sent to the above address.



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Hydrocarbon Migration: What We Know, What We Don't Know and Why It Is Important

Guest Speaker:

Barry Jay Katz

Chevron Energy Technology Company – Houston, Texas See page 9 for Abstract and Biography

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August 21-22 17th Annual Deepwater Symposium and Exhibition Hilton New Orleans Riverside • New Orleans, LA For more information, www.deepwaternola.org

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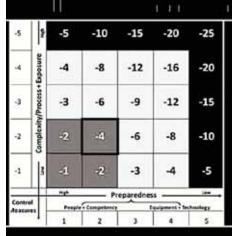
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June 3 NOGS Luncheon Presentation

 $\checkmark \checkmark \checkmark$ at the Holiday Inn Superdome $\checkmark \checkmark \checkmark$



Hydrocarbon Migration:

What We Know, What We Don't Know and Why It Is Important



Presented by

Barry Jay Katz Chevron Energy Technology Company Houston, Texas

ABSTRACT

Hydrocarbon migration remains one of the least understood aspects of petroleum systems, yet an understanding of the process remains important when assessing both conventional and unconventional resources. There are effectively three phases of migration that should be considered during any assessment: primary migration or expulsion; secondary migration from source to reservoir; and tertiary migration between reservoirs or remigration.

The mechanisms of expulsion remain an enigma. The mechanisms for oil and gas expulsion appear to differ, which explains the often cited differences between oil and gas source rock geochemical thresholds and why large volumes of organic-lean rocks cannot substitute for lesser volumes of organic-rich rocks. Lean rocks cannot reach sufficient oil saturation levels for expulsion to occur. It has also been suggested that although the generation process is continuous, expulsion may not be. Expulsion may be represented by cycling of pressure build-ups due to hydrocarbon generation, fracturing of the rock, expulsion of hydrocarbon and the associated release of pressure, and the healing of the fracture. The overall efficiency of the expulsion process remains controversial. Rather high expulsion efficiency factors have been cited, but appear somewhat inconsistent with the growing understanding of the unconventional resource base. It appears that reported elevated expulsion efficiency values actually reflect the movement of hydrocarbons out of kerogen and not the source rock. The efficiency of hydrocarbon movement out of the rock is much more limited and is potentially controlled by fine-scale stratigraphy. Expulsion occurs at the interface between the source and the carrier or micro-reservoir. The greater the contact surface area the more efficient expulsion appears. The importance of these carriers is clearly seen in the Waltman Shale (Wind River basin), where liquids have been retained in the shale within the generative (thermally mature) portion of the basin, where carrier beds are lacking. The retention of generated products, in general, also raises questions concerning approaches used when establishing oil-source rock correlations. The retained oil and that expelled differ at both the bulk and molecular level. Furthermore, it appears that expulsion is retarded relative to the conventional views of thermal maturity associated with the oil-window, such that expelled in some petroleum systems are more mature than the o

Once out of the source rock secondary migration begins. Secondary migration is driven by buoyancy and modified by water movement and the stratigraphic/petrophysical character of the carrier system. Migration may be predominantly vertical or lateral. Vertical migration permits the development of stacked reservoirs and the stratigraphic separation between source and reservoir. Lateral migration permits the accumulation of large volumes of hydrocarbons from extensive gathering areas and geographic separation between generative basin and accumulations. Most accumulations result from a combination of lateral and vertical migration. Faults can play a role within this phase of migration acting as both conduit and seal, with some individual faults acting as both along the fault trace and through time. The modeling of secondary migration continues to improve as both geologic input and computational capabilities are advanced. Conceptually, these models suggest that in addition to the previously noted controls on secondary migration the availability of hydrocarbons can influence migration patterns.

Many petroleum systems display evidence for tertiary migration or the remobilization of hydrocarbons from a preexisting accumulation. Tertiary migration may result in the reduction of hydrocarbon volumes as well as changes in fluid character. The loss of hydrocarbons may occur through displacement or inversion, with hydrocarbons being lost in the carrier network or to "blue sky," whereas changes in fluid properties may occur through the introduction of lighter or more mature hydrocarbons into a reservoir, through migration fractionation or phase segregation associated with changes in PVT conditions.

In conclusion, although working concepts and general thoughts have evolved, much remains to be learned about hydrocarbon migration. Our own terminology often confuses the issues. Migration remains important when attempting to assess resource potential, correlate oils to their sources, and defining the effective parts of a basin. It remains clear that there are hydrocarbon losses during the three phases of migration and that a better understanding of these processes would improve the evaluation of a petroleum system.

BIOGRAPHY

Barry Katz received his B.S. in geology from Brooklyn College in 1974 and his Ph.D. from the University of Miami in 1979 in marine geology and geophysics. After receiving his doctorate he joined Texaco's Bellaire Research Center where he held numerous technical and supervisory positions. He continued with Chevron after the merger in 2001, where he has been part of Chevron's Energy Technology Company. He currently serves as a team leader for hydrocarbon charge. His work has focused on the applications of geochemistry. He has been engaged in both research and technical support activities and has worked in approximately 50 basins onshore and offshore six continents. Barry has authored more than 75 papers and has edited five books. He serves as editor and reviewer for 10 journals, including editor-in-chief of The Open Geology Journal, and as a senior associate editor of the AAPG Bulletin. Barry has been chairman of IODP's Environmental Protection and Safety Panel for the past decade. His honors include being named a Chevron Fellow and being named an Honorary AAPG Member. He served as Elected Editor for HGS and currently serves as President-Elect.

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

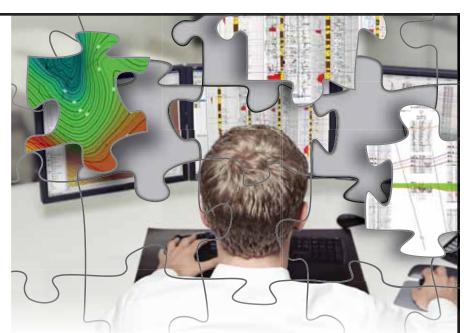
"And Looking Ahead . . . "

The next luncheon will be held on July 1st. Our guest speaker, Robert Clark of the Department of Earth and Environmental Sciences at the University of New Orleans, will present "An Evolutionary Model of a Retrograding Subdeltaic Distributary of a River-Dominated System." Contact the NOGS office at 561-8980 or use the PayPal link on the NOGS website (www.nogs.org) to make your reservation.

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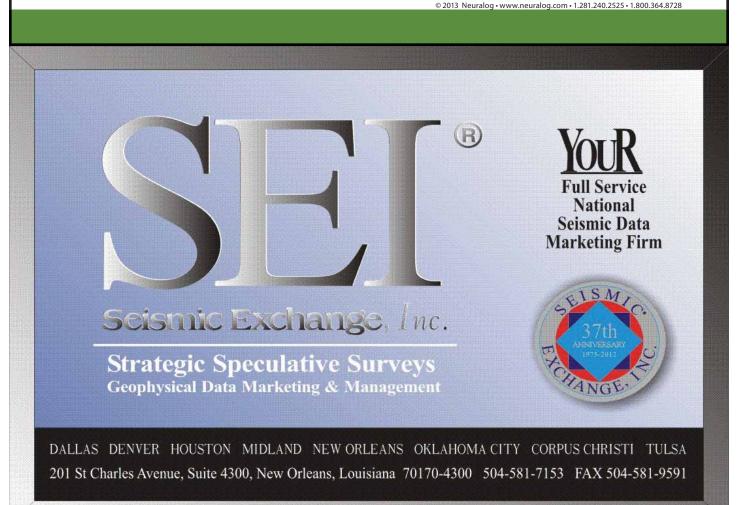
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2	3 NOGS Luncheon Holiday Inn 11:30 AM	4	5	6	7	8
9	10	11	12 NOGS Board	13	14	15
16	17	18	Meeting 19 TBA	20	21	22
		SIPES Annual Meeti	ng - Santa Fe, NM	\rightarrow		
23	24	25	26	27	28	29
30						

	July					
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 NOGS Luncheon Holiday Inn 11:30 AM	2	3	4 Independence Day	5	6
7	8	9	10	11	12	13
14	15	16	17 NOGS Board Meeting	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

New Orleans Geological Auxiliary News

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

NOGS invited the Auxiliary Board members to attend their March luncheon and program. Judy Lemarié, Camille Yeldell, Alma Dunlap and Mary Walther enjoyed lunch and a program presented by Dr. Tonja Koob and Jennifer Snape on the history of the Louisiana oil industry – beginning in 1901.

On May 8th Judy Sabaté and Pat Williamson chaired the Installation Luncheon at Zea Rotisserie and Grill on St. Charles Avenue, winding up a wonderful year.

The newly elected officers are:

President – Mary Walther • Vice President – Camille Yeldell Secretary – Beverly Christina • Treasurer – Judy Lemarié Directors 2013-2015 – Trudy Corona, Debra Fein Directors 2012-2014 – June Perret, Beverly Kastler, Linda Peirce

The Awards Committee presented the Lifetime Member Award this year to Judy Lemarié recognizing many years of devotion and outstanding service to the Auxiliary. Judy has previously won the Special Service Award and the Loyalty Award. Unfortunately Judy was unable to attend the luncheon.

The Awards Committee also presented the Loyalty Award to Beverly Kastler who has received the Special Service Award and continues her long and loyal giving to the organization.

Hopefully, we will be joined by new members for an enjoyable and informative year 2013-2014.



Judy Lemarié, Camille Yeldell, Alma Dunlap, Mary Walther

Peggy Rogers, NOGS LOG



New Officers: Mary Walther, Camille Yeldell, Beverly Christina, Debra Fein, Beverly Kastler, Linda Peirce, Judy Sabaté



Beverly Kastler and Mary Walther



Judy Lemarié



Judy Sabaté and Pat Williamson

Countdown: We are **128** days from the convention!

We are putting together the announcement brochure for the convention and registration will open in another month. We have a special "Emeritus" registration rate for those over 65. In addition to the great technical program, the short courses and field trips cover a range of Gulf Coast topics and will be a big draw. We are still lining up volunteers for on-site registration and other functions, so if you can help (even for half a day), let Bill Whiting know at Bootscon@aol.com.

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held its ann Memorial Golf Tourna at the Money Hill Golf C Louisiana. It rained like he skies cleared enough so we teams participated and everyb drink, and

First, I want to thank Steve Chris for having the course in such go day before. I also thank all the k everybody's money with a smile a work, year in and year out. Next | Baker Hughes, and Diversified for strong libations. Finally, I want to the sausage sandwich lunch, onwater, soft drinks, and beer, the a unflagging support

> Through the players and the is able to contribute more Memorial Scholarship F your support and seeing you

> > Chuck

Many Thanks to all of the

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JEMORIAL GOLF TOURNAMENT

GS

ual Bill Craig ment on April 29, 2013, Club near Abita Springs, eck the day before, but the could play a round. Eighteen ody had a good time with food, door prizes.

topher and his staff at Money Hill od shape after the rains from the betting hole volunteers for taking and Art Christensen for his camera would like to thank Weatherford, or the comfort stations with those thank Diversified Well Logging for course ice chests full of Gatorade, after-round steak dinner, and their to f the tournament.

sponsors listed below, NOGS than \$5000 to the Bill Craig und. Thank you again for we look forward to u next year.

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Golf Tournament Sponsors!

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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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South Louisiana and Offshore Gulf of Mexico Exploration and Production Activities

LAFAYETTE DISTRICT, ONSHORE AREA By Carlo C. Christina

During the month of April 46 permits to drill were issued by the Office of Conservation, Lafayette District, Onshore Area.

NEW LOCATIONS

In Allen Parish Hilcorp Energy is drilling the #1 Findley in **South Harmony Church Field**, (A), in Sec. 15, 6S-5W, to the proposed total depth of 15,000 feet. The location is ¹/₂ mile south of a well which has produced for 28 years from Upper Wilcox sands at 12,700 feet. (246249)

Midstates Petroleum continues to develop **Cowards Gully Field**, (B), in Beauregard Parish, with a horizontal Wilcox well in Sec. 8, 7S-11W. The #2 Musser-Davis 8 H will be drilled to a proposed depth of 17,000 feet in a 3379 foot lateral leg. (246236).

In Jefferson Davis Parish Endeavor Natural Gas has re-entered the #1 C. Guidry Farms in **South Jennings Field**, (C), in Sec. 28, 10S-3W. The well had been drilled by Adobe Resources in 1989 to a depth of 17,000 feet in the Bol mex section and was plugged and abandoned with no tests reported. The re-entry is located 2 miles south of current production from multiple sands from 8300 feet to 11,300 feet. (246248)

Castex Energy continues to develop the **Atchafalaya Bay Field**, (D), in St. Mary Parish, with the drilling of its #3 SL 20221 to a proposed depth of 20,000 feet. The field is currently producing from 6 high volume gas wells in multiple Middle to Lower Cib op sands. Daily production from these 6 wells is 155,000 million cubic feet of gas per day. Atchafalaya Bay Field is currently the largest gas producing field in Louisiana in the Lafayette District. (246340)

Hilcorp Energy will drill a deep test on the northeast flank of **Four League Bayou Field**, (E), in Sec. 3, 20S-13E, Terrebonne Parish. The #2 LL&E is permitted to a depth of 19,042 feet, offsetting an excellent gas well producing from 13,200 feet. (246323)

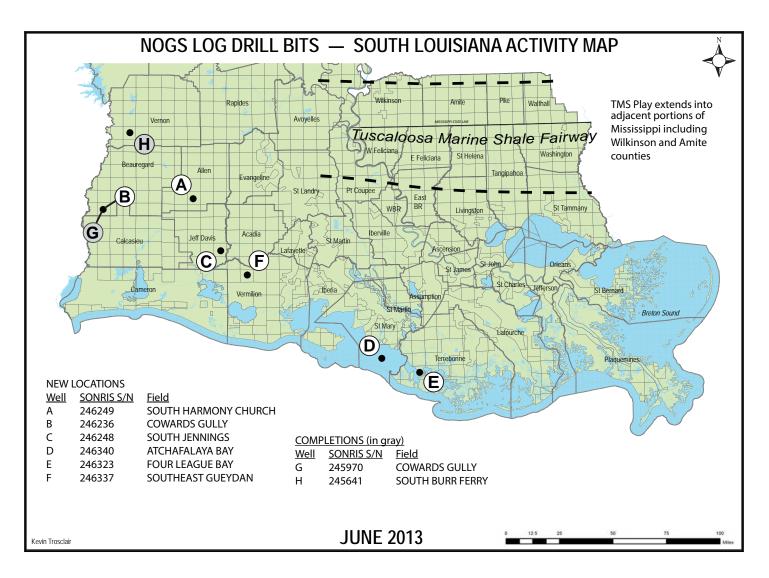
In Vermilion Parish Tecpetrol Operating has permitted its #1 Zaunbrecher Heirs in **Southeast Gueydan Field**, (F), in Sec. 20, 12S-1W. The well is located 1 mile south of production and is projected to test Miogyp sands at 17,000 feet. (246337)

COMPLETIONS

Midstates Petroleum has completed a significant horizontal well in the Upper Wilcox sands on the extreme eastern flank of **Cowards Gully Field**, (G), in Sec. 10, 7S-11W, Beauregard Parish. The #1 Wood 10 H was completed flowing 500 BOPD and 1500 MCFD through perforations 12,550 to 15,260 feet, overall. This completion is the third successful producer of the proposed 20 horizontal well inventory. Midstates is currently drilling 2 new wells in the field.

The #1 Wood 10 H was drilled and completed in only 44 days, at a depth of 15,366 feet in a lateral leg of 3065 feet. Midstates set 4 strings of casing and perforated and fracked 10 stages in a 2710 foot interval. Total completion cost was less than \$9,000,000. At its current rate of production the well will reach payout in less than 7 months. (245970)

In Vernon Parish Anadarko E&P has completed the #1 GARS 29 in **South Burr Ferry Field**, (H), in the Austin Chalk. The well was drilled in Sec. 29, 1S-10W on the east flank of the field and was completed flowing 1042 MCFD and 1042 BCPD through perforations 14,185 to 19,917 feet. (245641)



OFFSHORE GULF OF MEXICO SHELF AND DEEPWATER ACTIVITIES

by Al Baker

During April 2013, the BOEM approved **106** Gulf of Mexico drilling permits. Of these, **43** were for shelf wells, and **63** were for deepwater wells. There were **4** shelf (all development) and 4 deepwater (all exploratory) **new well permits** issued. Since the BP Macondo blowout in April 2010, the approval time for the BOEM to grant a permit has averaged **110** days, well above the 61-day average prior to that event.

On the shelf, **Arena Offshore** obtained a new well permit for their **Eugene Island 339 #K-15** well. **Hilcorp Energy** was awarded a new well permit for their **Ship Shoal 215 #L-6** well. **Stone Energy** was granted a new well permit for their **South Timbalier 111 #A-8** well. In addition, **Rooster Petroleum** received a new well permit for their **High Island A-494 #B-4** well.

In the deepwater **Walker Ridge Area**, **ConocoPhillips** received a new well permit to drill their **Block 460 #1** well, and **Statoil** was issued a new well permit for their **#1** well on **Block 970**. In **Mississippi Canyon Area**, **LLOG Exploration** was granted a new well permit for their **Block 255 #1** well. **BHP Billiton** also received a new well permit for their **Desoto Canyon 726 #1** well.

On April 26th, IHS-Petrodata reported that the Gulf of Mexico mobile offshore rig supply totaled **110**, and the contracted rig count stood at **79**. The contracted rig count is **2** more than reported last month causing the fleet utilization rate to increase to **71.8%**. This compares to 74 out of the 114 rigs available during the same period in 2012 for a 64.9% fleet utilization rate.

In addition, there were **30** platform rigs under contract out of the **53** total in the rig fleet for a fleet utilization rate of **56.6%**. The current number of platform rigs under contract in the Gulf is also 2 greater than reported last month.

On April 26th, the BakerHughes Rig Counts indicated that there were **49** active mobile offshore rigs in the Gulf, which represents **62%** of the total rigs under contract. Of these, **47** rigs are situated in **Offshore Louisiana**, and the remaining **2** are located in **Offshore Texas**. The total number increased by **4** rigs when compared to last month. This 4-rig improvement number represents an **8.9%** increase in the active mobile offshore rig fleet on a year-to-year basis; the current active rig count compares to 45 active rigs during the same period last year. Additionally, of the 30 platform rigs that are under contract, **22** (or **73.3%**) are currently working. This is **1** less than the total number of working platform rigs reported last month.

On April 4th, it was reported that **Energy XXI** had filed a development plan to produce their **Pendragon** exploration well located in the southwestern portion of **Vermilion Block 178.** The Pendragon well was reported last month to be drilling below 14,000 feet MD/12,400 feet TVD towards a proposed total depth of 20,400 feet MD/16,300 feet TVD. According to Energy XXI's development plan, they intend to install Platform "C" over the #1 discovery surface location. Production will flow 4 miles to the northwest to the existing "A" Platform on Vermilion Block 164. The Pendragon well targeted about a dozen sands between -7,000 feet and -16,000 feet on the southern flank of the **Vermilion Block 164 Salt Dome.**

On April 24th, the BOEM announced that it will hold **OCS Sale 233** on **August 28, 2013**, in New Orleans at a site to be determined. The sale will offer all unleased acreage in the **Western Gulf of Mexico**, which comprises more that 21 million acres.

As of April 25th, the BOEM had awarded leases on **68 tracts** of the **320 tracts** receiving high bids on March 20, 2013, in **OCS Sale 227** in the **Central Gulf of Mexico.** Of these, **42 tracts** were deemed acceptable in the **Phase 1** review, and the remaining **26 tracts** were deemed acceptable in the current **Phase 2** bid evaluation review. The BOEM has 90 days from the date of the sale to accept or reject the high bids.

On April 25th, **Anadarko Petroleum** announced a new deepwater oil discovery situated in the previously untested **Sigsbee Escarpment Area.** On **Block 39**, their **Phobos #1** well was drilled to a total depth of 28,675 feet in 8,500 feet of water. The well found approximately 250 net feet of high-quality oil in the Lower Tertiary Wilcox section. The well tested a significant, four-way closure that is located roughly 11 miles south of Anadarko's **Lucius Miocene** oil discovery. Lucius is currently under development and comprises a four-block unit, including Keathley Canyon 874, 875, 918 and 919. Anadarko is the operator of the Phobos discovery with a 30% working interest. Other partners include Plains Exploration & Production Co. with a 50% working interest and Exxon Mobil Corp. with a 20% working interest.

On April 30th, **LLOG Exploration** provided an operational update on its deepwater and shelf activities. First production from the fifth well in the **Who Dat Field** on **Mississippi Canyon 503**, **504**, **546** and **547** was initiated on April 12th, bringing the total field production to **28,000 BOPD** and **58 MMCFD**. On **Mississippi Canyon 255**, drilling activities on the **#1** well are currently underway. This well is considered a development well resulting from the **Marmalard** discovery announced in August 2012. The Marmalard discovery well was drilled in **Mississippi Canyon 300** to a total depth of 18,100 feet, finding two, oil-bearing zones. It is one of several discoveries that will be tied into the **Delta House Floating Production System** that is under construction and scheduled to begin operations in 2015. On the shelf, LLOG drilled the **South Timbalier 231 #1** well (**Powerball South**) to a total depth of 18,915 feet and found over 90 net feet of gas/condensate pay. Facilities are currently under construction to bring the well on line during the 3rd quarter of 2014. In addition, another well is planned for later in the year.

On April 30th, Cobalt International Energy also provided an operational update of its deepwater Gulf of Mexico activities. In **Green Canyon 896**, Cobalt is continuing its drilling operations of their **Ardennes #1** well. The well is targeting both Miocene and Lower Tertiary reservoirs and is expected to reach total depth in mid-2013.

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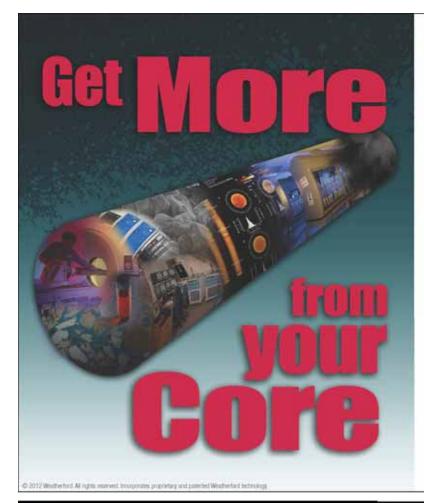
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May 2013 Luncheon

2013 Region 9 Greater New Orleans Science and Engineering Fair Winner Lauren Barré

NOGS welcomed Senior Division First Place Award Winner Lauren Barré and her teacher, Elizabeth Harney, of Ursuline Academy to the May 6th NOGS luncheon.

Lauren displayed her project in which she simulated a closed well bore drilling system and studied *"Annular Velocity vs. Slip Velocity."*

and her teacher, Elizabeth Harney, of Ursuline Academy



Congratulations!

AAPG recently announced election results for GCAGS representatives. Bill Whiting of NOGS was elected and will join Martha Lou Broussard of the HGS, who is already serving on the Advisory Council. The Gulf Coast Association of Geological Societies, the largest regional section of AAPG, is entitled to two representatives on the Advisory Council.



Bill continues his service to AAPG by being a Delegate in the House of Delegates and faithfully attends annual AAPG conventions. With his new position on the Advisory Council, NOGS will have a strong representative to support our Society's interests.

First place winner Lauren Barré

Whiting has been a dedicated member of NOGS for years, having served as President in 2008-2009 and on many committees. He is currently on the NOGS Memorial Foundation Board and a candidate for Director. Bill has and continues to serve NOGS in many ways. He helped move the office to its present location, checks monthly investment reports of the Memorial Foundation and counsels the Board on investment strategies. For many years he has volunteered to judge at annual high school Science Fairs. Additionally, Bill assists Annette on NOGS

luncheon days by transporting materials back to the NOGS office. Being the dedicated volunteer he is, Bill is Registration Chairman and responsible for coordinating volunteers for the October GCAGS Convention and he also underwrote the expense for the convention's logo T-shirts.

Bill is a native of Albion, Michigan, where he owns a historic home, named "Gale House," which was built in 1862. He holds two degrees in geology from Michigan State University and continues his strong interest in oil and gas activities in the Michigan Basin. Bill retired from Chevron Oil Corporation in 1990 after a 27-year career.

INFOTIDBITS

Info Tidbits: Submitted by Sheri Richardson

BOEM and USGS – Jessica Robertson, Jenny Hakun, Connie Gillette *"New Insight on Gas Hydrates in Gulf of Mexico"* May 14, 2013

http://www.boem.gov/BOEM-Newsroom/Press-Releases/2013/press05142013.aspx

Scientists have returned from a 15 day research expedition in the northern Gulf of Mexico with the best high-resolution seismic data and imagery ever obtained of sediments with high gas hydrate saturations.

Gas hydrates are ice-like substances formed when certain gases combine with water at specific pressures and temperatures. Deposits of gas hydrates are widespread in marine sediments beneath the ocean floor and in sediments within and beneath permafrost areas, where pressure-temperature conditions keep the gas trapped in the hydrate structure. Methane is the gas most often trapped in these deposits, making gas hydrates a potentially significant source for natural gas around the world.

"This expedition represents a significant milestone," said USGS Energy Resources Program Coordinator Brenda Pierce. "The data and imagery provide insight into the entire petroleum system at each location, including the source of gas, the migration pathways for the gas, the distribution of hydrate-bearing sediments, and the traps that hold the hydrate and free gas in place. The USGS has a globally recognized research effort studying gas hydrates in settings around the world, and this project combines our unique expertise with that of other agencies to advance research on this potential future energy resource."

"The high-resolution nature of the data acquired through this interagency project will uniquely inform the BOEM effort to assess the resource potential of gas hydrates on the U.S. Outer Continental Shelf," said Renee Orr, Chief, Strategic Resources Office, BOEM.

ExxonMobil – Press Release

"ExxonMobil to Develop Julia Oil Field in the Gulf of Mexico" May 7, 2013

http://news.exxonmobil.com/press-release/exxonmobil-develop-julia-oil-field-gulf-mexico

Exxon Mobil Corporation is commencing development of the Julia oil field in the Gulf of Mexico.

Capital cost for the project, which is expected to begin oil production in 2016, is estimated to be more than \$4 billion. The field was discovered in 2007 and is estimated to have nearly six billion barrels of resource in place.

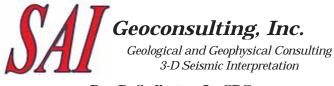
"The development of Julia will provide a new source of domestic energy and well-paying jobs over the next several years," said Neil W. Duffin, president of ExxonMobil Development Company. "Access to resources such as Julia will contribute to U.S. energy security for many years to come."

The initial development phase is being designed for daily production of 34,000 barrels of oil and includes six wells with subsea tie-backs to the Jack & St. Malo production facility operated by Chevron U.S.A. Inc. Julia project front end engineering design has been completed and the engineering, procurement and construction contracts have been placed.

"Julia is one of the first large oil discoveries in the ultra-deepwater frontier of the Gulf of Mexico," said Duffin. "This resource is located more than 30,000 feet below the ocean's surface. Enhanced technologies will be deployed to ensure the safe and environmentally responsible development of this important energy resource."

The Julia field comprises five leases in the ultra-deepwater Walker Ridge area of the Gulf of Mexico, 265 miles southwest of New Orleans. The blocks are WR-584, WR-627, WR-628, WR-540 and WR-583.

ExxonMobil, the operator, and Statoil Gulf of Mexico LLC each hold a 50 percent interest in the Julia unit.



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