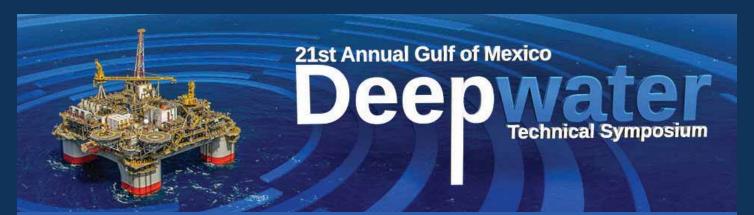


Volume 58, Number 1 LEANS GE **JULY 10 - NOGS LUNCHEON** Presentation: The Challenge(s) of Surface-Geologic Mapping in Louisiana

Presentation: The Challenge(s) of Surface-Geologic Mapping in Louisiana
Guest Speaker: Richard P. McCulloh
Louisiana State University • Baton Rouge, Louisiana



GEOSCIENCE OPENING SEMINAR

August 21, 2017

"Exploring the Deep Water Gulf of Mexico Petroleum Systems"

JOHN DRIBUS

Global Exploration Advisor Schlumberger



To place the exploration geology of the deep water petroleum systems of the Gulf of Mexico into proper global context, this one day short course begins with a look at the transformation of global deep water exploration during the recent "lower and longer" oil price crash. Exploration activities have mostly switched emphasis from frontier exploration in untested or sparsely drilled basins to areas of known "commercial possible" discovery corridors, and to backyard exploration for deeper pools or for adjacent structures or stratigraphic traps within tieback range.

Then we will look at the three key northern Gulf of Mexico conventional deep water plays in the Jurassic (Norphlet Aeolian sandstone), Eocene/ Paleocene/ Oligocene (Whopper, Wilcox, and Frio Formations), and subsalt Miocene/ Pliocene. Our focus will begin with a sequence stratigraphic perspective that looks at the sediments expected to be deposited in the slope and deep water basin plain during High Stands such as condensed section marine mudstones, Falling Stage including mud-rich mass transport deposits), and Low Stand depositional sequences such as basin floor fan and channel levee deposits.

Then we will discuss the critical factors in the deep water Gulf of Mexico Petroleum Systems beginning with forming the basin (global evolution and sources rocks), subsequent filling of the basin (carbonate and clastic reservoirs and seals), and migration through the overburden to the conventional reservoirs. This petroleum systems section of the class will conclude with a look at the deformation of the basin to create both structural and stratigraphic traps for hydrocarbon accumulation.

We will then turn to some interesting important auxiliary issues such as petrophysical considerations of pressure and diagenesis, and then review some aspects of the "Funny Looking Things" (FLT's and DHI's) that characterize many of the shallow prospects in the area, and then examine some of the challenges of drilling for the petroleum prize through the geohazards at the sea floor and around salt that are often in the way of the petroleum accumulations we seek.

Time permitting, we will conclude with a discussion of how we can utilize seismic data to help understand critical geologic risks of the turbidite play.

www.deepwaternola.org



Published monthly by the New Orleans Geological Society. This issue was sent to press on July 1, 2017.

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

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on the cover

Cover Photo Submitted by Laura Sorey

McKinney Falls State Park — Austin, Texas

As any University of Texas alumni will inform you (whether you ask them or not), popular swimming holes can be found within and without the city of Austin, TX. One of the spots prized by these aquatically minded Longhorns can be found at McKinney Falls State Park and is the subject of the month's cover. Cretaceous aged limestone constitutes most of the bedrock in Austin area and is responsible for the karstic features that make the swimming holes so appealing. However, McKinney Falls stand apart from this category due to the role of volcanic activity in their formation. Pilot's Knob, a shallow submarine volcano, began to form during the Cretaceous while limestone continued to be deposited in the region. As a result, the iron-rich montmorillonite of ash ejected from Pilot's Knob was sandwiched between beds of the McKown Formation limestone. Uplift, tilting, and the erosive power of Onion Creek led to the formation of the upper and lower McKinney Falls where the less stable pyroclastic clay is easily eroded while the more resistant overlying limestone forms the lip of the waterfall from which intrepid swimmers may jump in the pool below.

From the Editor

It's difficult to convey how much trouble I had actually a writing a "From the Editor" section this month. It involved staring at blank screen, typing then immediately deleting several drafts, and even wondering whether it's unethical to pull content from one of my previous pieces. Spoiler alert: it's unethical. Ironically, the only thing I knew wanted to discuss was the role of writing within science and to throw in a plug for people to submit to the NOGS LOG. An unfortunate time for eloquence to completely escape me. Such as it is, I hope my lack of wordsmithing or compelling analogies won't deter you from becoming a NOGS LOG contributor this year. The interests and talents of our members cover a diverse spread of scientific topics, and there is so much to educate and generate interest, if only we can communicate that knowledge to others. Whether it's a technical piece, an expositional article, or a selection of pictures, become a NOGS LOG contributor and share that knowledge with others.





2017 ADVERTISING RATES

The New Orleans Geological Society was formed in 1941, with an initial membership of only 55. It has always been an active professional society and presently has a membership of 500.

AD SIZE	2015 RATE	NEW 2017 RATE!
Full Page (7.5"x10")	\$3500	\$1750
Half Page (3.75"x10" or 7.5"x5"	\$1850	\$925
Quarter Page (3.75"x5" or 7.5"x2.5")	\$1000	\$500
Eighth Page (3.75"x2.5")	\$600	\$300
Twelfth Page (3.75"x1.65")	\$375	\$188
Note Size (3.75"x.75")	\$120	\$60



PREMIUM LOCATIONS

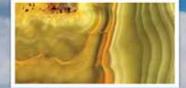
Inside Front Cover	+30%
Opposite President's Page	+20%
Opposite Oral Abstract	+20%
Inside Back Cover	+30%
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REVIEW THE REQUIREMENTS

www.lbopg.org

PROTECTING OUR NATURAL RESOURCES

Our mission is to protect the public health, safety, and welfare and to guard the state's natural resources with regard to environmental and civil projects where a geoscientific review and evaluation is required in the making of recommendations of any geoscientific components of said projects.



Big Change for the August 2017 NOGS LOG

Just like many of our members and corporate sponsors, NOGS has been significantly impacted by the ongoing downturn in the oil industry over the past two and a half years. Due to the challenges of a cost cutting environment, the NOGS LOG has lost almost all of the advertisers that it and NOGS rely on for support. NOGS spends approximately \$78/year to provide each member with a print copy of the LOG. Previously, advertising fees paid for the cost of printing a hard copy for each member. Without these fees, this practice is not sustainable. We estimate the cost to publish a smaller number of print copies for members willing to pay for them to be \$90.00/year.

The Board of Directors has made the decision to begin publishing the *NOGS LOG* in digital online format and to discontinue mass mailings of hard copy editions of the newsletter. This was done in order to preserve the quality of the publication and honor our economic and operational constraints. Since many NOGS members may prefer to read a hard copy, members will be able to opt in to receive mailed paper editions for a surcharge of \$90.00 per year. Complimentary copies to various

institutions and partner societies will continue to be issued as hard copies.

This was a difficult decision made only after several months of challenging discussion and assessment. However, the Board of Directors determined that making the switch to a digital publication is the best way for NOGS to continue effective communications with our members while maintaining our organization's ability to operate successfully regardless of economic conditions. We thank you for your support.

If you'd like to opt in to receive hard copies of the *NOGS LOG*, you can pay this surcharge by using the NOGS payment center at http://nogs.org/payment-center/. Scroll down to the special events button and pay the \$90.00

Or, by mailing a check in the amount of \$90.00 to the NOGS office at: 810 Union St, Ste 300 • New Orleans LA 70112

Al Melillo

Past NOGS President, 2016-17



Chris McLindon, Dr. Nancye Dawers (Tulane), Dr. Mark Kulp (UNO), and Rui Zhang (ULL) will serve as conveners for a technical session on Mississippi River Delta Plain geology at the upcoming American Geophysical Union (AGU) Fall Meeting this December in New Orleans.

The session is titled "Assessing the impacts of subsurface geology on surface processes on the Mississippi River Delta Plain and other deltaic passive margin settings using energy industry seismic data" and is currently accepting abstracts from potential presenters.

Abstract submissions are due August 2nd.

For more information, please review the session info at https://agu.confex.com/agu/fm17/preliminaryview.cgi/Session27399



Member-at-Large

Mary Walther

NOGS Office

Office Manager: Annette Hudson
Phone: 504-561-8980 • Email: info@nogs.org • Website: www.nogs.org
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Correspondence and all luncheon reservations should be sent to the above address.

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July 10 • NOGS Luncheon

Holiday Inn Downtown Superdome

\$3.00 validated parking in hotel garage

Presentation.

The Challenge(s) of Surface-Geologic Mapping in Louisiana

Guest Speaker.

Richard P. McCulloh

Louisiana Geological Survey • Louisiana State University • Baton Rouge, Louisiana See pages 8 and 9 for Abstract and Biography

HOLIDAY INN DOWNTOWN SUPERDOME

Check with concierge or front desk for location. Lunch served at 11:30 am

ADMISSION:

Without reservation \$35.00 Student Member with reservations..... FREE

July 13-15

Petroleum History Institute Symposium Marathon Center for the Performing Arts • Finlay Ohio For more information: http://petroleumhistory.org/

August 16-17

NAPE Summer

George R. Brown Convention Center • Houston, Texas http://napeexpo.com/shows/about-the-show/houston

August 7 **NOGS Luncheon**

Holiday Inn Downtown Superdome • New Orleans, Louisiana For more info: annette@nogs.org or 504-561-8980

August 21 & August 22-23

Geoscience Opening Seminar • Deepwater Technical Symposim Downtown Marriott at the Convention Center • New Orleans, LA http://www.deepwaternola.org

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Continued from previous page

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July 10 NOGS Luncheon Presentation

☆ ☆ ☆ at the Holiday Inn Superdome ☆ ☆ ☆

The Challenge(s) of Surface-Geologic Mapping in Louisiana

Presented by

Richard P. McCulloh

Louisiana Geological Survey
Louisiana State University • Baton Rouge, Louisiana

ABSTRACT

Most American geologists traditionally have been taught field techniques in settings with reasonably old and nakedly exposed strata, in geological terranes characterized by ancient, hard rock that are situated in semiarid or arid climates (e.g., Colorado, west Texas, Wyoming). The reason seems obvious: a relative lack of obstacles to observing, and thus to teaching, facilitates learning anything new. Quaternary strata in such terranes tend to be of minor if not negligible volume and geologic significance.

The value of learning in such an environment for the sake of introduction and attempted mastery of basic concepts and skills is indisputable. At the other end of the geologic and climatic spectrum, however, one finds that few of the specific skills learned and practiced at most geology field camps in the U.S. can be transferred directly to mapping exercise in Plio-Pleistocene terranes in tropical and subtropical climates. The surface of Louisiana, with dominantly Quaternary strata and a humid subtropical climate, represents one such terrane. Exposures are scarce and those that occur are largely ephemeral, as is the case in many coastal-plain settings, necessitating a completely different approach to the geologicmapping enterprise than that likely experienced at field camp.

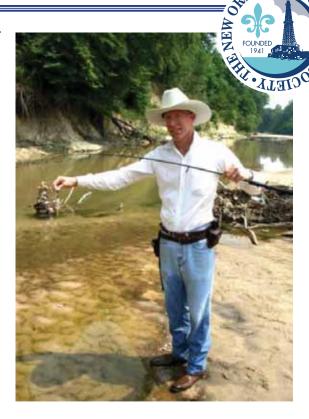
These natural difficulties of surface mapping in our state have been exacerbated by a particular cultural overlay during the past century: the advent of oil and gas exploration here led to a disproportionate focus on the deep subsurface, which eclipsed interest in surface geology. Additionally, the geological profession underwent its own culture change over the past half century, during which diversification of research techniques led to a relative deemphasis of field mapping, once the essential and main technique for conducting geological research.

Given these special circumstances and the research climate of recent decades, Louisiana Geological Survey (LGS) mappers have keved primarily on geomorphic signatures Ouaternary and Pliocene units in the conduct of surface-geologic mapping projects. These stratigraphic units successively incise each other in the area updip of the hinge zone of northern Gulfbasin subsidence, an area covering most of the onshore region. In this area they are terraced, and their depositional surfaces show a spectrum of age-related characteristics, including elevation range, relief, slope, and degree of dissection. As a result, Pliocene and younger stratigraphic units show distinctive geomorphic attributes relative to older strata and to each other. The most efficient strategy, therefore, is to (1) create new source mapping of Plio-Pleistocene and Holocene units based on geomorphic aspects using the best topographic deata available; (2) integrate the newer mapping of Plio-Pleistocene units with legacy mapping of Tertiary "bedrock" units (where present); (3) modify the resulting contacts based on observations made during strategic field checking; and (4) recompile at the

selected target scale (larger than the intended scale of presentation of developing the data in a GIS). Application of the above methodology, supported by selective checking of interpreted surface contacts against relevant subsurface information where possible in problem areas, has been LGS practice over the past two-plus decades. This time frame essentially corresponds to the duration thus far (24 years) of the STATEMAP component of the congressionally authorized National Cooperative Geological Mapping Program, which has been the principal sponsor supporting statewide completion of 30×60 minute geologic quadrangle coverage at 1:100,000 scale.

BIOGRAPHY

Richard P. McCulloh holds a B.S. degree in geology from Oklahoma State University and an M.A. degree in geology from the University of Texas at Austin. He joined the Louisiana Geological Survey (LGS) in Baton Rouge after working for two years as a geologist for Conoco Minerals Inc. in the south Texas uranium district.



At LGS he has been involved in mapping and compilation of surface geology at scales ranging from 1:24,000 to 1:500,000, as well as other surface and subsurface investigations including stratigraphic configurations associated with Miocene growth faults; delineation of shale-filled channels in the Wilcox Group; surface and shallow-subsurface geology of emergent salt domes in coastal Louisiana; and structural geomorphology as reflected in stream nets and alluvial courses.

THE MAY LUNCHEON RESERVATION DEADLINE IS JULY 7. CONTACT THE NOGS OFFICE

"And Looking Ahead . . . "

The next luncheon will be held on August 7th. Our guest speaker will be will be announced later this month. Contact the NOGS office at 504-561-8980 or use the PayPal link at www.nogs.org to make your reservation.





CALENDAR OF EVENTS: JULY — AUGUST 2017

If you know of upcoming seminars or academic events that may be of interest to our members, please email the event details to Laura Sorey at nogseditor@gmail.com to be included in the monthly calendar.

2017	EVENT	LOCATION	CONTACT / INFO
4 Jul	Independence Day		
10 Jul	NOGS Luncheon Speaker: Richard McCulloh "The Challenge(s) of Surface-Geologic Mapping in Louisiana"	Holiday Inn Superdome	annette@nogs.org or 504-561-8980
13-15 Jul	Petroleum History Institute Symposium	Finlay, Ohio	http://lpetroleumhistory.org/
22 Jul	End of first period of discounted registration for 2017 Deepwater Technical Symposium		http://www.deepwaternola.org/ registration/
26 Jul	Submission Deadline for Early AGU 2017 Abstracts		https://fallmeeting.agu.org/2017/ abstract-submissions/
2 Aug	Final Submission Deadline for AGU 2017 Abstracts		https://fallmeeting.agu.org/2017/ abstract-submissions/
7 Aug	NOGS Luncheon Speaker: TBA	Holiday Inn Superdome	annette@nogs.org or 504-561-8980
16-17 Aug	NAPE Summer	Houston, Texas	http://napeexpo.com/shows/about- the-show/houston
21 Aug	Geoscience Opening Seminar for the 21st Annual Deepwater Technical Symposium Speaker: John Dribus, Schlumberger "Exploring the Deep Water Gulf of Mexico Petroleum Systems"	New Orleans Marriott Convention Center	http://www.deepwaternola.org
22-23 Aug	21st Annual Deepwater Technical Symposium	New Orleans Marriott Convention Center	http://www.deepwaternola.org

2017 ASBOG Exam Information & Deadlines

The Louisiana Board of Professional Geoscientists will proctor the ASBOG Fundamentals of Geology and Practice of Geology exams on October 6, 2017.

LBPOG must receive your application (including transcript and references) for GIT certificate or PG license for approval by the Board prior to their meeting on June 13.



The LBOPG Proctoring/Verification Application and Fee must be received by LBOPG by July 21 in order to sit for the October 6th exam.

<u>Note</u>: You must have a pending application for a GIT certificate or PG license and relevant fees submitted prior to submitting the application for proctoring.

See www.lbopg.org for more info.



New Orleans Geological Auxiliary News

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

NOGA 2017-18 Installation Luncheon

The Turtle Room at Café Adelaide was the setting for our installation luncheon on May 10th. A wonderful day was planned by Mary Ellis Hasseltine and Susie Baker. The food was delicious and the table decorations were beautiful. Following lunch, Pat Williamson installed the officers and board members for the 2017-2018 year.

2017-18 NOGA Officers and Board Members

Margie Conatser — President
Camille Yeldell — Vice-President
Trez Zotkiewicz — Secretary
Judy Lemarié — Treasurer
Trudy Corona — Member-at-Large
Alma Dunlap — Parliamentarian
Genny Melillo and Linda Peirce
2016-2018 Board Members
Penny Bryant and Loretto Stephens
2017-2019 Board Members



Camille Yeldell presented Linda Peirce with the Loyalty Award which recognizes an outstanding member who has given longtime service to the Auxiliary. Linda joined in 2002 and was elected Treasurer and hosted the September luncheon in her home the following year. She served two years as Treasurer, 3 years as 1st Vice President and 2 years as President. She has co-chaired many luncheons, served on numerous committees and co-chaired spouse activities for the 2010 AAPG convention.

Trudy Corona *Member-at-Large*

Photo, right:
Linda Peirce receiving the
Loyalty Award
Photo, left:
Mary Ellis Hasseltine,
co-chair of the installation
luncheon





New Orleans Geological Auxiliary Membership Application

Name	Spouse's Name
Address	Home Phone
City, State, Zip	Cell Phone
Spouse's Company	Email

Dues: \$25 payable to New Orleans Geological Auxiliary
Please mail to Judy Lemarié, Treasurer, #2 Yosemite Dr., New Orleans, LA 70131



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m Groundbreaking — May 2017



South Louisiana and Offshore Gulf of Mexico Exploration and Production Activities

LAFAYETTE DISTRICT, ONSHORE AREA By Kevin J. Trosclair and Carlo C. Christina

The Baker-Hughes United States rig count for the week of May 26 was 908 rigs, up 38 rigs from the prior month. Rig activity in the U.S. has steadily increased over the past 12 months climbing from a low of 404 rigs in May 2016. The Louisiana rig count (not including the OCS) averaged 46 rigs for the month of March. This is an increase from 39 rigs the prior month.

North Louisiana Rigs:	37
South Louisiana Rigs:	9
Land	5
Inland Waters	4

NEW LOCATIONS

In Beauregard Parish, West Cowpen Creek Field, (A), Fountain Operating Company will drill the #1MINERAL RESOURCES, SN 250226, to test Wilcox sands at a depth of 11,500 feet. It is located in Sec. 22, 6S-10W, one-half mile west of the #2 FORESTAR MINERALS 23, which was recently completed flowing 177 BOPD.

Interstate Explorations will drill the #1 FIVE STAR ROYALTY PARTNERS, SN 250253, in **Bayou Sorrel Field, (B),** Iberville Parish, to a projected depth of 12,080 feet to test the E2-L4 Sand. The well is located in Sec 98, 10S-10E, approximately 1½ miles southeast of a well which produced from a Marg vag sand at 11,500 feet. There is no other production in the area.

In St. Martin Parish, **Lake Valerie Field**, **(C)**, Cico Oil and Gas will drill the #1 DAVID ELLISON, SN 250272, to 12,924 feet to test Nodosaria blanpeidi sands in Sec. 65, 8S-8E. There is no current production in the field.

Dunn Exploration has permitted its #1 OTIS RAY DUNCAN, SN 250277, in **Abbeville Field**, **(D)**, Vermilion Parish. It will be drilled in Sec. 18, 12S-3E to 9960 feet to test the Duhon Sand.

COMPLETIONS

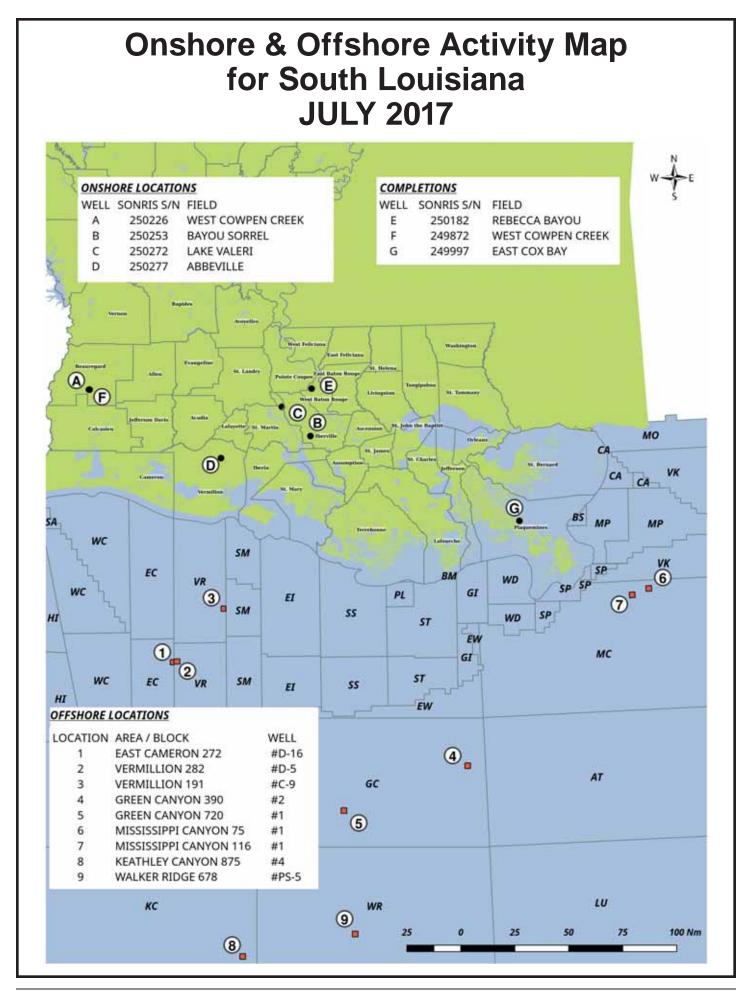
In West Baton Rouge Parish, **Rebecca Bayou Field**, **(E)**, PAN-OK Company has completed the #1 WILBERTS SONS, SN 250182, as an excellent oil well in the Nodosaria 4 Sand flowing 250 BOPD and

125 MCFG through perforations 9695 to 9697 feet. The well was drilled to a total depth of 9831 feet in Sec 29, 6S-11E, 1½ miles north of production. The field has been off production since 1989.

Fountain Operating, LLC has completed the #2 FORESTAR MINERALS 23, SN 249872, as an oil well in **West Cowpen Creek Field, (F),** Beauregard Parish. It was drilled in Sec. 23, 6S-10W and completed in the Wilcox, through perforations 11,172 to 11,218 and 11,271 to 11,301 feet after fracking

Upstream Exploration has drilled its #1 U3 RA SUD; SL 21474, SN 249997, to a total depth of 16,678, (TVD 13,603) feet, in **East Cox Bay Field, (G)**, Plaquemines Parish. The well was drilled in Sec. 26, 18S-16E, as a directional hole with the bottom hole location 9,000 feet south of the surface location. It was drilled to test the Uvig 3 Sand in a separate fault block from Upstream's 2 producing wells, located 1½ miles to the north. The well encountered the Uvig 3 sand, very well developed, but containing salt water, and it was temporarily abandoned as a shut-in dry-hole, future utility well.

The field was discovered in December 2014, with the completion of the #1 U3 RA SUB; SL 21380 flowing 422 BOPD and 795 MCFG through perforations 13,300 to 13,328 feet. Upstream confirmed production with the completion of the #1 U-3 RA SUA; OLD, in December 2016, flowing 503 BOPD and 1172 MCFG through perforations 12,385 to 12,395 feet. Cumulative production



from these 2 wells is more than 4.6 billion cubic feet of gas and more than 270,000 barrels of oil. Currently, the 2 wells are producing 1,000 barrels of oil per day and 3 million cubic feet of gas per day.

OFFSHORE GULF OF MEXICO

SHELF AND DEEPWATER ACTIVITIES

by Al Baker

During May 2017, the BOEM approved 86 Gulf of Mexico drilling permits. Of these, 17 were for shelf wells and 69 were for deepwater wells. Of the total number of permits, there were 9 new well permits. Six permits were issued in deepwater, and three permits were awarded on the shelf.

The three new well permits on the shelf were for development wells. Two were issued to GOMEX Energy Offshore for their East Cameron 272 #D-16 and Vermilion 282 #D-5 wells. Both wells will be drilled form the GOMEX's "D" Platform located in East Cameron Block 272. The third new well permit was awarded to ANKOR Energy for their Vermilion 191 #C-9 well.

The six deepwater new well permits were for exploration wells. Two permits were issued to LLOG Exploration Offshore for their Green Canyon 390 #2 and Mississippi Canyon 75 #1 wells. Two permits were also granted to Union Oil Company of California (Chevron) for their Walker Ridge 678 #PS-5 and Green Canyon 720 #1 wells. Deep Gulf Energy III received one new well permit to drill their Mississippi Canyon 116 #1 well, and Anadarko Petroleum obtained one permit to drill their Keathley Canyon 875 #4 well.

On May 26th, **IHS-Petrodata** reported that the Gulf of Mexico mobile offshore rig supply stood at **94**, which is **1** less than last month. The marketed rig supply consisted of **47** rigs, of which **33** were under contract. The marketed rig supply number and the contracted rig supply numbers each increased by **3** compared to last month. The marketed contracted versus total rig supply utilization rate is **35.1%**, whereas the marketed contracted versus marketed supply utilization rate stands at **70.2%**. By comparison, the May 2016 fleet utilization rate stood at 55% (versus 50% today) with 61 out of the 111 rigs under contract

As of May 26th, **BakerHughes** indicated that there were **23** active mobile offshore rigs in the Gulf of Mexico, which is **69.7%** of the rigs under contract mentioned

above. This active rigs number is **6** more than reported last month. Of the 23 rigs, **5** are located on the **shelf** and **12** are situated in **deepwater**. The current active rigs count is identical to 23 active rigs count during the same period last year. This would seem to suggest that not much has changed in the Gulf over the past year.

As of April 28th, the **BakerHughes** total U.S. rig count stood at **908** rigs **down 53%** from the **September 26, 2014 high** of **1931** rigs, but up **504** rigs or **125%** from the **May 20, 2016 low** of **404** rigs one year ago. Of the current 908 rigs, **722** are **oil rigs** and **185** are **gas rigs.** Texas has the largest number of rigs with 458, which again is slightly over half (50.4%) of the total number of rigs in the U.S.

As of June 1st, the **BOEM** announced that it had accepted **108** of the **163** bids made at the March 2017 **OCS Sale 247** that encompassed the **Central Gulf of Mexico.** This leaves total of **55 bids** remaining in the Phase 2 evaluation period, which ends on June 21st.

The next federal offshore lease sale, **OCS Sale 249**, is scheduled for **August 16th** in New Orleans. It will be the first of a new area-wide sale program that includes all the available tracts in the Western, Central and Eastern portions of the Gulf.

Did You Know...

Discovered in 1902, the Willamette Meteorite is the largest meteorite recovered from North America as well as the sixth largest ever found. As there's no impact crater associated with its discovery site, it's believed to have been transported as a glacial erratic away from its probable landing site in Canada or Montana around the time of the Last Glacial Maximum. Researchers believe it was then carried to the Willamette Valley by the Missoula Floods approximately 13,000 years ago at the conclusion of glaciation.

The meteorite was found near what would eventually become West Linn, OR, and was originally an object of veneration for the Clackamas tribe of Native Americans. Despite this, Ellis Hughes claimed to have discovered the 31,200 lb, iron-nickel specimen on land belonging to the Oregon Iron and Steel Company in 1902. In an ill-fated attempt to claim ownership as well as discovery, Ellis had the meteorite transported to his own land after the company refused his offer to buy the land where the meteorite had been found. However, this attempt was foiled by a 1905 ruling from the Oregon Supreme Court that the meteorite belonged to Oregon Iron and Steel.

Mrs. William Dodge of New York purchased the meteorite in 1906 for \$20,600 and donated it to the American Museum of Natural History's permanent collection.

Sources: https://en.wikipedia.org/wiki/Willamette_Meteorite and http://www.inlandlapidary.com/content/dyk.asp

Take Me Out to the Ballgame!

On May 17, over 9,000 students from across south Louisiana visited Core Element's STEM Education Day at the New Orleans Babycakes Stadium to learn about science and technology from scientists hailing from a variety of companies, agencies, and schools. A PIPE team with members from NOGS, SPE Delta, and SGS hosted a large station where students experienced a fun, hands-on introduction to the science and engineering of oil finding. Thanks to the team effort and all our volunteers who came out in support of STEM!



The Louisiana Geological Survey presents: The First Louisiana Coastal Geology Framework Symposium



July 26, 2017
Dalton Woods Auditorium
Energy, Coast and Environment Building
Louisiana State University
Baton Rouge, Louisiana

Scheduled Speakers: Nancye Dawers, John Johnston III, Chris McLindon, Rick McCulloh, Elizabeth McDade

We are currently looking for more speakers and posters! Abstracts are due July 15, 2017.

There will be a panel discussion and joint Q&A session at the end of the day. For more information or to submit abstracts, contact symposium chairman John Johnston III at hammer@lsu.edu.

Symposium staff: John Johnston III, Elizabeth McDade, Amanda Jo Zimmerman

Check out these recent postings on our website:

On Homepage Calendar:

Deepwater Technical Symposium – Opening Geoscience Seminar

On Monday, August 21st, John Dribus will present "Exploring the Deep Water Gulf of Mexico Petroleum Systems" Read his detailed abstract on page 2 of this issue. Registration opens soon. Check with www.deepwaternola.org for more information.

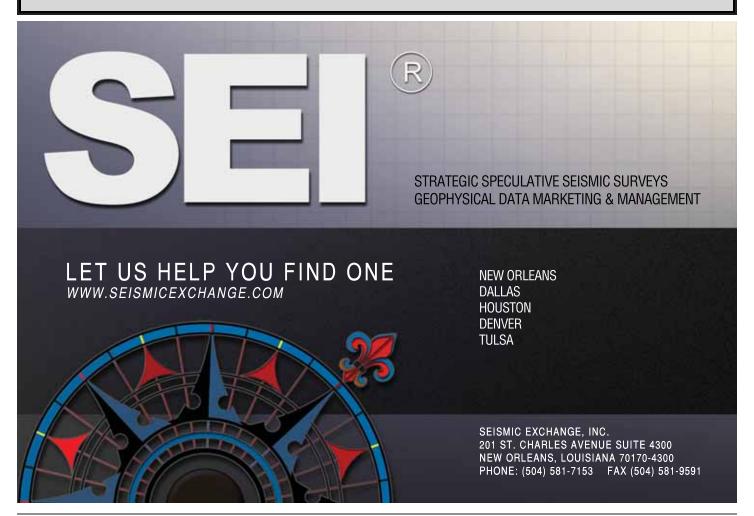
On LINKS page under Presentations of Interest:

When Earth Attacks! - A Geologist's Retrospective - Presented by The Honorable Michael L. Merritt, Commissioner, SLFPA-West, November 2, 2015 (PDF)

When Earth Attacks! - A Geologist's Retrospective - Merritt's speaker notes (PDF) [As a suggestion to the viewer, open both PDFs and toggle between them. A second option is to print the speaker notes to use with the slides.] The presentation chronicles the aftermath of Hurricane Katrina and its effects on the New Orleans metropolitan area and the push to get stronger flood protection.

NEW in the Galleries:

View the new photos posted of the Louisiana Children's Museum Groundbreaking on May 20th.



Submit Your Field Photos!

To many people, a summer challenge involves struggling to remember whether you packed an extra swimsuit. To many geologists, a summer challenge often involves trying to access an outcrop of interest without breaking an ankle. Whether they're students, professionals, or just inquisitive road trip travelers, many NOGS members have already undertaken ventures into field sites across the country this summer,



as shown by the pictures below. If you'd like to submit some of your field pictures for publication in the *NOGS LOG*, please email them to nogseditior@gmail.com. Pictures by Laura Dalton, Dana Smith, and Laura Sorey.



Amygdaloidal basalt. Gila Cliff Dwellings National Monument, NM



Devonian/Mississippian Contact between Sunbury Shale and Bedford Shale, KY



Devil's Hall. Guadalupe National Park, TX



Carlsbad Caverns, NM



Gila Cliff Dwellings National Monument, NM



Laminated gypsum.
Guadalupe Mountains, TX



Guadalupe Peak.
Guadalupe National Park, TX



Lost World Caverns, WV



NOGS Research Initiative Wins Prestigious Grant

June 23, 2017

The New Orleans Geological Society (NOGS) is pleased to announce two significant developments in its Louisiana Coastal Geology Research Initiative.

In collaboration with the Louisiana Geological Survey, the LSU Center for Energy Studies, the LSU Department of Oceanography and Coastal Sciences, the LSU Department of Geology and Geophysics, and several other professional earth science organizations, NOGS will co-sponsor "The First Louisiana Coastal Geology Framework Symposium." The Symposium will be held in the Dalton Woods Auditorium in the Energy, Coast & Environment Building on the Louisiana State University (LSU) Baton Rouge Campus on July 26, 2017. The symposium will include a panel discussion and presentations by earth scientists from universities, state agencies, and the oil and gas industry.

On June 22, 2017, the Water Institute of the Gulf announced the awarding of the Restore Act Centers of Excellence \$349,174 collaborative research grant to earth science researchers at local universities. Dr. Mark Kulp (University of New Orleans [UNO]), Dr. Nancye Dawers (Tulane University [Tulane]), and Dr. Rui Zhang (University of Louisiana at Lafayette [ULL]) will oversee collaborative research projects under this grant to study fault-related subsidence across the Louisiana coastal plain. NOGS facilitated access to oil

and gas industry seismic data for graduate students to support individual research projects at each university. The proposal document for this collaborative grant states that this research is unique because "it unites previously unavailable industry seismic reflection data with modern methods of data analysis (high resolution seismic imaging and processing)."

NOGS was organized on October 3, 1941, as a non-profit organization for the purpose of facilitating the development of the profession and science of geology. In the succeeding decades NOGS has published numerous geological atlases and field guides that cover southeast Louisiana. In November 2015, NOGS published a proposal on the organization's website for the oil and gas industry to support research into the impacts of relative sea level rise on infrastructure in the Louisiana coastal zone. This proposal document has led to the development of eight graduatelevel research projects at UNO, Tulane, ULL and LSU. Each of these projects makes use of oil and gas industry data and knowledge base. Seismic surveys and other data have been donated to the universities by several companies in the oil and gas industry. In addition to the direct donation of data to the universities, NOGS has arranged for students to gain access to data for research projects through the internships at Castex Energy in Houston, Upstream Exploration in Metairie, and Northcoast Oil Company in Covington.

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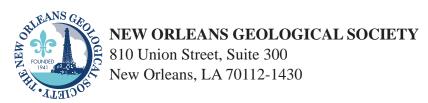
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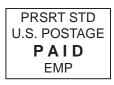
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