

NOGS LOC

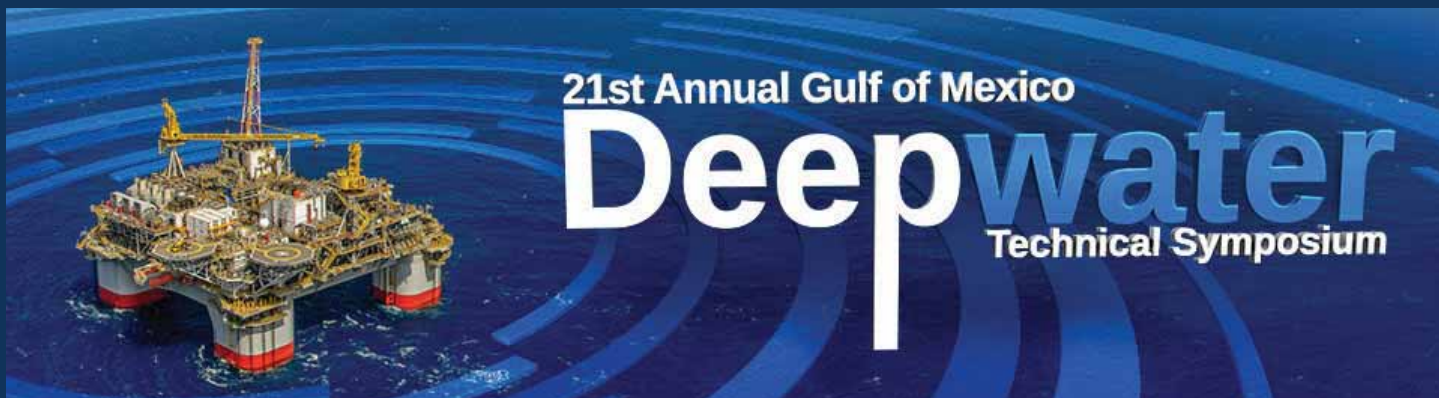
JUNE 2017

Volume 57, Number 12



JUNE 5 - NOGS LUNCHEON

**Presentation: Facies Reconstruction of a Late Pleistocene Cypress Forest
Discovered on the Northern Gulf of Mexico Continental Shelf**
Guest Speaker: Suyapa M. Gonzales Rodriguez
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



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Interested in contributing to the NOGS LOG?

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

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on the cover

Cover Photo Courtesy of the USGS

Sunrise over the Atlantic Ocean from the Florida coastline

This month's cover image shows a deceptively simple sight, that of a sunrise over the Atlantic Ocean from the Florida coast. The Iapetus Ocean, a proterozoic Atlantic of sorts, was the ancient ocean that spread between the paleocontinents of Laurentia, Baltica, and Avalonia. Though the Iapetus (named for the Greek Titan Iapetus, father of Atlas who serves as the namesake of the Atlantic Ocean) closed up during the formation of Pangaea around 385 million years ago, its position relative to the paleocontinents would later roughly form the shorelines of the modern Atlantic. The Atlantic as we know began to form with the breakup of Pangaea in the early-Jurassic with rifting between Laurentia (North America and Eurasia) and Gondwana (Africa and South America). The South Atlantic Ocean didn't begin to form until the early Cretaceous when Gondwana began to rift as the basin continued to open up at uneven rates of separation. The last major stage in the formation of the Atlantic came in the early Cenozoic as Laurasia began to split with North America rotating away from Eurasia and eventually colliding with South America.

From the Editor



Several weeks after you receive this issue of the *NOGS LOG*, the NOGS Board of Directors will transition to a new slate of officers. I know that our outgoing President Al Melillo speaks on the matter in his monthly letter, but as for me, I feel compelled to join him in expressing my appreciation for the work and leadership of the 2016-2017 NOGS officers. This past year was my first time to serve on professional board in any capacity, and it's difficult to imagine a more effective crash course in the life of a non-profit than seeing our officers and directors at work. Above everything else I've learned about NOGS in the past year, I was struck most powerfully by how our officers and members adhere to the idea that you can get a lot of work done when you're unconcerned about who gets the credit. In the *NOGS LOG*, contributors typically get bylines, but in NOGS itself, volunteers focus on getting the job done rather than worrying about whether or not everyone knows they were involved with a project. It's a remarkable approach to service, and one that we can only strive to emulate as NOGS continues to develop as an organization and community.



Laura

Laura Sorey, Editor



Contact:
Annette Hudson
info@nogs.org

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
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From the President

Well, this is my last President's column, and I would like to take this opportunity to thank those who have helped me throughout the year. Many thanks to the Board of Directors for sharing its opinions and experiences as we guided NOGS through another year of challenges and opportunities. President-Elect Kathy Haggar did a wonderful job as Entertainment Chair. I am grateful to Vice-President Alex Janevski who stood in my place at luncheons and board meetings when I was out of town. Bill Haworth did a great job recording board meeting minutes and setting up the AV gear for our luncheons. Thanks to Margaret McKinney for keeping our treasury in order. Editor Laura Sorey had the challenging job of getting the *NOGS LOG* out every month, which she did extremely well and seemingly effortlessly. Directors Dave Cope, Brenda Reilly, and Jennifer Connolly offered many valuable insights as we discussed important issues.

I want to thank the many people who shared with me their valuable experience, especially Bill Whiting and Ed Picou. We undertook a number of initiatives this year, and I am very grateful to the members who stepped up and made them happen. Louis Lemarie did a great job designing and sourcing the 75th Anniversary mementos. Thanks to Jennifer Connolly for researching and selecting the website that sells our NOGS logo apparel and gift items. I am grateful to Mike Merritt for leading two very successful field trips to examine some of the flood protection system on the West Bank. These trips would not have been as successful without the excellent guidebook masterfully assembled from Mike's notes and presentations by Tom Klekamp with the able assistance of Laura Sorey and Art

Johnson. Thanks to Tom for initiating NOGS journey into social media with his creation of a Facebook friends group with whom he shared interesting geological news. Many thanks to Laura Sorey who expanded Toms' group into a full-fledged NOGS Facebook page where we can post announcements, activities and news items. Credit goes to Alex Janevski for suggesting that NOGS explore social media.

There are also many activities that go on year to year. We enjoyed a great Christmas Holiday Party at the home of Cathy and Mark McRae thanks to the efforts of Kathy Haggar, and NOGA members Camille Yeldell, Trudy Corona, and Genny Melillo. Our partnership with PLANO in the Golf Tournament again proved very successful as we raised well over \$5,000 for the local children's museums. This was due to the efforts of Dave Reiter, Kathy Haggar, Ryan Schneider of PLANO, and Annette Hudson. Many thanks to Tom Bergeon for coordinating the Super Science Saturday at the Louisiana Children's Museum, the Girls Scouts BIG (Believe in Girls) event at Southeastern University, and acting as NOGS liaison to the children's museums on the south and north shores. Much appreciation to Mike Fein and Art Johnson for working together to present the Geoscience Seminar at the Deepwater Technical Symposium and to represent NOGS as one of the organizers. Thanks to Chris McClindon for initially conceiving and overseeing the Fault Atlas project with UNO, Tulane, and LSU. Many thanks to Ed Picou for ably overseeing the NOGS website. I also want to thank Jeff Spencer, GCAGS Historian, for contributing three very interesting articles to the *NOGS LOG*. Thanks to Jim and Trez Zotkiewicz and to NOGA for the excellent Spring Soiree

(continued on page 27)



NOGS Office

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



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June 5 • NOGS Luncheon

Holiday Inn Downtown Superdome

\$3.00 validated parking in hotel garage

Presentation:

***Facies Reconstruction of a Late Pleistocene Cypress Forest
Discovered on the Northern Gulf of Mexico Continental Shelf***

Guest Speaker:

Suyapa M. Gonzales Rodriguez

Dept. of Geology & Geophysics • 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:

With reservation..... \$30.00

Without reservation \$35.00

Student Member with reservations..... FREE

July 10

NOGS Luncheon

Holiday Inn Downtown Superdome • New Orleans, Louisiana

For more info: annette@nogs.org or 504-561-8980

August 16-17

NAPE Summer

George R. Brown Convention Center • Houston, Texas

<http://napeexpo.com/shows/about-the-show/houston>

July 13-15

Petroleum History Institute Symposium

Marathon Center for the Performing Arts • Finlay Ohio

For more information: <http://petroleumhistory.org/>

August 21 & August 22-23

Geoscience Opening Seminar • Deepwater Technical Symposium

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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2018	William M. Whiting	Consultant	504-947-8495	bootscon@aol.com
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June 5 NOGS Luncheon Presentation

☆☆☆ at the Holiday Inn Superdome ☆☆☆

Facies Reconstruction of a Late Pleistocene Cypress Forest Discovered on the Northern Gulf of Mexico Continental Shelf

Presented by

Suyapa M. Gonzales Rodriguez

Department of Geology & Geophysics

Louisiana State University • Baton Rouge, Louisiana

ABSTRACT

A previously buried bald cypress forest (*Taxodium distichum*) was discovered on the continental shelf seafloor, offshore of Orange Beach, Alabama, USA, in ~20 m water depth. The forest was likely buried in the late Pleistocene, possibly exhumed by Hurricane Ivan in 2004, and is now exposed as stumps in life position. We are investigating local stratigraphy and mode of forest preservation. In August 2015 and July 2016, submersible vibracores were collected. Sediment cores revealed, from top to bottom, a surface of Holocene transgressive sands, underlain by interbedded sand and mud (potentially Holocene or Pleistocene), overlying a swamp or delta plain facies (likely Pleistocene) containing woody debris and mud that has been provisionally dated using C-14 to ca. 41-45 ka. Cores collected in 2016 revealed a Pleistocene paleosol beneath Holocene sands in a nearby trough.

We hypothesize that floodplain aggradation in the area was a key factor that might have allowed forest preservation. A temporary sea-level rise of 10-15 m occurred ca. 40 ka, which could have produced local floodplain aggradation that would have buried the swamp and forest sediments. During the subsequent lowstand, sediments that comprise the floodplain were eroded. Subsequently, paleosols were formed in other nearby areas. It is hypothesized that some swamp sediments located in paleo-topographic lows might have been preserved and buried due to the deep coverage of the eastern-trending channel infill sediments. Coastal wave erosion during transgression likely eroded high ground but enough sediment remained to keep the cypress forest blanketed and therefore allowed preservation.

BIOGRAPHY

Suyapa Gonzales Rodriguez is currently a first semester graduate student at LSU pursuing my master's in geology in an accelerated program. I was born and raised in Honduras, where I spent my childhood swimming and snorkeling the crystalline waters of the Caribbean Sea. I lived in the northern coast of the country, where we have beaches, rainforests, and mountains all in one place. Being surrounded by so much beauty taught me to truly respect and love nature. I took



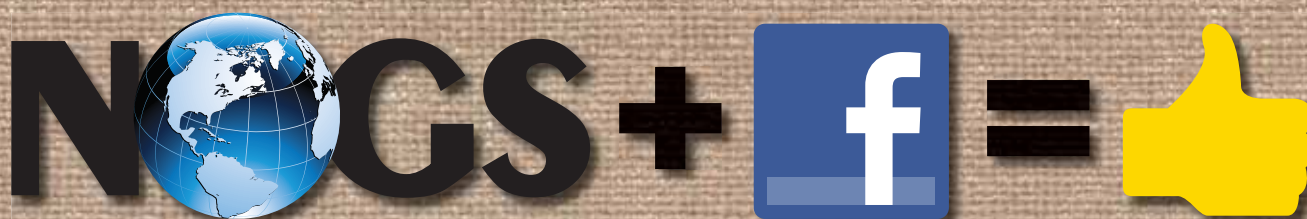
a year off from high school to travel, moving to Germany, where I lived with a host family and learned my third language. When I came back to Honduras, I decided to go abroad once again, but this time for college. I came to LSU almost four years ago. Ever since my first geology class

at LSU, I've been mesmerized and inspired by this amazing science and how diverse it is. Up until this day, becoming a geologist has been one of the best decisions I've made.

THE MAY LUNCHEON RESERVATION DEADLINE IS JUNE 1. CONTACT THE NOGS OFFICE

"And Looking Ahead . . ."

The next luncheon will be held on July 10th. Our guest speaker will be Richard McCulloh, Louisiana Geological Survey, will present "The Challenge(s) of Surface-Geologic Mapping in Louisiana." Contact the NOGS office at 504-561-8980 or use the PayPal link at www.nogs.org to make your reservation.



Like us on Facebook!

The new page for the New Orleans Geological Society is a great way to connect with other geologists and keep up to date with the latest NOGS events, videos, updates, and fun geology tidbits.



Find us at <https://www.facebook.com/nogs.org/>



CALENDAR OF EVENTS: JUNE — 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
5 Jun	NOGS Luncheon Speaker: Suyapa Gonzales Rodriguez "Facies Reconstruction of a Late Pleistocene Cypress Forest Discovered on the Northern Gulf of Mexico Continental Shelf"	Holiday Inn Superdome	annette@nogs.org or 504-561-8980
10 Jul	API Sporting Clays Tournament	Covey Rise Lodge Husser, LA	http://www.api-delta.org/events/sporting-clays-father-son-and-family-tournament.aspx
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	New Orleans Marriott Convention Center	http://www.deepwaternola.org/registration/
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 More information to be announced later.	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 6 exam.

Note: 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.



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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 Spring Soirée

Lots of fun was had by all at the annual Spring Soirée hosted by Trez and Jim Zotkiewicz in their lovely Metairie home., with dinner catered by Toulouse. Thanks to Trez, Jean Jones, Retta Stephens and our president, Trudy Corona for all their hard work to make this event happen.



New Orleans Geological Auxiliary Membership Application

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

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NOGS Facts of Life for Flood Protection

Spring Field Trip • April 29, 2017



PHOTOS BY TOM KLEKAMP

4.15.17



SUPER SCIENCE SATURDAY

DINOSAURS, EARTHQUAKES & OIL

On April 15th, sixty-three enthusiastic volunteers from NOGS and the area universities greeted over 900 visitors at the Louisiana Children's Museum for Super Science Saturday. Kids were introduced to dinosaurs, earthquakes, and oil, and many a paleontologist's future blossomed on the spot.

Students have always played such a vital role in Super Science Saturday's success.

This year we had twenty-three students from **Southeastern**: **Samantha Messina, Garrett Buras, Alexis Fairbanks, Paul Tondra, Cailey Moore, Jade Sheets, Neke King, Brooke Hanegan, Katie McKinney, Jordan Pittman, Victoria Carter, Logan Phipps, Brittanie Grasmick, Haley Allen, Savannah Vicknair, Capri Guarisco, Victoria Mcmasters, Stephanie Fos, Victoria North, Ashlin Nicosia, Victoria North, Brielle Garner, Sh-Kaia Mosely, and Tamara Alexander**, along with **Stephanie Welch** the geology and astronomy teacher at Southeastern.

Our **LSU** volunteers were **Carolyn LeSieur** and **Van Smith**. **UNO** had **Morgan Crawford, Ryan and Stephanie Jones, Jennifer Mary Housey, and Joshua Flathers** running the stations. **Tulane** volunteers included **Mythili Ramachandran, Bobola Akintomide, Melody Bolton, Ripul Dutt** and **Travis Hong**. Travis' girlfriend **Sirena Si** set the long distance record coming from the **University of California Riverside Medical School**.

NOGS volunteers included **Rachel Carter, Liz McDade** and her son **Wilson, Elizabeth Cornell, Caitlin Altomare, Anna Strimas** and her daughter **Lilly, Kathy** and **Kelli Haggar, Chris McLindon, Mike Fein, Mike** and **Opie Anderson, Bill Vollenwider, Tom George**, and our NOGS President **Al Melillo**. Rounding out the crew were our special contributors **Art Johnson, Bernie Regel, and Peyton Madere** as our station trainers. **Bernie** took excellent photographs. **Dave Cope** dazzled as always on the 3D workstation, and **Lisa Kennedy** of **SGS** lead the fist pumping on the seismograph. Major thanks to **Drew Akins** on check in, **Kraig Derstler, Joshua Flathers, and Jennifer Housey** for the **UNO T-rex**, and **Bruce Sherman** of **Southeastern** for his major student recruitment. **Michael** and **Jared** of **LCM** were invaluable on the setup, and **Ashley Lucas**, the **LCM Early Learning Manager**, was our museum stalwart extraordinaire.

It was a great day and major thanks to all of you for coming out and making a big difference!

Tom Bergeon



SUPER SCIENCE



CE SATURDAY



PHOTOGRAPHY BY BERNIE REGEL AND TOM BERGEON

South Louisiana and Offshore Gulf of Mexico Exploration and Production Activities

LAFAYETTE DISTRICT, ONSHORE AREA

By Kevin J. Trosclair

The Baker-Hughes United States rig count for the week of April 28 was 870 rigs, up 46 rigs from the prior month. Rig activity in the U.S. continues to climb from a low of 404 rigs in May 2016. The Louisiana rig count (not including the OCS) averaged 39 rigs for the month of March. This is a slight increase from 36 rigs the prior month.

North Louisiana Rigs:	33
South Louisiana Rigs:	6
Land	3
Inland Waters	3

NEW LOCATIONS

In Avoyelles Parish, **North Bayou Jack Field, (A)**, Sentry Energy Services will drill the #1 Eagles Ranch 14 H, SN 250209, in Sec. 14, 2S-4E, as a horizontal well to test the Austin Chalk. The well will be drilled to a total depth of 21,900 feet, (TVD 16,720 feet), and is located 2 miles southwest of the nearest wells in the field.

North Bayou Jack Field was discovered in 1975 by W. A. Moncrief and Gulf Oil Corp. with a completion in a thin **Tuscaloosa sand** and flowed 156 BOPD and 5457 MCFG through perforations 16,128 to 16,134 feet. The well produced only 2 months, flowing 2132 barrels of oil and 89546 MCF gas.

The second well, SN 154571, drilled in 1977, did not find any Tuscaloosa sand. It was completed in the **Austin Chalk** through perforations 15,530 to 15,580 feet flowing 520 BOPD and 440 MCF. This zone produced more than 100 barrels of oil a day for several months, and has produced for **32 years**, ultimately producing more than **582,000 barrels of oil**.

Additional drilling in the field resulted in mixed results with the following 10 wells resulting in 6 dry holes. In 1991 the first of several wells were drilled to test the Austin Chalk. Ten were completed as oil wells with only 2 dry holes. In March 1993, a **horizontal well**, SN 214755, was completed **flowing 2240 BOPD and 1015 MCFG** in the **open hole** in the interval **14,167 to 18,390**. It has produced for 24 years, but has produced **only 97,500**

barrels of oil. Production declined within the first 6 months in this well, and in most wells.

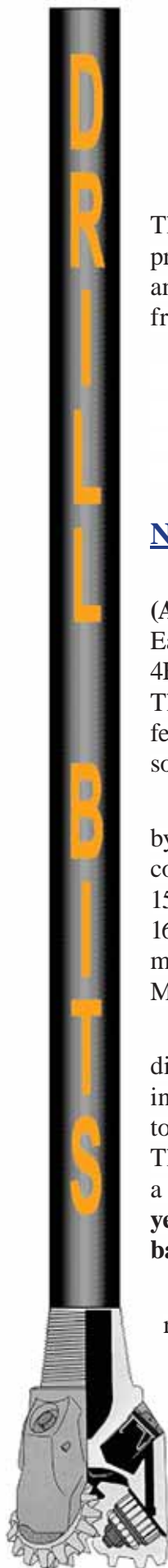
Although 16 wells have been completed as producers the cumulative oil production for the field is a disappointing 1,318,753 barrels of oil. Perhaps Sentry Energy Services will be successful with its #1 Eagles Ranch, kicking off a new series of drilling in the field.

Castex Energy will drill the #1 TEX L-CIB C RA SUA;LL&E, SN 250180, **Wildcat, (B)**, its King Lake prospect, in T20S-R14E to a total depth of 19,053 feet, (TVD 18,000), to test Tex L sands. This well is located 1½ miles southwest of the only other well in the area, a dry hole drilled to a depth of 15,338 feet in 1961. It is also located one-half mile southeast of a well permitted to a depth of 17,685 feet in 2007, but was not drilled as the permit expired.

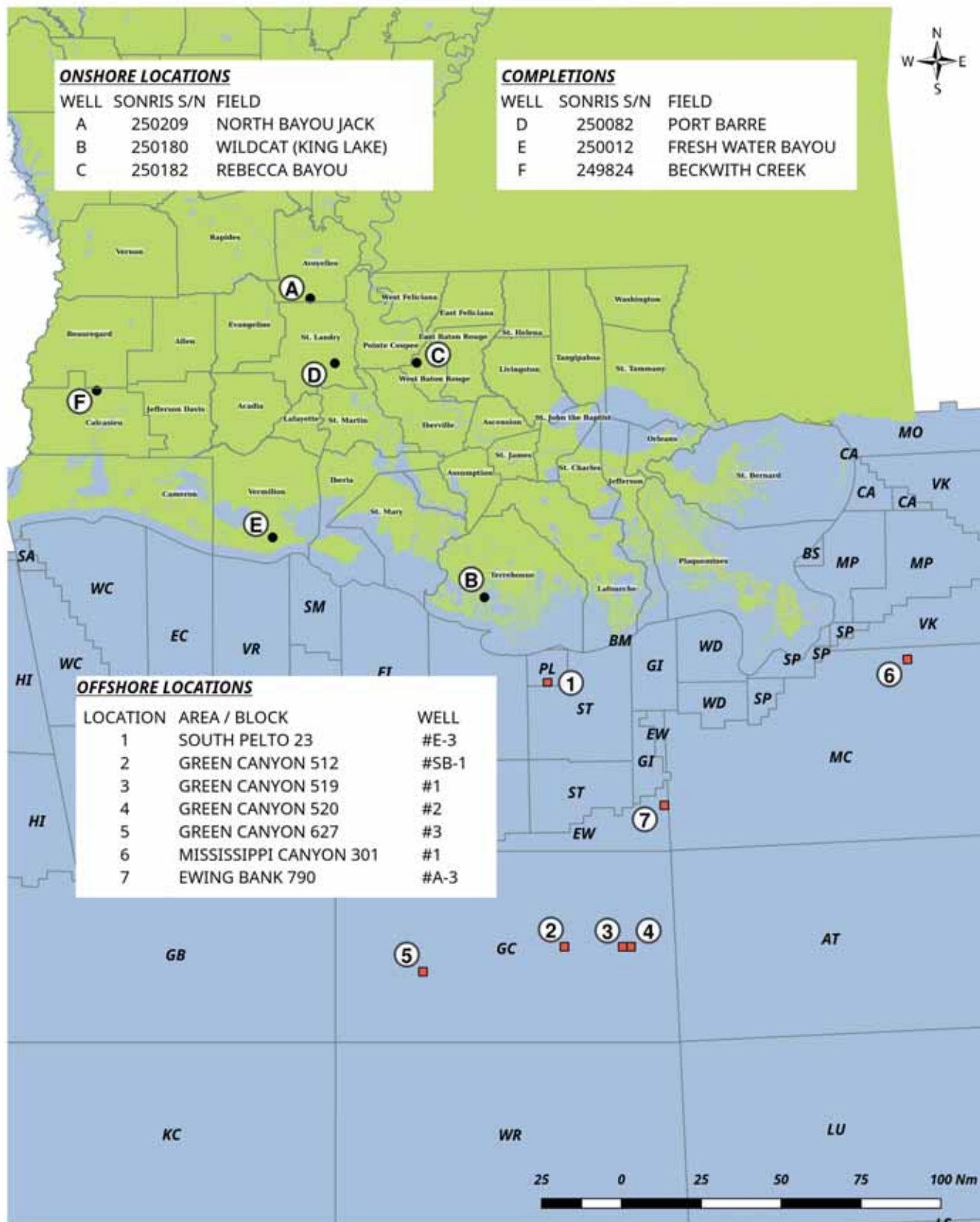
In West Baton Rouge Parish, **Rebecca Bayou Field, (C)**, Pan-OK Company will drill the #1 WILBERTS SONS, SN 250182, to test Nonion struma/Nodosaria sands at a depth of 9791 feet, (TVD 9400). The well will be drilled in Sec 29, 6S-11E, 1½ miles north of production. The field has been off production since 1989.

COMPLETIONS

Key Operating Company re-entered the Union Gas, #1 Stanton, SN 239752, in **Port Barre Field, (D)**, St. Landry Parish, which had been drilled in 2009 and plugged after testing **821 BOPD** and



Onshore & Offshore Activity Map for South Louisiana JUNE 2017



1180 MCFG through perforations 11,258 to 11,264 feet, (see April *LOG*).

Key then perforated the re-entry, SN 250082, in the intervals 10,038 to 10,042, and 10,050 to 10,064, and 10,076 to 10,086 feet. This sand, a Wilcox sand, having more than 50 feet of net sand, and more than 3 ohms resistivity, **swabbed 100% salt water**. Key reported that a pulsed neutron log was run which confirmed that the zone was wet. However, on March 22, Key filed a report showing the well was plugged as a “**shut-in dry hole-future utility**.”

As previously reported, Hilcorp Energy drilled the #2 Exxon Mobil, (SN 250012), in **Freshwater Bayou Field, (E)**, in Sec. 28, 16S-2E. It was drilled to a total depth of 15,257 feet where a fish was lost in the hole at 9492 feet. Hilcorp was unable to recover it and the well was temporarily abandoned on 3/24/2017.

In Calcasieu Parish, **Beckwith Creek Field, (F)**, Five-Jab, Inc. drilled its #3 Griggs, SN 249824, in Sec. 5, 8S-9W to a total depth of 7550 feet and plugged and abandoned it as a dry hole.

OFFSHORE GULF OF MEXICO

SHELF AND DEEPWATER ACTIVITIES

by Al Baker

During **April 2017**, the **BOEM** approved **58** Gulf of Mexico drilling permits. Of these, **10** were for shelf wells and **48** were for deepwater wells. Of the total number of permits, there were **7 new well permits**. **Six** permits were issued in **deepwater**, and **one** permit was awarded on the **shelf**.

The single new well permit on the shelf was issued to **Talos Energy Offshore** for their **South Pelto 23 #E-3** development well.

The six deepwater new well permits included **4 exploration** and **2 development wells**. Two exploration well permits were issued to **Anadarko Petroleum** for their **Green Canyon 519 #1** and **Green Canyon 627 #3** wells. **LLOG Offshore Exploration** received an exploration well permit to drill their **Mississippi Canyon 74 #1** well, and **BHP Billiton Petroleum (GOM)** obtained a permit to drill their **Green Canyon 520 #2** well. The two development well permits were granted to **Hess Corporation** for their **Green Canyon 512 #SB-1** well and to **Walter Oil & Gas** for their **Ewing Bank 790 #A-3** well.

On April 28th, **IHS-Petrodata** reported that the Gulf of Mexico mobile offshore rig supply stood at **95**, which is **1** less than last month. The marketed rig supply consisted of **44** rigs, of which **30** were under contract. The marketed rig supply number and the contracted rig supply number is the same as last month. The marketed contracted versus total rig supply utilization rate is **31.6%**, while the marketed contracted versus marketed supply utilization rate remains at **68.2%**. By comparison, the April 2016 fleet utilization rate stood at 55.8% (versus 46.3% today) with 63 out of the 113 rigs under contract

As of April 28th, **BakerHughes** indicated that there were **17** active mobile offshore rigs in the Gulf of Mexico, which is **56.7%** of the rigs under contract mentioned above. This active rigs number is **5** less than reported last month. Of the 17 rigs, **5** are located on the **shelf** and **12** are situated in **deepwater**. The current shelf operators include Arena Offshore, Renaissance Offshore, Talos Energy and Walter Oil & Gas. The current active rigs count compares to 24 active rigs during the same period last year, representing a **29.2%** decline (minus 7 rigs) in yearly rig activity.

As of April 28th, the **BakerHughes** total U.S. rig count stood at **870** rigs **down 55%** from the **September 26, 2014 high** of **1931** rigs, but up **466** rigs or **115%** from the **May 20, 2016 low** of **404** rigs. By comparison, the rig count stood at 420 rigs a year ago. Of the current 870 rigs, **697** are **oil rigs** and **171** are **gas rigs**. Texas has the largest number of rigs with 437, which is slightly over half (50.2%) of the total number of rigs.

As of April 27th, the BOEM has announced that it had accepted as sufficient 18 bids in the March 2017 **OCS Sale 247** that covered the **Central Gulf of Mexico**. A total of **145 bids** remain in the Phase 2 evaluation period, which can last until June 21st.

Did You Know...

The visitor center near the top of Mount St. Helens is named for David Johnston, the geologist who predicted that the volcano would explode not upward but sideways. He was six miles away when the volcano erupted on May 18, 1980. Johnston saw the eruption, radioed it in and was killed minutes later by the pyroclastic blast of gas and rock.

The Mount St. Helens eruption killed 57 people, destroyed 230 square miles of forest and rained ash as far east as Wisconsin.

Read more: <http://www.smithsonianmag.com/science-nature/the-ten-most-spectacular-geologic-sites-38476122/>

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NOGS PLANO Annual Golf Tournament



Money Hill Country Club

May 1, 2017



On Monday, May 1, NOGS and PLANO hosted their joint charity golf tournament in support of the Louisiana Children's Museum and Children's Museum of St. Tammany. With seventy-eight players, strong volunteer turnout from both organizations, generous support from all our sponsors, and the good fortune of lovely weather, the tournament was a success for all participants.

While some teams might have achieved better scores than others (not that we're naming any names), fun was had by all as the day's play concluded with a steak dinner provided by Diversified Well Logging and the final prize ceremony.

Thanks again to all players, sponsors, and volunteers for your enthusiasm and generosity in helping us support education for Louisiana's children.

To see more pictures from the tournament, please visit www.nogs.org/galleries/.



Photos by Arthur Christensen

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Falling Waters State Park, A Surprise Trip to the Past

By Fran Wiselady

It was a nice sunny day in March when David and I decided to go to the Falling Waters State Park in Florida, a 90-minute drive from Pensacola going east on I-10. It is the site of Florida's highest waterfall. My daughter Mary recommended the park; she said it was very pretty.

The park is atop a bed of limestone that was eroded by water forming the many sinkholes and caverns. The limestone is overlain by a sandy soil deposited as ancient beaches. There are short trails for nature lovers.

The sinkholes at the park were used as hideouts by Indian warriors fighting against Andrew Jackson during the Seminole Wars.^[1] The park is the site of a Civil War era gristmill.^[2] The gristmill was powered by the waterfall. Later in 1891, a whiskey distillery was constructed on the site to meet the demands of men building the frontier railway.

The trail beginning at the parking lot is an easy nice paved walkway. Just a short distance takes you right to the waterfall. The waterfall is at the top of a 73-foot deep sinkhole. The falling water is fed by springs and varies throughout the seasons from being completely dry to full flow. The falls were a bit more than a trickle when I was there, and it looks like there is a giant clawed hand from the Creature of the Black Lagoon looming over top. The water from the waterfall flows into a large cavern near the base of the sinkhole.

The surprise is another short distance on a boardwalk with some steps but worth the effort. The first oil well drilled in Florida is at this site. In 1919 a tall wooden derrick and a steam driven rig drilled for oil. At a depth of 3900 feet, some gas was released with a false report of a gusher. The well was drilled to 4912 feet, but no oil of commercial quantity was found. The well was capped in 1921.

It was fun being surprised by some oil well history. Mary didn't even mention it, but as a horticulturist, she is more concerned with the beautiful ferns and mosses all over the park.



1. Gallagher, Peter B. (1985-02-13). "What next for a waterfall? What next for a state?". *St. Petersburg Times*. p. 10-D. Retrieved 2010-06-22.[dead link]

2. ^ Jump up to:^a^b^c "Falling Waters State Park: History." Florida Division of Recreation and Parks. Retrieved 2010-06-22.

Association of Levee Boards of Louisiana (ALBL) Geology & Geophysics Committee Working

By Mike Merritt

Public officials, representing all levee districts in Louisiana, gather in New Orleans for technical meetings early each December. At the December 2015 Association of Levee Boards of Louisiana (ALBL) meeting, in New Orleans, NOGS member and SLFPA-W Commissioner, Mike Merritt gave an illustrated lecture on technologies you don't see much anymore. Some of the examples cited were: 1) analog black and white television broadcasts, illustrated by a picture of an antenna on a roof; 2) one dollar haircuts, illustrated with a picture of Sheriff Andy Taylor at Floyd's Mayberry, NC, barbershop; and 3) a picture of a wooden, mule-drawn, Wichita Falls spudding (cable tool) rig Merritt offered as an exception to "prove the rule" because he considers it a metaphor for the "1930's technology" in use on the levees whereby authorities rely on cores spaced far apart instead of obtaining modern, comprehensive geophysics surveys.

Merritt respectfully asked the ALBL to set up a committee to examine the new geology methods and geophysics technologies currently in use around the world, (but not here). He urged the new ALBL Committee consider or determine which of these modern earth science methods would be best suited to South Louisiana circumstances and most likely to confirm levee foundation alloformations are stable and strong enough to host flood protection projects in the Lower Mississippi River Valley.

After considering a recommendation to form a Geology & Geophysics Committee (originally presented at a prior meeting in New Orleans in December, 2015) at the May 2016 meeting in Baton Rouge, ALBL President Steve Wilson formed a Geology and Geophysics Committee, nicknamed The "Geo Technical" Committee and appointed these public officials to serve on the Geo Technical Committee:

- Hon. Mike Merritt, SLFPA-W, Chairman
- Hon. David Camardelle, Mayor of Grand Isle
- Hon. Tina Horn, Chenier Plain Coastal Restoration and Protection Authority
- Hon. John Stringer, Tensas Basin Levee District
- Hon. Bob Turner, SLFPA-E Executive Director
- Hon. Will Tyson, Atchafalaya Basin Levee District

- Hon. Steve Wilson, ALBL President
- Hon. Windell Curole, General Manager, South Lafourche Levee District

The Geo Technical Committee worked hard reviewing technical materials, including copies of the NOGS Fall 2016 Field Trip Guide Book. Their detailed findings were submitted to the ALBL Executive Committee during the December 2016 meeting in New Orleans. At the next Executive Committee meeting in February 2017, the Geotech Committee Report was presented by Mr. Windell Curole together with the Geo Technical Committee's formal request that ALBL accept its findings and adopt an advisory statement informing all ALBL members about best practices concerning geology and geophysics matters. The request was approved. This geology best practices advisory statement, was offered to Louisiana levee commissioners by reporting it for the record in the Executive Committee's minutes. At the time of writing, it is expected to be in the hands of ALBL members meeting in Baton Rouge on May 4-5.

"ALBL members are advised the Geo Technical Committee's inquiry informs it a best practice construction geology method consists of three steps:

Step 1: compiling all available research about the levee right of way, such as reports, core descriptions and maps;

Step 2: field investigations or additional technical surveys or mapping to combine with Step 1 data to provide complete and detailed coverage of the project area;

Step 3: geological or geophysical analysis summarized in a comprehensive report, for example, identifying any geologic hazards or concerns to help levee districts manage risks affecting a levee.

Preferably, specific advice, recommendations or a second technical opinion are best obtained from a geologist licensed to practice before the public by the Louisiana Board of Professional Geoscientists."

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.

In the Galleries:

Take a look at 66 photos of the recent NOGS/PLANO Golf Tournament at Money Hill Country Club Golf Course, held on May 1st.

From the President *(continued from page 5)*

event. Arthur Christensen has done a wonderful job photographing NOGS events. Thanks to Kristee Brown for doing a great job printing the *LOG* and designing our 75th Anniversary Mementos.

NOGS could not present events like the Christmas Holiday Party and the Golf Tournament without the benefit of sponsors. I wish to express my sincere appreciation to all of them. However, I want to extend a special thanks to Tim Klibert and Leslie Broussard of Diversified Mud Logging for their exceptional generosity in supporting NOGS.

I also want to extend a very great thanks to our Office Manager, Annette Hudson, whose willingness to do what it takes to get the job done and her institutional knowledge makes her a huge asset. Thanks also to my good friend Don Dubose for supporting NOGS and me.

We have a very talented Board of Directors for the upcoming year thanks to the fine work of Nominating Chair Jim Zotkiewicz. Joining President Kathy Haggar will be President-Elect Alex Janevski, Vice-President Chris McClindon, Secretary Grant Black, Editor Laura Sorey, Treasurer Margaret McKinney, and Director Dave Reiter. Many, many thanks in advance to these members for their willingness to serve. NOGS will

face serious challenges if the oil industry continues in its current state. We are starting to look at ways to deal with this possibility, and incoming President Kathy Haggar will need your assistance. Please help her and NOGS by stepping up and volunteering for a committee or an event.

A very special thanks goes to my wife Genny and my daughter Elizabeth. I have taken many hours away from chores around the house to work on NOGS duties and Genny has been very understanding. Thanks to Elizabeth for proofreading my monthly columns and for always bringing a ray of sunshine into my day.

I am deeply honored to have served as NOGS President and hope what I have written above allows others to see how much I value what they have done to help me this past year. If I have left out anyone, and I am sure I have, please accept my apologies. I am very grateful to the members who throughout the year have come up to me with words of support and encouragement. I have gained a tremendous awareness of the good that NOGS does for our local geologists, students of geology, and the community in general. I am very proud to have been part of that. Thank you.

Al Melillo

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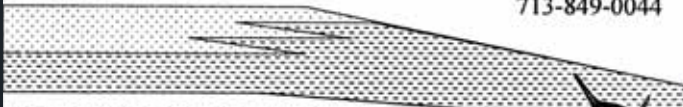

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