

IN THIS ISSUE





On the Cover

The Jurassic Coast along southern U.K.'s Dorset and East Devon coastlines is named appropriately. This coastline is special because it is a continuous preservation of Earth's history from 250 to 65 million years ago. This is known as the Triassic, Jurassic and Cretaceous periods... when the dinosaurs roamed the planet. During this time the coast changed a lot, going from a desert, to a tropical sea, to a coastal forest and swamp, and to a shallow sea. There are many fossils scattered along the coastline and in the cliffs. The most common type of fossil here is marine, including famous pyrite "fool's gold" ammonites, belemnites, and even bones of large sea-dwelling marine reptiles like the Ichthyosaurs (though these are much rarer to find). In addition to the fossils, there are wonderful coastal geological and geomorphological feature like arches, pinnacles and sea stacks.

From the Editor...

The recovery from the damages caused by Hurricane Ida on the 16th anniversary of Hurricane Katrina's landfall on August 29, 2005, will take a lot of energy, patience, and support from all of us. Those of who live in southeast Louisiana are keenly aware of the economic, social, and environmental damages from hurricanes and we are a role model for helping members of our community recovery, supporting projects that will make our environment more resilient and our businesses and way of life sustainable.

If all of us pitch in and do something to help our neighbors, no matter how small, we will recover and return to vitality before you know it. Here's a suggestion for your friends around the country who would like to do something to help have a conversation about planting a tree where they live.

Click links to access web



Emmitt Lockard
2021/2022 NOGS LOG Editor



A MESSAGE FROM 2021/2022 NOGS PRESIDENT

To all members and friends of the New Orleans Geologic Society:

I hope this finds all safe and well after the difficulties brought by Hurricane Ida on top of those already in place caused by COVID. I know that many were forced to evacuate due to the hurricane effects, as most of us were (and some still are) without electricity, Wi-Fi and other connections damaged by Hurricane Ida. Hopefully, both the hurricane season and COVID will be less for the rest of the year.

Oil and gas prices are fluctuating in response to less travel due to COVID, but are up from last month with WTI at \$70 compared to last month's above \$66 per barrel. Natural gas prices rose above \$7.40 per mcf. Drilling activity is still strong in the US, with over 500 rigs drilling now.

COVID numbers are better with a decrease of the August record of over 11,000 new cases per day in early August to about 3,000 new cases per day now. Even with a decrease in cases, COVID is still significant, and our thoughts and prayers go out to all those affected by COVID. Louisiana governor John Bel Edwards has extended the Louisiana mask mandate until September 29. In the meantime, the monthly NOGS presentations will continue online in the virtual mode.

As always, a reminder of dues renewal if you haven't already done so, \$35.00 for Active membership and \$15 for Student membership. Please be reminded that we haven't been able to have a lot of fundraisers this year so I encourage you to pay your dues and to give consideration to adding a special donation to the Memorial Foundation to help us continue our worthwhile local community, university, and education programs.

I continue to look forward to this next year as we hopefully return to a more normal time.

Thanks everyone, stay safe and well!

Best regards, Doug Bradford



Drill with confidence.

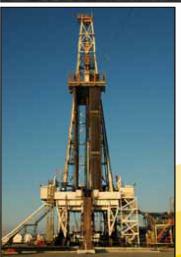
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PICTURE FROM THE PAST

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This photo was published in the December 2010 NOGS LOG, celebrating publication of our latest technical volume. The steering committee promoting the publication of the Oil and Gas Fields of South Louisiana, 2010.

They are: From left: Charley Corona, Duncan Goldthwaite*, Tom Klekamp*, Art Johnson*, Ed
Picou, Louis Lemarié and Carlo Christina*

Deceased *

Submitted by Ed Picou, Chairman - Historical Committee

Vertising rate

The New Orleans Geological Society 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, with specific emphasis to exploration and production of petroleum and natural gas. Secondary related objectives include the dissemination of pertinent geological and environmental technological data, and the maintenance of a high standard of professional conduct of its members. The full history of the Society can be found at nogs.org.

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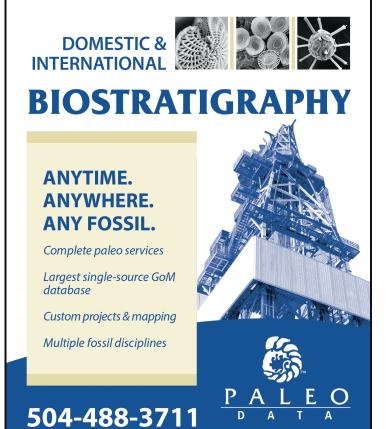
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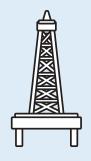
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DRILL BITS

OFFSHORE GULF OF MEXICO SHELF AND DEEPWATER ACTIVITIES BY AL BAKER



During August 2021, the U.S. Department of the Interior Bureau of Safety and Environmental Enforcement (BSEE) approved 62 Gulf of Mexico (GoM) drilling permits. Ten of the permits were for shelf wells, and the remaining 52 permits were for deepwater wells. Of the total number of permits, there were 6 new well permits. Five permits were issued in deepwater and one permit on the shelf.

The single shelf new well permit was given to Contango Operator for their Eugene Island 284 #1 well.

Of the five deepwater new well permits, 4 permits were for exploration wells, and 1 permit was for a development well. Shell Offshore was given 2 permits for their Walker Ridge 508 #1 well and Mississippi Canyon 391 #AW-4 wells. Chevron U.S.A. was granted a permit for their Green Canyon 822 #17 well. Anadarko Petroleum was awarded a permit for their Mississippi Canyon 129 #5 well. LLOG Exploration Offshore received the development new well permit for their Keathley Canyon 830 #1 well.

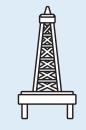
On August 27th, IHS-Petrodata indicated that the GoM mobile offshore rig supply stood at 52, which are 3 less than last month. The marketed rig supply consisted of 26 rigs, of which 21 were under contract. The marketed rig supply is 5 less than last month, and contracted rig supply number is 4 less than last month. The marketed contracted versus total rig supply utilization rate was 40.4%, and the marketed contracted versus marketed supply utilization rate was 80.8%. By comparison, the August 2020 total fleet utilization rate stood at 66.7% with 36 rigs under contract out of the 63 rigs in the fleet.

On August 27th, Baker Hughes reported that there are 14 active mobile offshore rigs in the GoM, which is the same as last month and 53.8% of the rigs under contract mentioned above. Currently, 4 rigs are drilling on the shelf, and 10 rigs are drilling in deepwater. They include 7 rigs in the Mississippi Canyon Area, 2 rigs in the Eugene Island Area and 1 rig each in the Garden Banks, Green Canyon, Viosca Knoll, South Marsh Island and Main Pass Areas.

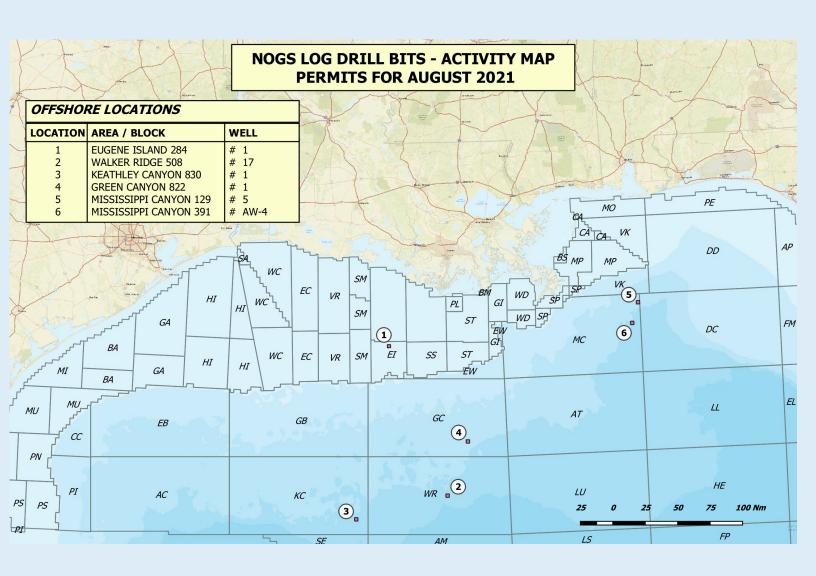
On August 27th, the Baker Hughes total U.S. rig count stood at 508 rigs, which are is 20 more rigs than reported at the end of July 2021. Of the 508 rigs, 410 (80.7%) are oil rigs, 97 (19.1%) are gas rigs and 1 miscellaneous rig. A year ago, there were 254 rigs working in the U.S. inferring that the current rig figure represents a 100% increase in rigs year over year. Presently, Texas continues to have the largest number of rigs with 232, which is 45.7% of the total number of rigs in the U.S. Louisiana currently has a total of 49 rigs, which is 1 more than last month. Nationwide, Louisiana continues to rank third in the rotary rig count. New Mexico ranks second with 81 rigs.



DRILL BITS



OFFSHORE GULF OF MEXICO SHELF AND DEEPWATER ACTIVITIES
MAP BY KEVIN TROSCLAIR









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NEW ORLEANS GEOLOGICAL SOCIETY MEMORIAL FOUNDATION INC.

Founded March 14, 1978, the mission of the New Orleans Geological Society Memorial Foundation is to promote earth science related or scientific purpose by granting of scholarships to outstanding Geology students at the universities in Southeast Louisiana having a comprehensive curriculum and offering a degree in Geology. The Bill Craig Memorial Fund provides for any earth science related educational or scientific purpose that is a direct benefit to grades K-12 teacher or teachers within the Greater New Orleans Area. This area is defined as the area encompassing New Orleans, Jefferson, Plaquemines, St. Bernard and St. Tammany Parishes.

THE MEMORIAL FOUNDAION IS AN IRS TAX EXEMPT CODE #501(C)(3) ORGANIZATION. THE FEDERAL ID IS 72-1220999. PLEASE CONSIDER MAKING A DONATION TO THE FOUNDATION. YOUR INDIVIDUAL SUPPORT IN ANY AMOUNT WILL HELP MEET THE IRS **GUIDELINES FOR** OUR FOUNDATION. THANKS!



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Recent Oil Industry Headlines September 2021

9/27/2021 - Goldman expects oil prices to hit \$90 by year-end as supply tightens - Goldman Sachs raised its forecast for year-end Brent crude oil prices to \$90 per barrel from \$80, as a faster fuel demand recovery from Delta variant and Hurricane Ida's hit to production led to tight global supplies. Brent futures hit a near three-year high last week as global output disruptions have forced energy companies to pull large amounts of crude out of inventories. Read Full Article

9/24/2021 - U.S. drillers add oil and gas rigs for 14th month in a row -Baker Hughes - U.S. energy firms this week added oil and natural gas rigs for a 14th month in a row as more offshore units in the Gulf of Mexico returned to service after shutting when Hurricane Ida slammed into the coast in late August. This week, 3 offshore rigs returned in the Gulf of Mexico, energy services firm Baker Hughes Co said in its closely followed report on Friday. Read Full Article

9/24/2021 - An Unstoppable Natural Gas Rally – Shell, the main producer in the GOM, said that repairing the West Delta-143 platform will take at least several months, shaving off some 250,000 b/d of production over Q4 2021. More than 16% of US Gulf of Mexico production is still shut-in, equivalent to almost 300,000 b/d as the pace of restoring output has weakened substantially this week. This will continue a rally for the foreseeable future. Read Full Article

9/23/2021 - Oil strong amid U.S. stocks draw and supply tightness - Oil prices continue to thrive on the momentum of supply constraints in the U.S. Gulf of Mexico, which was reflected in the large crude inventory draws report of last week. While oil production is slowly returning, there are still prolonged outages that may last into early next year, supporting a bullish sentiment as some of the expected supply in coming months now will be removed from the equation. Read Fill Article

9/20/2021 - Chevron CEO: Oil Prices To Remain Higher For Longer - Global oil and gas prices will remain higher for longer as companies resist the urge to ramp up production, the chief executive of Chevron, Mike Wirth told Bloomberg in an interview. One of the reasons for this reluctance to produce more is that investors are not on board with it, Bloomberg notes. Indeed, investors in oil and gas have become quite nervous about the long-term future of their investments there and have prioritized cash returns now rather than later. Read Full Article

9/16/2021 - Gulf of Mexico oil production still reeling from hurricanes Ida, Nicholas - Hurricane Ida plowed through the Gulf of Mexico three weeks ago, but oil refineries in the area are still struggling to get up and running. That storm temporarily knocked off 95% of the Gulf's oil production — Hurricane Nicholas only postponed operations even longer. On Tuesday, 39 production platforms were still evacuated when Nicholas made landfall. Daniel Armbruster, with AAA Texas, says so far, gas prices are remaining steady. But that could change if operations don't pick back up soon. Suzanne Lemieux with American Petroleum Institute says right now, federal agencies are actively inspecting operations on and off shore. Read Full Article

TOP 10 REASONS TO JOIN NOGS

- Proclaim your professionalism
 - With an 80 year history and over 300 active members, NOGS is the premier professional organization for geologists in New Orleans. Adding your name to the ranks declares your pride in the profession you have chosen.
- Advance your career

 NOGS members enjoy educational opportunities and top speakers designed to increase knowledge and keep up with the newest trends in geoscience, both on the national and local levels.
- Advertise your integrity

 NOGS has a reputation of over 75 years for upholding high standards. Align yourself with like-minded geologists and related fields.
- Further your cause

 NOGS was organized for the purpose of facilitating the development of the profession and science of Geology, at the time with a focus on production of oil and gas. Since Hurricane Katrina our objectives expanded to include the dissemination of the geological facts of flood control, engineering and environmental geoscience.
- Network with others who do what you do

 Making connections, between people and ideas, is an important part of any scientific endeavor. Meet others who can help you make those connections.
- Advocate for your profession

 Serious-minded professionals know that serving the profession means responding to calls for action from those who represent the profession. NOGS monitors trends in geoscience education, regulation, and practice standards and periodically advises members on required action.
- Serve your profession and community

 Opportunities for individuals to serve on NOGS committees that work on a variety of issues from building educational programs to sharing knowledge with others to providing scholarships to young geologists in our area.
- Bon't reinvent the wheel ... use available resources

 NOGS members can provide you with the resources you need to do your job well. Long-time members remain active and are happy to share their knowledge and best practices.
- Play a part in elevating the status of geosciences.

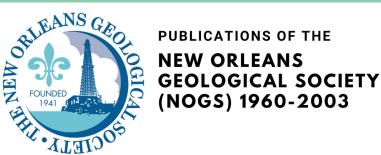
 Your membership in NOGS and your dedication to geoscience elevates the entire profession.
- Do it for YOURSELF!

 It's all about YOU! NOGS' educational, networking, and career planning programs will take you where you want to go!



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Louisiana State Geologist and Director of Louisiana Geological Survey Announcement



Dr. Clare Falcon is the first woman to be selected as the Louisiana State Geologist and Director of the Louisiana Geological Survey. The news of Dr. Falcon's selection has created considerable excitement among members of the New Orleans Geological Society. Many of us have had the pleasure of working with her professionally and getting to know her as a person.

Dr. Falcon is a native of the United Kingdom where she received her bachelor's degree from Liverpool University in Geology and her Ph. D. from the University of Leeds before beginning her career in the oil and gas industry. In her 25-year career she has worked for Schlumberger in the oil and gas service sector and for the multinational operators that include Amoco, Statoil, Eni Petroleum and BHP. She has held positions as a geologist, sedimentologist, Exploration Team Leader, and Geoscience Manager for exploration and development programs in the U.S. and Mexico.

Dr. Falcon's academic interests, professional experience and leadership training, make her an excellent choice to fulfill the Vision of the Louisiana Geological Survey to make the survey one of the premier geological surveys in the nation. Additionally, the survey will provide relevant unbiased geological and environmental information to state agencies and decision-making bodies to guide decisions that balance protection of the environment and natural resource development.

30th Anniversary of the Willow Bayou Discovery – Cameron Parish, Louisiana

Jeff Spencer GCAGS Historian

Many explorationists have experienced the "success" of an exploratory well, only to find that the discovery could not be successfully offset. The Willow Bayou field of Cameron Parish, Louisiana is an example of such a discovery where, after the success of a rank wildcat, an aggressive drilling plan of deep wells in a wetland environment and complex geology resulted in undoubtedly a huge financial failure.

In early 1990 Plains Resources promoted their "Plains/Miami Fee Exploration Program." Plains had secured leases on ~18,500 acres of the large Texas Miami Fee block in west-central Cameron Parish, Louisiana. Texaco had purchased ~140,000 acres in fee from the Miami Corporation in 1919.



Written on reverse of photograph: "Miami Fee No. 1 in Cameron, La. Plains Resources 8/92." The August 1992 date and the gas flare would suggest the Plains No. 1 sidetrack, renamed the No. 4.

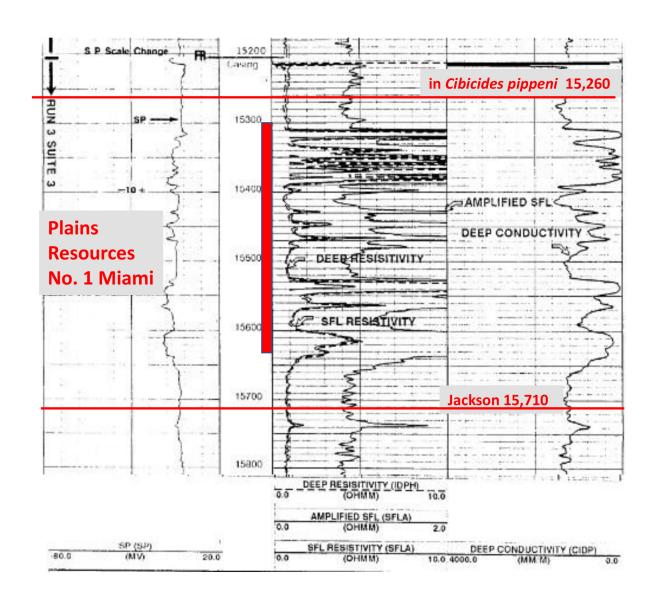
After a geological/geophysical study of the area, Plains had identified a "large, untested paleostructure" with Oligocene to Eocene potential. In April 1990, Plains revised their proposal to include a specific location for a proposed 16,500 wildcat in Sec.2-T14S-R14W with the primary objectives as the Oligocene Camerina A, Hackberry, and the Eocene Cockfield/Yegua. The permit for the well included 20,707 feet of board road, bridges at two canal crossings, 3 culverts, a ring levee, and two weirs.

Discovery well: In May 1991, the Plains Resources No. 1 Miami Fee well (17-023-22524; serial# 212991) spud. The well was drilled to a total depth of 16,500′ MD and completed on October 17, 1991, from perforations of 15,300-632′, flowing 1353 BOPD & 23.3 MMCFGD (FTP 8551, SITP 10764, 24/64″ ck). The completion zone was designated "Lower Oligocene."Paleontological analysis placed the completed sand section in the Middle-Lower Vicksburg with an "in Cibicides pippeni" at 15,260′ and the interpretation of an unconformity or fault at the 15,260′ pick. The Vicksburg age of the productive sands was somewhat of a surprise to many geologists working south Louisiana. A top of Jackson (15,710′) was picked approximately 70 feet below the base of the perforated sand. The better sands, by sidewall core analysis, had porosities between 24 and 28% and permeabilities from 250-380 md. The No. 1 Miami produced for only six months, with cumulative production of 109 MBO and 1.6 BCFG.

1992: Plains spud two wells, Nos. 2 and 3 Miami, in May 1992. The No. 2 well was plugged and abandoned in October 1992 after reaching a total depth of 20,134′ MD. The No. 3 well drilled to a total depth of 18,645′ MD and was completed (12/1992) uphole in Hackberry sands (PF: 12664-82′ & 13206-16′) with an IP of 127 BOPD and 1056 MCFGD. The well was plugged and abandoned in 1997 after producing only 9 MBO and 101 MMCFG.Both the Nos. 2 and 3 Miami wells TD′d in the Yegua and neither encountered the Cibicides pippeni by paleo.

Also in May 1992, Plains re-entered their No. 1 well and sidetracked as the No. 4 Miami well. The well drilled to a total depth of 16,345' MD and was completed through multiple Vicksburg perforations. The well IP'd at 200 BOPD and 2500 MCFG. The well only produced 7.2 MBO and 81 MMCFG. In 1995 Plains made a final attempt to offset their Vicksburg discovery with the drilling of their No. 5 Miami. The well reached a TD of 16,500' MD and was plugged and abandoned.

Post Plains: In late 1998, Seitel completed their 225 square mile Black Bayou 3D seismic survey, which covered much of the Willow Bayou area. In 2001, Manti Operating Co. re-entered the Miami No. 5 well and unsuccessfully attempted completions in the Hackberry. Samuel Gary Jr. and Associates, Inc., drilled two wells. Their 26-1 Texaco E&P spud in June 2008 and was plugged and abandoned in November 2008 after reaching a total depth of 14,230′ MD. In May 2009, the company completed their 2-1 Texaco E&P (TD 16,360′ MD) in a Middle Hackberry sand from perforations of 13074-84′ with an IP of 432 BOPD & 3456 MCFGD. This well was plugged and abandoned in March 2021 after producing over 4 BCFG and 400 MBO, the best producing well in the Willow Bayou field.





The 71st Annual Gulf Coast Geoscience Convention (GeoGulf 2021) is scheduled for October 27-29, 2021 in Austin, TX. The convention has an excellent technical program and its offering of short courses include:

- Introduction to Salt Tectonics: Interpreting Seismic in a Salt-Driven Realm
- Advanced Multi-Well Formation Evaluation & Core Integration
- Shallow Marine Reservoirs: Deltas as Key Depositional System in Clastic Source-to-Sink Systems

Click here for more info

The Geological Society of America's Annual Meeting (Connects 2021) is scheduled for October 10-13, 2021 in Portland, OR. The meeting will be hybrid, online streaming will be available for this conference. The Keynote Symposia, Noontime Lectures, Halbouty Distinguished Lecturer, GSA Presidential Address, short courses and much more will be available online.

Click here for more info

The American Geophysical Union's Fall Meeting (#AGU21: Science is Society) is scheduled for December 13-17, 2021 in New Orleans, LA. This will be a hybrid meeting of Earth and Space Scientists, students and other scientists from diverse disciplines who will present their findings and solutions in person and online.

Click here for more info

The 50th Annual Gem, Mineral, Fossil, & Jewelry Show has been canceled.