

FEBRUARY 2023

Volume 63 No. 8

NCGS LOG



On the Cover

A rare winter storm blankets El Capitan Peak in the Guadalupe Mountains National Park situated in the west Texas panhandle. To the right of El Capitan, shrouded in clouds, is Guadalupe Peak, the highest point in Texas at 8,751 ft. The National Park is well known for its exposures of Permian age biohermal reef limestones and related forereef and backreef facies. The Park was dedicated in September 1972 to preserve these world class geological exposures and currently attracts nearly 180,000 visitors annually.



From the Editor...

Happy Mardi Gras Everyone,

The cover photo of this NOGS Log edition reminds me of how I originally became interested in pursuing a career in Earth Science. I grew up in nearby Carlsbad, NM, and spent a lot of time hiking the arroyos and canyons of the Guadalupe and Sacramento mountains with my father, who would pick up rocks and minerals along the way and identify them for me. How did you first become interested in the science of Geology? Everyone has their own story of how their interest in Earth Science was first piqued, whether it was from a teacher, a book or TV show, a friend or colleague, or in my case an interested parent who was well versed in all things geological. Or perhaps it was from one of the many educational activities that NOGS sponsors, such as the Super Saurus Saturday at the Louisiana Children's Museum. Now more than ever it is important for experienced Geologists to impart their accumulated knowledge of Earth Science to younger students through various educational activities. The future health of the science of Geology depends on it.

Have a wonderful and safe Mardi Gras season.



David

David Reiter

2022/2023 NOGS LOG Editor



A MESSAGE FROM 2022/2023 NOGS PRESIDENT

DOUGLAS BRADFORD

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

It is great to be “back to normal” again with in-person activities and meetings. Our recent in-person meetings have been well attended and will continue to be in-person at locations to be announced with the on-line option as appropriate.

NOGS outreach events are also getting back to normal with activities for youth such as the STEM NOLA event at the Saints Training Camp Saturday morning on March 4th, and the activity at the Children’s Museum to be announced. Other events to be announced when schedules are set are science days at the Children’s museums, assisting with local school science fair judging, and preparing for a spring golf tournament. Please look for more information on these activities in the coming months.

Also watch for the announcement for the Monday NOGS session at the upcoming Deep Water Symposium that will be coming soon. The session last year was an excellent all day presentation that was fully attended. We are looking forward to this year’s event.

As always, a reminder of dues renewal if you haven’t already done so, \$35.00 for Regular membership and \$15 for Student membership. 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.

Thanks everyone, stay safe and well!

**Best regards,
Doug Bradford
2022-2023 NOGS President**



FEBRUARY NOGS MEETING

MONDAY, FEBRUARY 6, 2023 11:30 AM
ZEA'S NORTH SHORE



A REGULATORY PERSPECTIVE ON INJECTION WELLS AND THE LOUISIANA ENERGY TRANSITION

ABSTRACT

Over the past several years, Louisiana has experienced a sharp rise in the number of companies looking to develop underground injection projects like hydrogen storage in salt caverns and the geologic sequestration of carbon dioxide as part of their plans for the energy transition. The regulation of large-scale underground injection projects such as these require highly technical assessments of various geological and engineering considerations throughout the life of the project. This presentation will provide a high-level overview of the regulatory considerations for Class V gas storage cavern wells and Class VI geologic sequestration wells required to ensure protection of the underground source of drinking water (USDW) in Louisiana.

SPACE IS LIMITED TO 45 GUESTS PLEASE MAKE YOUR RESERVATION EARLY!

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LAURA SOREY

Laura Sorey joined the Louisiana Department of Natural Resources in 2019 and is a geology supervisor for LDNR's Injection and Mining Division. She works with the permitting and oversight of Class I, II, and V injection wells and the development of Louisiana's Class VI geologic sequestration program. A native of Mississippi, Laura previously worked as a geologist in the oil and gas industry and in environmental consulting. She is a licensed PG in Louisiana and holds a BS in geology from Millsaps College and an MS in geology from Louisiana State University.



MATT ARANYOSI

Matt Aranyosi is the Manager of the Engineering Section in the Louisiana Department of Natural Resources - Injection and Mining Division. He graduated with a Bachelor's in Petroleum Engineering from Louisiana State University in 2008. After spending ten years in oil and gas reservoir consulting, Matt has worked for the Louisiana Department of Natural Resources for the last six years, primarily as a salt cavern engineer. He is a licensed PE and has been the Injection and Mining Engineering Manager since June 2022.

PICTURE FROM THE PAST



An eager foursome ready to hit the links on the Money Hill Golf Course at the NOGS Annual Golf tournament, May 15, 2000. All players photos were taken with the tourney's banner.

*Submitted by
Ed Picou, Chairman - Historical Committee*

advertising rates

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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JANUARY NOGS MEETING



**MACHELLE JOHNSON, SENIOR
RESERVOIR ENGINEER
AND
CHRIS MURLEY, GEOSCIENTIST**

Machelle has 30 years of extensive Gulf of Mexico Exploration, Development, and Production Experience. Prior to joining Cantium in 2019, Machelle held several team leadership and technical roles at Shell, Stone Energy, and Talos with most time spent working major Deepwater Fields, both sanctioning major projects and optimizing production as the lead Surveillance Reservoir Engineer. Machelle holds a Bachelor of Science (Petroleum Engineering) from the University of Alabama.

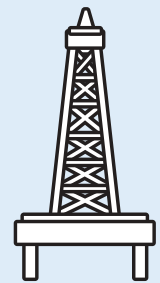
Chris has 8 years of experience in the oil and gas industry. Before joining Cantium as a Geologist in 2019, Chris was an Asset Development Geologist for Chevron where he worked on the now Cantium owned Bay Marchand and Main Pass fields. Chris earned his Bachelors in Geology from Louisiana State University and his MS in Geology from the University of Louisiana at Lafayette.

FINDING NEW OIL IN OLD FIELDS 7900'SD DEVELOPMENT IN THE MAIN PASS 41 FIELD



DRILL BITS

OFFSHORE GULF OF MEXICO SHELF AND DEEPWATER ACTIVITIES BY AL BAKER



During December 2022, the Bureau of Safety and Environmental Enforcement (BSEE) approved 53 Gulf of Mexico (GoM) drilling permits. Seven of the permits were for shelf wells, and the remaining 46 permits were for deepwater wells. There were 5 new well permits issued; all are in deepwater.

Of the 5 deepwater new well permits, 4 were for exploration wells, and 1 was for a development well. Shell Offshore received a permit for their Mississippi Canyon 942 #PN-4 development well in their Power Nap Field. Shell Offshore also obtained 2 exploration well permits for their Mississippi Canyon 802 #2 well and their Green Canyon 158 #3 well in their Brutus Field. Murphy Exploration & Production Company - USA was granted a permit for their Atwater Valley 138 #2 exploration well in their Oso Field. LLOG Exploration was awarded a permit for their Ewing Bank 877 #2 exploration well located in their Spruance Field.

On December 30th, IHS-Petrodata indicated that the GoM mobile offshore rig supply stood at 46, which is the same as last month. The marketed rig supply consisted of 34 rigs, of which 28 were under contract. The marketed rig supply and the contracted rig supply number were also the same as last month. The marketed contracted versus total rig supply utilization rate stayed at 73.9%, and the marketed contracted versus marketed supply utilization rate remained at 82.4%. By comparison, the December 2021 total fleet utilization rate stood at 70.8% with 34 rigs under contract out of the 48 rigs in the fleet.

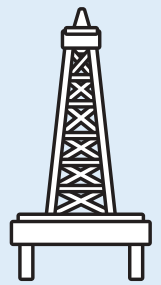
On December 30th, Baker Hughes reported that there are 15 active mobile offshore rigs in the GoM, which is 1 less than last month and 53.6% of the rigs under contract mentioned above. Currently, one rig is drilling on the shelf, and 14 rigs are drilling in deepwater. The single shelf rig is situated in the Main Pass Area. The deepwater rigs include 5 rigs in the Mississippi Canyon Area, 3 rigs in the Green Canyon Area, 2 rigs in the Walker Ridge Area and 1 rig each in the Garden Banks, Ewing Bank, East Breaks and Atwater Valley Areas.

On December 30th, the Baker Hughes total U.S. rig count stood at 779 rigs, which is 5 less than reported at the end of November 2022. Of the 779 rigs, 621 (79.7%) are oil rigs and 156 (20%) are gas rigs. Two rigs are listed as miscellaneous. A year ago, there were 586 rigs working in the U.S. inferring that the current rig figure represents an 32.9% increase in rigs year over year. Presently, Texas continues to have the largest number of rigs with 376, which is 48.3% of the total number of rigs in the U. S. Louisiana currently has a total of 68 rigs, which are 2 more than last month. Louisiana ranks fourth behind New Mexico, which has 102 rigs, and Oklahoma, which has 69 rigs.



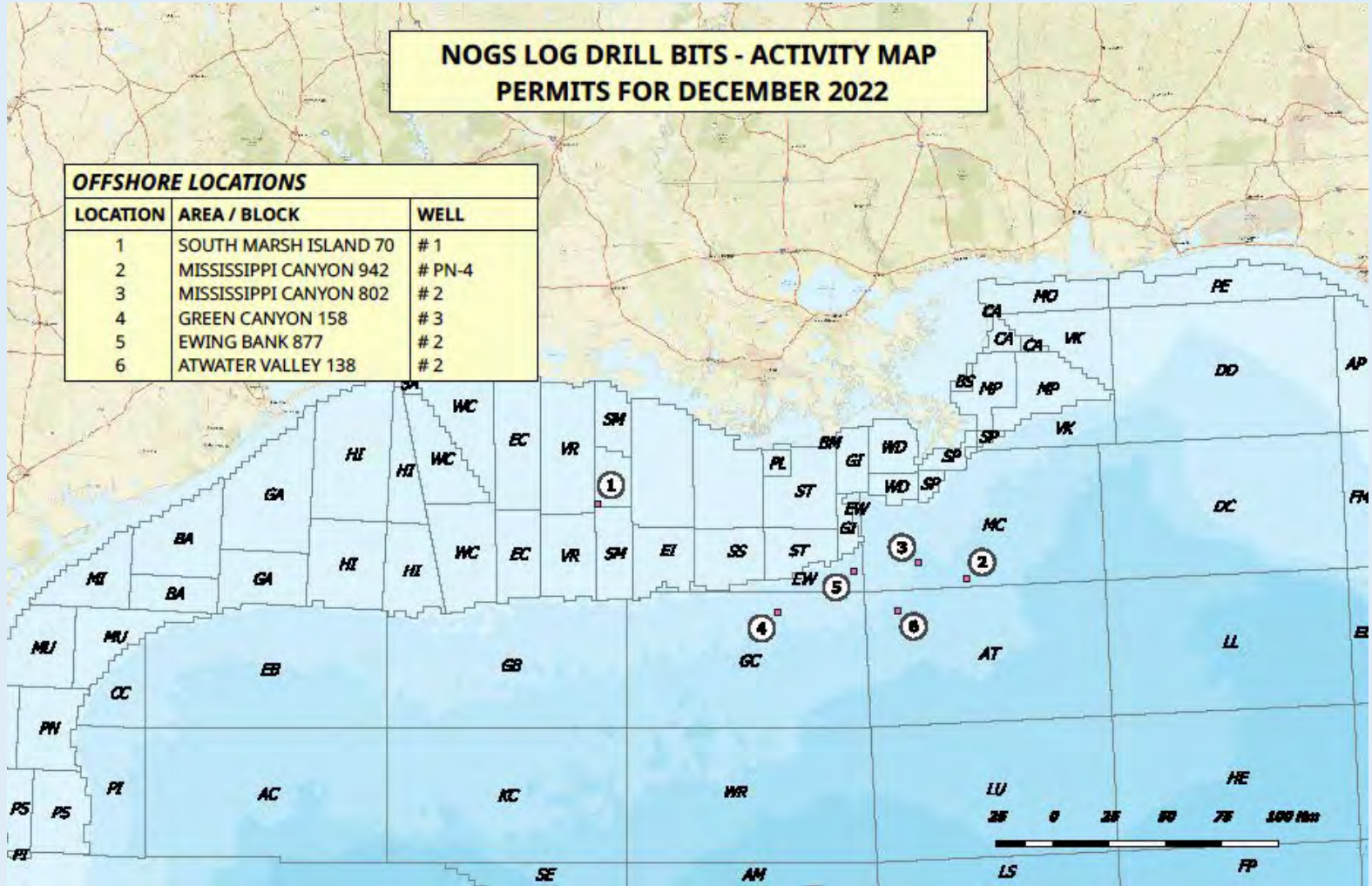
DRILL BITS

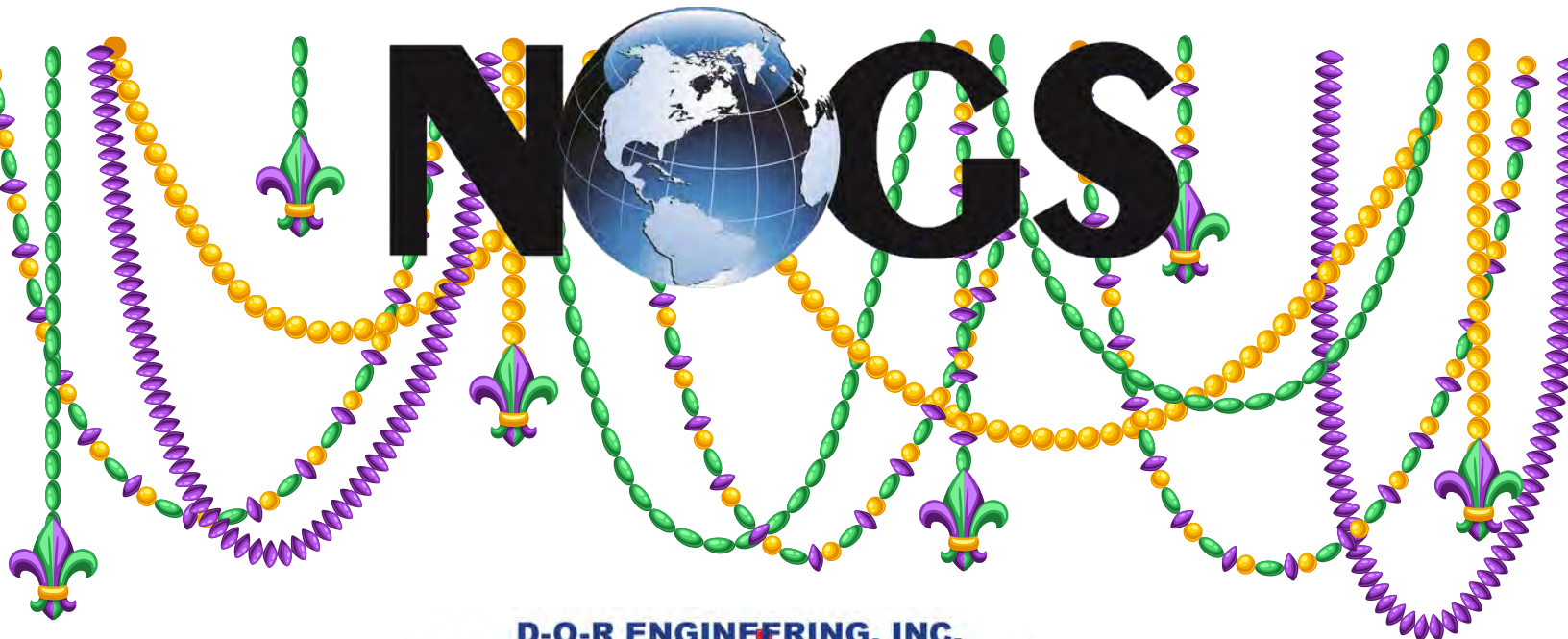
NEW WELL PERMITS OFFSHORE GULF OF MEXICO
SHELF AND DEEPWATER ACTIVITIES MAP BY
KEVIN TROSCLAIR



NOGS LOG DRILL BITS - ACTIVITY MAP
PERMITS FOR DECEMBER 2022

OFFSHORE LOCATIONS		
LOCATION	AREA / BLOCK	WELL
1	SOUTH MARSH ISLAND 70	# 1
2	MISSISSIPPI CANYON 942	# PN-4
3	MISSISSIPPI CANYON 802	# 2
4	GREEN CANYON 158	# 3
5	EWING BANK 877	# 2
6	ATWATER VALLEY 138	# 2





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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.

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Recent Energy Headlines...January 2023 Recap

1/4/2023 - Talos Makes Two Deepwater Discoveries Near Ram Powell Platform in Gulf of Mexico - Talos holds a 60% working interest in the two deepwater discoveries, Lime Rock and Venice, both of which are located near the company's Ram Powell platform, where future production from both wells will flow via subsea tiebacks. Talos encountered 78 feet, and 72 feet of net hydrocarbon pay in the primary targets at Lime Rock and Venice, respectively, with, the company says, excellent geologic qualities. The company collected pressure, fluid and core samples from the wells to confirm the discoveries. [Read Full Article](#)

1/6/2023 - BP to Invest \$7B in Gulf of Mexico Business by 2025 - BP plans to invest \$7 billion in its Gulf of Mexico business by 2025, according to a new report published by the company. BP outlined in the report that the investment will help drive its transformation toward an integrated energy company, "increasing production of resilient hydrocarbons that are some of the lowest carbon barrels of oil compared to other oil producing regions". [Read Full Article](#)

1/6/2023 - Phillips 66 to Buy DCP Midstream Publicly Held Units for \$3.8 Billion - Phillips 66 on Friday said it agreed to buy all of the publicly held common units of DCP Midstream L.P. for about \$3.8 billion in cash, boosting its economic interest in the natural-gas-liquids producer and marketer to 86.8%. Phillips, a Houston diversified energy manufacturing and logistics company, said it would pay \$41.75 each for the units, a roughly 6.2% premium to Thursday's closing price for the Denver company. [Read Full Article](#)

1/9/2023 - Job growth coming for Louisiana's oil, gas industries, experts say - BATON ROUGE, La. (WAFB) - Industry researchers expect the oil and gas industry to grow in 2023, which will include more job openings. The demand is going up and more hands are needed to get the job done. [Read Full Article](#)

1/16/2023 - Gulf of Mexico Lease Sales Edge Closer - The Bureau of Ocean Energy Management (BOEM) has announced that it has issued its Final Supplemental Environmental Impact Statement (EIS) for two upcoming Gulf of Mexico (GOM) Outer Continental Shelf oil and gas lease sales to comply with the Inflation Reduction Act (IRA) of 2022. Lease Sale 259 and Lease Sale 261 are mandated by the IRA to be held no later than March 31 and September 30, respectively, BOEM highlighted in an update sent to Rigzone. The Final Supplemental EIS includes an expanded greenhouse gas (GHG) analysis and provides an analysis of monetized impacts from these estimated GHG emissions, BOEM noted in the update. [Read Full Article](#)

TOP 10 REASONS TO JOIN NOGS

1

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.

2

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.

3

Advertise your integrity

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

4

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.

5

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.

6

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.

7

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.

8

Don'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.

9

Play a part in elevating the status of geosciences.

Your membership in NOGS and your dedication to geoscience elevates the entire profession.

10

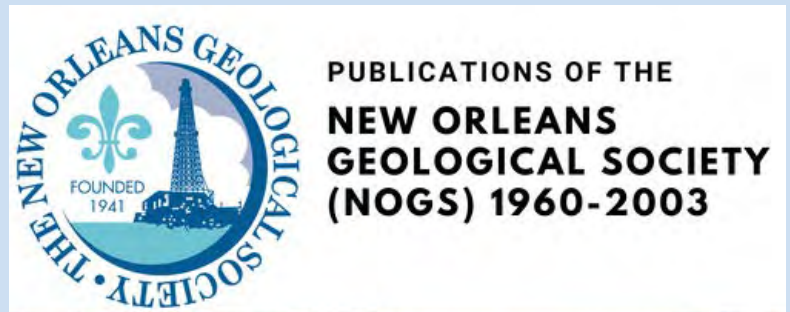
Do it for YOURSELF!

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



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Convention Information www.geogulf2023.org

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100 Technical Talks on the Gulf of Mexico
Three Concurrent Sessions, two full days
50 Professional/Student Posters, Exhibits,
and Book Signings
Three Luncheons with Exciting Speakers

Don't Miss the All-Convention Luncheon
Monday April 24, at the Norris Center
Apollo 17 geologist Harrison "Jack" Schmitt
AND Jessica Watkins, ISS NASA Astronaut.



Field Trips

April 21- Spindletop Top Museum

April 22- NASA Space Center

with Jack Schmitt Apollo 17

April 26- Galveston and Brazos River

April 27-30 -Trip to the Austin Hill
County, Enchanted Rock. Check the
HGS web event page for info and links

Convention Short Courses

SC-1 Salt Tectonics of the Gulf of

Mexico- Two-Day Course

Mark Rowan (Saturday and Sunday)

SC-2: Gulf of Mexico Sedimentary Basin:

Depositional Evolution and Petroleum

Applications

John W. Snedden (Saturday 4.22.23)

SC-3: Structural, Tectonic, and

Paleogeographic Evolution of the GOM,

Caribbean, and South America

Jim Pindell (Sunday 4.23.23)



Join the New Orleans Saints and Pelicans for

NOLA STEM FEST

Saturday, March 4, 2023

10:00 am - 2:00 pm

Ochsner Sports Performance Center

Families
Welcome!

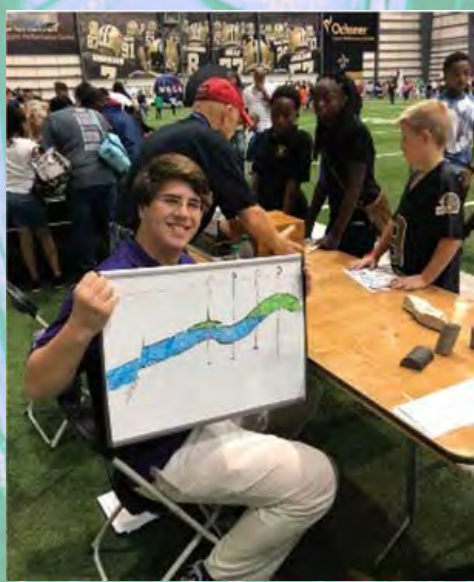
NOGS volunteers will demonstrate

“How an Oil Field Forms”

and

“Teach Kids to be Oil Finders”

Save the date and sign up to join the fun



Save the date and contact
Tom to join in the fun

Tombergeon.geo@gmail.com