

February 2025
Volume 65 No. 8

NCS LOC

A graphic featuring a blue and white globe with a grid pattern. Several red hearts of varying sizes are positioned around the globe, with red arrows pointing from them towards the globe. The globe is partially obscured by the large letters of the title.

On the Cover

Niagara Falls, this spectacular natural wonder lying on the border of New York State, USA and Ontario, Canada has long been an attraction for honeymooners and daredevils alike. Stratigraphy, glaciation and erosion all play an important part in the formation and maintenance of the falls. The falls are formed by the Niagara Escarpment which consist of Ordovician shale overlain by Silurian limestone, dolostone, sandstone and shale. The Ordovician Queenston Shale is overlain by the Silurian Rochester Shale, the Decew Dolostone and the Lockport Dolostone. The entire Great Lakes region and the Niagara River were formed during the last ice age 18,000



years ago. Glaciation and glacial retreat provided the gorge and water source for the falls. The low degree of structural dip (~ 0.22 degrees) and erosional features of the stratigraphic sequence provide for a continuous vertical geometry of the falls. Water seeping through fractures in the hard overlying dolomite easily erodes the underlying shale causing the dolomite to break off in large blocks facilitating a westward retreat of the falls. The falls have retreated approximately 7 miles in the last 12,500 years making Niagara one of the fastest moving waterfalls in the world. These large blocks are usually eroded relatively quickly by the force of the falling water, however, upriver flow control for hydroelectric power generation has lessened this erosion leaving large blocks accumulating at the base of the falls on the American side, which in turn, is starting to form rapids. Higher water flow on the Canadian side not only erodes the dolomite blocks, it also maintains a 100 foot deep plunge pool.

(RESOURCES: [Niagara Falls | Facts, Geology, & History | Britannica](#) ; [Niagara Falls Facts | Geology Facts & Figures](#) ; [niagarageopark.com/niagara-geology](#) .

From the Editor

Hello again and Happy Valentine's Day!

The monthly luncheon and technical presentation will be held Wednesday, February 12nd at Zea's Restaurant in Covington where Chris McLindon will present: "An Overview of U.S Lithium Resources". Come join us for a delicious lunch and engaging conversation or join us virtually!

SPE Delta Section February 2025 Meeting: SPE Distinguished Lecturer Kåre Langaas, Aker BP ASA will lecture on "Designing Optimal Wells with Inflow Control Technology." He will speak on February 4, 2025 at the Viking office. A light lunch will be provided. It is free.

LSU Geology & Geophysics Department's Spring Seminar series will offer three presentations in February. On Wednesday, February 12th at 3:20 p.m. Peter Lippert of the University of Utah will present "What are magnetic biomarkers and what can they tell us about Cenozoic climate change in the North Atlantic Ocean? Refreshments will be served in the Clarence Cazalot Marathon Oil Atrium of Howe Russell Kniffen Geoscience Complex. Seminars begin at 3:45 p.m. in E130 Howe-Russell-Kniffen. Networking continues after the seminar in the Atrium. Financial support for the lecture series is provided by the LJ Wilbert Endowment, Grover E. Murray Educational Fund, and the Marathon Oil Distinguished Speaker Series Fund.

Registration to attend Geogulf 2025 is open! Nacogdoches, TX will host the the 74th GCAGS/GCSSEPM Convention and Exposition April 6th through the 8th. Early bird registration through March 1st is \$400. Regular registration fee is \$500, and \$100 for students. Registration includes: admission to the technical program, admission to the Core Workshop, lunches on Monday and Tuesday, the Ice Breaker on Sunday, refreshment breaks, and more! It's not too early to make plans to attend!

The New Orleans Geological Society is still in need of an Editor Elect to serve on the Board of Directors. Please consider donating a little bit of you time to the continuation and health of our organization.

I encourage professionals, academics, and graduate students to grow your network and share your research. Become an active NOGS Member, consider writing a short article in the NOGS Log or, better yet, provide a short lunchtime presentation at a monthly meeting. Volunteer to work NOGS events or offer your services as a Board Member.

Until March....

Brian Bothner



Brian Bothner
2024/2025 NOGS Log Editor



JARED BULLOCK

A MESSAGE FROM THE 2024/2025 NOGS PRESIDENT

Greetings,

The last of the snow from the January 21st, 2025 winter storm has finally melted. Yes, that's right - snow in the Deep South. The U.S. National Weather Service's official snowfall at the New Orleans Airport was recorded at 8.0" which is an all-time high for its period of record since 1948. The all-time recorded high for New Orleans, LA is said to be 10" at Audubon! It was incredible to experience that type of weather here and I hope everyone remained safe through the storm.

Due to the weather conditions we had to postpone our January luncheon. Fortunately, our speaker, Chris McLindon, was available to reschedule for Wednesday, February 12th at Zea's in Covington. He will be presenting "Overview of U.S. Lithium Resources". As with all our luncheons, there will be time for networking at 11:30am and the meeting officially starts at 12pm with announcements followed by a presentation. Please check the NOGS website frequently for event announcements.

As we are swiftly moving along in the new year, the NOGS Board of Directors is already thinking about our next Board. We strive to be transparent, reach all our membership through outreach and member events, and make decisions that best serve our society and the community. NOGS has gained much momentum during the last few years as we returned to hosting all in-person events, rotate monthly luncheon locations between the North and Southshore, increased our membership by adding dozens of new members this past year, reestablished our university relations, and have worked hard with the local SPE and AADE chapters to greatly expand the Deepwater Technical Symposium program which happens to be the largest annual event for NOGS. If you are interested or would like to nominate someone to serve on the NOGS Board of Directors with the new term starting in July, please reach out to us. NOGS is a special society, and the time and effort from individuals serving on the Board recently has positioned us to continue to succeed moving forward.

SAVE THE DATE: The Annual NOGS Golf Tournament will be held at Timberlane Golf & Recreation in Gretna on Friday, May 16. Please mark down the date and pull together a team to support NOGS. There will be hole sponsorship opportunities available for those interested. We look forward seeing all NOGS members there and having a competitive tournament!

Jared Bullock
NOGS 2024-2025 President

Promoting NOGS

Carol Avery; NOGS Director

We have created a “Join NOGS” flyer that will be available at our monthly luncheons. These handy trifold brochures are a great way to introduce The New Orleans Geological Society and to highlight the benefits of membership in our professional organization.

Our intent is to increase society awareness and membership. These flyers will be available at NOGS functions and the NOGS exhibition booth at professional conferences such as the Deepwater Technical Symposium and the upcoming Louisiana Environmental Conference and Trade Fair in Lafayette’s Cajun Dome, March 20-21.

Additionally, we are working to create several stand-alone feather banners and retractable banners for use in exhibit halls booths and at Public and School Outreach events. These items will also be valuable as we interact with university students on various NOGS initiatives. Once complete, we will display these items at our monthly meetings.

Please pick up a couple of brochures at our next monthly luncheon. Pass them on to friends and coworkers. Membership in professional organizations is a valuable resource and joining NOGS is as easy as completing our online application at <https://nogs.org/join-us!>

MONTHLY MEETING

Overview of U.S Lithium Resources

CHRIS MCLINDON

Lithium was designated as a critical mineral by the U.S. Department of Interior in 2018. Future demand for lithium will come mainly from electric vehicles and utility-scale energy storage. Global lithium production currently comes primarily from Australia, Chile, Argentina and China. The U.S. is a minor producer at present but has significant undeveloped resources.

An overview of the chemical properties and natural occurrence of lithium will provide a basis of the review of four of the major U.S. resources – King’s Mountain, North Carolina (pegmatite), Thacker Pass and Rhyolite Ridge, Nevada (volcanic-sourced clay), Silver Peak, Nevada (salar aquifer brine) and the Smackover Formation of East Texas and south Arkansas (deep reservoir brine). Recovery methods, processing and total potential for each resource area will be discussed. These four major resource types account for nearly all of the global lithium reserves.



DATE

WEDNESDAY, FEBRUARY 12, 2025



TIME

AT 11:30 AM NETWORKING

12:00 PM LUNCH &

PRESENTATION



ZEA'S NORTHSORE



REGISTER



LSU GEOLOGY & GEOPHYSICS DEPARTMENT SEMINAR SPRING 2025 SERIES FEBRUARY EVENTS

Date	Speaker, Title or Topic	Dept. Host
February 12	Peter Lippert, University of Utah What are magnetic biomarkers and what can they tell us about Cenozoic climate change in the North Atlantic Ocean?	Prof. Forte
February 19	Jim Schiffbauer, University of Missouri Tales of taphonomy: From the Ediacaran to the Mazon Creek, what we can learn from studies of fossil preservation	Prof. Karunatillake
February 26	Achim Herrmann, LSU G&G Se isotopes in carbonate rocks as a potential redox-proxy: Challenges and Opportunities	Prof. Snow

Seminars now on Wednesdays! At 3:20 p.m., we begin with refreshments in the Clarence Cazalot Marathon Oil Atrium of Howe Russell Kniffen Geoscience Complex. Seminars begin at 3:45 p.m. in E130 Howe-Russell-Kniffen. Networking continues after the seminar in the Atrium

Thanks to our seminar series
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SPE DELTA SECTION FEBRUARY 2025

February 4, 2025 Meeting:

SPE Distinguished Lecturer Kåre Langaas, Aker BP ASA

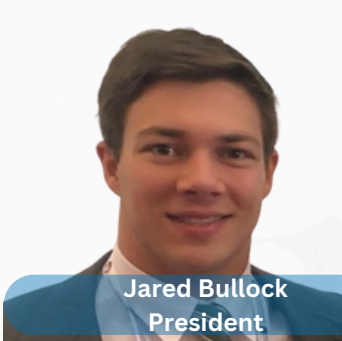
"Designing Optimal Wells with Inflow Control Technology."

Location: The Viking office. A light lunch will be provided. It is free.

Thanks for your support of our events.



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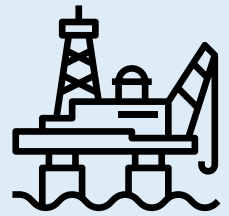
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Brian Bothner
Editor

DRILL BITS

OFFSHORE GULF OF MEXICO SHELF AND DEEPWATER ACTIVITIES BY AL BAKER



During December 2024, the Bureau of Safety and Environmental Enforcement (BSEE) approved 49 Gulf of Mexico (GoM) drilling permits. Eight of the permits were for shelf wells, and the remaining 41 permits were for deepwater wells. There were 2 new well permits issued in deepwater.

The deepwater new well permits were for 2 exploration wells. Shell Offshore obtained a permit for their Alaminos Canyon 856 #GD-11 well located to the west of their Great White Field. Anadarko Petroleum received a permit for their Green Canyon 726 #5 well in their Caesar Tonga Field complex.

On December 27th, S&P Global Petrodata indicated that the GoM mobile offshore rig supply stood at 49, which is 1 more than last month. The marketed rig supply consisted of 36 rigs, of which 27 were under contract. The marketed rig supply was also the 1 more than last month, and the contracted rig supply was 2 more than last month. The marketed contracted versus total rig supply utilization rate stood at 55.1%, and the marketed contracted versus marketed supply utilization rate stood at 75%. By comparison, the December 2023 total fleet utilization rate stood at 77.8% with 36 rigs in the marketed supply out of the 49 rigs in the fleet.

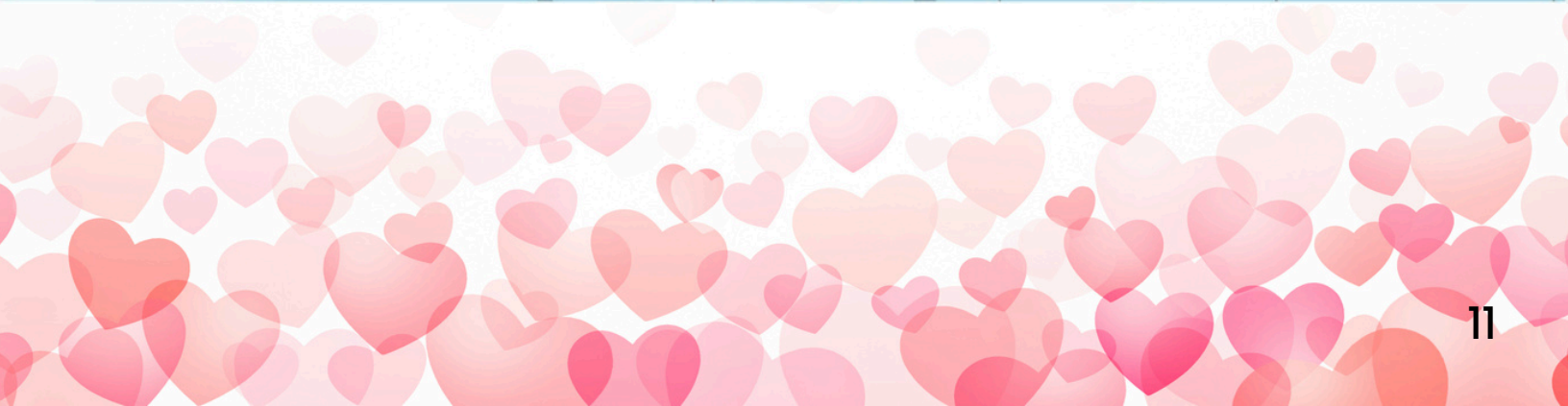
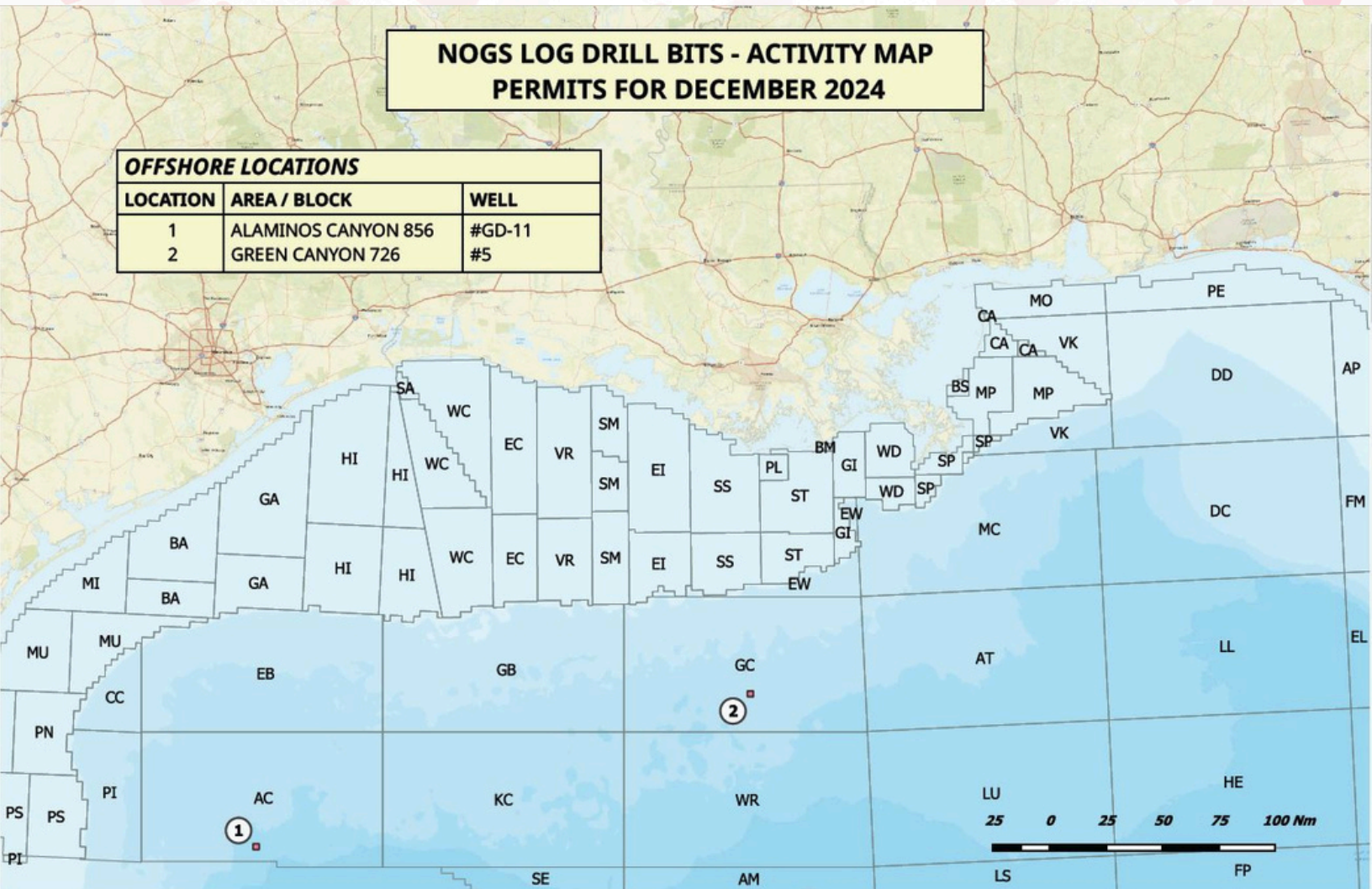
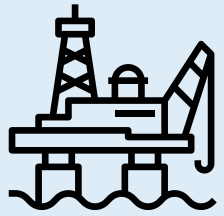
On December 27th, Baker Hughes reported that there are 12 active mobile offshore rigs in the GoM, which is 6 less than last month and 44.4% of the rigs under contract mentioned above. Currently, 1 rig is drilling on the shelf, and 11 of the rigs are drilling in deepwater. The shelf rig is situated in the Main Pass Area. The deepwater rigs include 5 rigs in the Mississippi Canyon Area, 2 rigs each in the Green Canyon and Alaminos Canyon Areas, and 1 rig each in the Keathley Canyon and Garden Banks Areas.

On December 27th, the Baker Hughes total U.S. rig count stood at 589 rigs, which is the 7 more than at the end of November 2024. Of the 589 rigs, 483 (82%) are oil rigs and 102 (17.3%) are gas rigs. Four rigs are listed as miscellaneous. Of the 589 wells being drilled, 527 (89.5%) are horizontal and 13 (2.2%) are vertical. A year ago, there were 622 rigs working in the U.S. inferring that the current 33 rig decline corresponds to an 5.3% decrease in rigs year over year. Nationally, Texas has the largest number of rigs with 284, which is 48.2% of the total number of rigs in the U. S. Louisiana currently has a total of 31 rigs, which is 1 more than last month. Louisiana ranks fourth behind New Mexico, which has 103 rigs and Oklahoma, which has 43 rigs.



DRILL BITS

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



Recent Energy Headlines

February 2025 Recap

1/22/2025 - Woodside adding wells at GoM Shenzi, Mad Dog fields - Woodside Energy has issued updates on its field development activities in the Gulf of Mexico (GoM) and elsewhere in its latest results statement. In the US GoM, the company conducted a shutdown at the Shenzi field center to implement integrity and reliability programs. [Read Full Article](#)

1/22/2025 - President Donald Trump elevated Republican Mark Christie to chairman of the Federal Energy Regulatory Commission - Such a move is expected when a new president is of a different political party than the prior president. Christie said his priorities include protecting consumers from excessive power costs, addressing the electricity reliability problems exacerbated by retirements of generation units, and urging states and their utility regulators to address reliability and energy-cost issues. [Read Full Article](#)

1/22/2025 - President Donald Trump gave a directive to rename the Gulf of Mexico the Gulf of America - The executive order issued on January 20, which was published on the White House website. "Within 30 days of the date of this order, the Secretary of the Interior shall, consistent with 43 U.S.C. 364 through 364f, take all appropriate actions to rename as the 'Gulf of America' the U.S. Continental Shelf area bounded on the northeast, north, and northwest by the States of Texas, Louisiana, Mississippi, Alabama and Florida and extending to the seaward boundary with Mexico and Cuba in the area formerly named as the Gulf of Mexico," Trump stated in that executive order. [Read Full Article](#)

1/15/2025 - Talos Energy discovers oil, natural gas at Katmai well in Gulf of Mexico - Talos Energy Inc. (Talos) has announced that the Katmai West #2 well located in the Ewing Bank area of the U.S Gulf of Mexico successfully encountered commercial quantities of oil and natural gas. "We are proud of our team for achieving these successful drilling results," said Talos's Interim Co-President, Executive Vice President and Head of Operations John Spath. "Delivering this high-impact deepwater well, approximately 35% under budget and more than a month ahead of schedule, demonstrates our ability to efficiently execute complex projects while maintaining top safety and environmental standards. [Read Full Article](#)

1/15/2025 - House Republicans eye reconciliation bill to expand more sales in the GOM - "We have a list," he said of the projects. In addition, Westerman said that Republicans could try to require more auctions for the rights to drill oil and gas, saying they could "mandate more sales in the Gulf of Mexico" as well as in Alaska's North Slope and Bering Sea. [Read Full Article](#)

1/15/2025 - IEA: Global oil demand sharply increased in fourth-quarter 2024 - Global oil demand posted an annual growth of 1.5 million b/d in the quarter, the strongest level since fourth-quarter 2023, exceeding IEA's previous forecast. Global oil demand rose seasonally in fourth-quarter 2024, posting a robust annual growth of 1.5 million b/d, according to the International Energy Agency (IEA)'s January 2024 issue Oil Market Monthly Report. This marks the strongest level since fourth-quarter 2023, exceeding IEA's previous forecast by 260,000 b/d. [Read Full Article.](#)

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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LSU GEOLOGY & GEOPHYSICS DEPARTMENT SEMINAR

SPRING 2025 SERIES UPCOMING EVENTS

Date	Speaker, Title or Topic	Dept. Host
March 5	Mardi Gras Holiday ends	
March 12	LSU Geology & Geophysics Open House for Undecided Undergraduates	ALL
March 21 (F) Friday	Elizabeth Chamberlin, Univ. Netherlands Mississippi Delta evolution reconstructed through luminescence dating	Prof. Wilson
March 26	Pamela Kempton, Kansas State University Evolution of a mid-ocean ridge over 61 million years	Prof. Dutrow
April 2	LSU Spring Break	
April 9	Becky Totten, University of Alabama A journey from below sea level to the Doomsday Glacier: How polar changes affect the Gulf Coast	Prof. Warny
April 16	Aaron Palke, Gemological Institute of America The Internal World of Gemstones: Inclusions as Geological Time Capsules	Prof. Dutrow
April 23-25	LSU G&G Rock Stars, Student Poster Presentations	Prof. Luttrell
	End of semester	

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SPE DELTA SECTION 2024-2025 UPCOMING EVENTS

March 14, 2025, Friday, SPE Delta Golf Tournament at Carter Plantation, Springfield, LA. Matt Wandstrat is coordinating. For more golf information contact Matt.wandstrat@gmail.com.

March, April and May 2025 meetings are in progress. Stay tuned. For more information contact Mary O'Neill at cyberbrat@msn.com.

Thanks for your support of our events.



GEOGULF2025

**GCAGS Annual | Nacogdoches, TX
Conference April 6-8, 2025**

Registration is now open
Early Bird through March 1 \$400
Regular \$500
Students \$100
www.GeoGulf2025.org

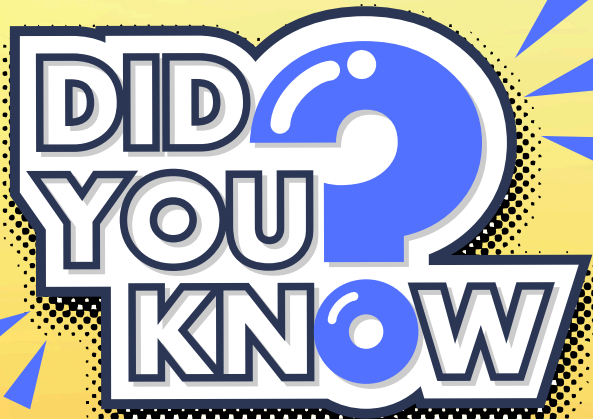
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NOGS
GOLF TOURNAMENT



FRIDAY, MAY 16, 2025

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