MARCH 2022 Volume 62 No. 9







On the Cover

Whitehaven Beach in Australia is in the Whitsunday Islands formed from the remnants of a caldera in the Coral Sea approximately 25km off the coast of Queensland. The beach sand is 99% quartz that was likely deposited by longshore currents during the last glacial melt about 10,000 years ago. The Traditional Owners of the Whitsunday Islands are the Ngaro and the Juru people. In 1870, the Ngaro people were forcibly relocated to a penal colony on Palm Island or forced to become laborers on Brampton Island.
Today, the Whitsunday Islands are a National Park under the protection of Great Barrier Reef World Heritage Area.

From the Editor...

The last two years have shown all of us that even though the conventional ways of doing things in our daily lives works fine, but you can also develop new processes to achieve the same and sometimes better results. My best example is virtual meetings and conferences, they have allowed me to participate in many more events than I could have ever imagined. My perspective on the breath of my profession and first-hand experience of the research being done by international scientists has been a thrill. It has inspired me to have and hopefully get others to start conversations that will lead to broader perspectives and discovering new ideas.

Here's an article with new ideas on rift formations that I hope will enjoy and talk about.



Mufi



Emmitt Lockard 2021/2022 NOGS LOG Editor

A MESSAGE FROM 2021/2022 NOGS PRESIDENT

HILLARY SLETTEN

To members and friends of the New Orleans Geological Society:

I hope everyone was able to enjoy this year's Mardi Gras season! It is such a cultural lifeblood to our communities and so it was wonderful to see parades and festivities return to the region again after missing out on them last year. Krewe de NOGS, anyone? Just "floating" the suggestion for the future organization to consider. Dinosaur and fossil ammonite costumes would be a must! ③ Thank you to everyone who listened to our February Speaker, Dr. Eleanor Killiam, from Mott MacDonald. She gave an excellent talk about engineering methods and strategies used for flood mitigation, along with a nice overview of the impacts climate change is having and will have on our coastal areas. As a reminder to those who attend our speaker events, please make sure to send us your feedback via the emailed survey! We use this information to vote for and recognize our top 2-3 guest speakers each year who receive a special award.

During March we are pleased to welcome Dr. Tom Missimer as our next guest speaker. Dr. Missimer is a scholar of geologic and hydrogeologic issues in Florida and the Gulf Coast and is currently Director of the Emergent Technologies Institute at Florida Gulf Coast University. This month he will be speaking about Miocene sediment transport systems, climate, and pulsed tectonism in the southeastern United States. Hi talk will be another virtual talk. We are currently planning for our future speakers to be in-person events back at The Cannery in mid-City starting in April. The NOGS Board recognizes that we need to rebuild our connections and that the immediate, more severe threats of COVID-19 have been reduced with increased time and vaccination rates. More details to come on inperson events next month.

I'd like to give a big "thank you" to Mike Merritt for stepping in and taking on the roles of Secretary and Field Trip Committee Chair. This will greatly help our organization get back on track with recording meeting minutes more consistently, reduce the workload on our administrator (Christy Himel), and also jumpstart our field trip program! Mike is investigating a field trip opportunity we hope to provide later in the year, so please stay tuned.

Another "thank you" goes out to Mike Fein for heading up the judges who represented NOGS for the virtual GNO Science Fair that was held February 14-17, and "thank you" to all of the volunteer judges who helped make this event possible! Mike will offer a more detailed update on the science fair in a coming LOG issue.

Stay safe out there and enjoy another great issue of the NOGS LOG! Cheers,

Cheers, Hillary Sletten 2021-2022 NOGS President

NOGS MARCH 2022 MEETING

MONDAY, MARCH 7, 2022 11:30 AM ZOOM MEETING

LATE MIOCENE FLUVIAL TRANSPORT OF COURSE SILICICLASTIC SEDIMENTS FROM THE SOUTHERN APPALACHIAN MOUNTAINS TO SOUTHERN FLORIDA

Presented by:

Thomas M. Missimer, Ph.D., P. G. Executive-in-Residence and Professor Florida Gulf Coast University U. A. Whitaker College of Engineering



ABSTRACT

Past geomorphological models assume that erosion of sediments from old mountain belts occurred at a relatively constant rate, based on comparatively uniform isostatic adjustment caused by unloading. Late Miocene strata of the southeastern United States provide an example of pulsed tectonism resulting in a surge in siliciclastic sediment production and transport. Regional tectonism (uplift of the southern Appalachian Mountains) and climatic conditions during the Late Miocene resulted in the long-distance (up to 1000 km) fluvial transport of coarse siliciclastic sediments onto a stable carbonate platform in southern Florida. The sediments are unusual in that they are significantly coarser than marine-transported sands in southern Florida, with discoidal quartz and quartzite clasts up to 40 mm in diameter locally present, and have relatively high potassium feldspar contents (up to 16% in some sample fractions), whereas feldspar is rare in modern Florida beach sands. It is suggested that previously documented rejuvenation of the southern Appalachian Mountains during the Middle to Late Miocene time, coupled with the Messenian sea-level low, generated the increased rate of sediment production and necessary hydraulic gradient to allow rapid transport of coarse sediments. Tectonic influence on the river pathway in Florida, as well as in the southern Appalachian Mountains, may have maintained the river on the narrow carbonate platform. The Florida Platform during the Late Miocene must also have had a sufficiently wet climate to cause episodic transport of the coarse sediments. Siliciclastic sediment transport on the Florida Platform during the Late Miocene greatly differed from Pleistocene to modern conditions, which are dominated by the transport of fine-grained sands by longshore marine processes.

BIOGRAPHY

Dr. Missimer has worked on geologic and hydrogeologic problems in Florida and other parts of the Gulf Coast for the past 48 years. He is the author of 136 peer-reviewed journal papers and 11 books. He has a BA in geology from Franklin & Marshall College, an MS in geology from Florida State University, and a PhD in marine geology and geophysics from the University of Miami. He has published a number of papers on the Pliocene and Miocene geology of Florida. He is currently an Eminent Scholar in hydrology and Director of the Emergent Technologies Institute at Florida Gulf Coast University.

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From left – Mike Fein, Jeff Spencer and Tom Klekamp* Photo taken at the Holiday Inn on February 1, 2016, at the NOGS Luncheon when Spencer presented "40th Anniversary of South Louisiana Lower Tuscaloosa Trend – Recollections and Early Media Coverage" *Deceased

> Submitted by Ed Picou, Chairman - Historical Committee

The New Orleans Geological Society was organized on October 3, 1941, as a nonprofit 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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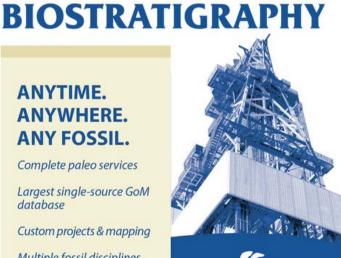
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Welcome



Welcome Mike Merritt – New Secretary of NOGS

Mike Merritt has agreed to serve as Secretary of NOGS for the remainder of the 2021-2022 term and he has also been nominated to be the Secretary of NOGS for the 2022-2023 term. Mike has worked in the oil and gas industry in Oklahoma and north Africa. In Oklahoma he also served as the state's oil and gas valuations expert, a petroleum geologist and as the Environmental Investigator for contamination from underground storage tanks for the state of Oklahoma.

Mike also served as a Commissioner of the Southeast Louisiana Flood Protection Authority-West where he worked tirelessly to ensure that geology was in the forefront of flood control construction projects designed to protect our community.





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DRILL BITS OFFSHORE GULF OF MEXICO SHELF AND DEEPWATER ACTIVITIES BY AL BAKER



During January 2022, the Bureau of Ocean Energy Management (BOEM) approved 71 Gulf of Mexico (GoM) drilling permits. Thirteen of the permits were for shelf wells, and the remaining 58 permits were for deepwater wells. Of the total number of permits, 2 new well permits issued in deepwater.

The 2 deepwater new well permits included 1 exploration well and 1 development well. Hess Corporation was granted the exploration well permit to drill their Green Canyon 69 #4 well. Shell Gulf of Mexico received the development well permit for their Garden Banks 386 #LL-6 well.

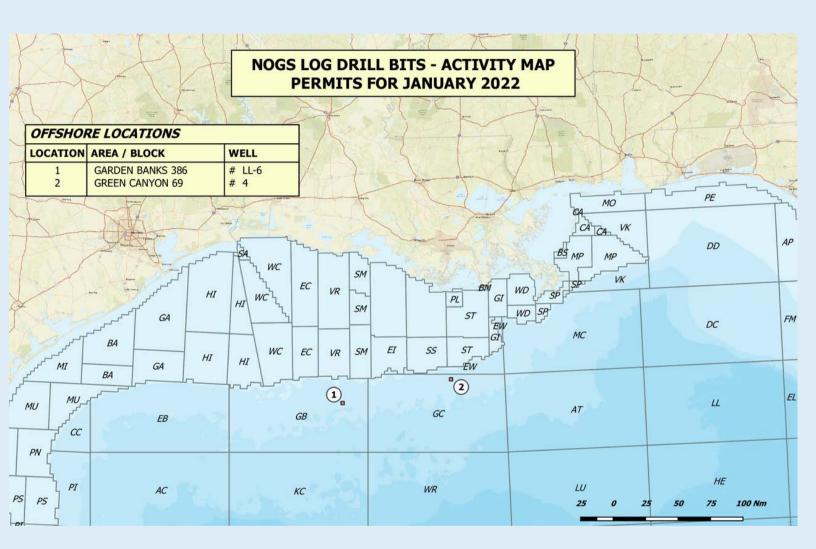
On January 28th, IHS-Petrodata indicated that the GoM mobile offshore rig supply stood at 47, which is 1 less than last month. The marketed rig supply consisted of 34 rigs, of which 29 were under contract. The marketed rig supply number was the same as last month, and the contracted rig supply number was 1 more rig than last month. The marketed contracted versus total rig supply utilization rate was 72.3%, and the marketed contracted versus marketed supply utilization rate was 85.3%.By comparison, the January 2021 total fleet utilization rate stood at 63.9% with 36 rigs under contract out of the 59 rigs in the fleet.

On January 28th, Baker Hughes reported that there are 18 active mobile offshore rigs in the GoM, which is 3 more than last month and 62.1% of the rigs under contract mentioned above. Currently, 2 rigs are drilling on the shelf, and 16 rigs are drilling in deepwater. They include 6 rigs in the Mississippi Canyon Area, 4 rigs in the Green Canyon Area, 2 rigs in the Viosca Knoll Area, and 1 rig each in the Alaminos Canyon, Keathley Canyon, Walker Ridge, Ewing Bank, Eugene Island and Main Pass Areas.

On January 28th, the Baker Hughes total U.S. rig count stood at 610 rigs, which are 24 more rigs than reported at the end of December 2021. Of the 610 rigs, 495 (81.1%) are oil rigs and 115 (18.9%) are gas rigs. A year ago, there were 384 rigs working in the U.S. inferring that the current rig figure represents an 58.9% increase in rigs year over year. Presently, Texas continues to have the largest number of rigs with 284, which is 46.6% of the total number of rigs in the U.S. Louisiana currently has a total of 57 rigs, which is 8 more than last month. Louisiana is ranked third behind New Mexico, which presently has 94 rigs.



OFFSHORE GULF OF MEXICO SHELF AND DEEPWATER ACTIVITIES BY AL BAKER







Registration is NOW OPEN

Registration is now open for our first international conference, **SAGE 2022**, a **hybrid event** of both speakers and attendees focused on aspects of Applied Geoscience and Engineering. With 3 concurrent hybrid sessions, with post-convention on-demand access to presentations for all attendees, come join us and enjoy some Cajun hospitality with our Icebreaker event on Wednesday evening, Complimentary Lunches on both Thursday and Friday, and Happy Hour on Thursday evening.

- All-Convention Luncheon featuring Louisiana Attorney General Jeff Landry, as well as a diverse array of additional Keynote Presentations
- 3 Concurrent Hybrid Sessions, featuring energy, CCUS, land/legal, and additional applied geoscience and engineering topics.
- Post-Convention On-Demand Access to Presentations (Speakers Permitting) for All Attendees
- Digital Copy of the SAGE Record conference proceedings
- Continuing Education Short Course and Field Trip (SOLD OUT!)
- Student Poster Session and Expo
- Exhibits and Prospects
- Lots of Food and Drink, with Icebreaker, Complimentary Lunches, Coffee Breaks, Happy Hour, and Awards Banquet Dinner (with special guest Mr. Frank Harrison, Jr., recipient of our Legends Medal)
- Golf Tournament
- And More!

Registration Costs*

Professional Early-Bird: \$175 to \$250* Professional Virtual Early-Bird: \$0 to \$75* Student Early-Bird: \$0 to \$75* Student Virtual Early-Bird: \$0 to \$40*

*Member discount and/or speaker discounts apply. Non-member registrations include complimentary SAGE membership dues for 2022.

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We have great sponsorship opportunities with even Bronze (\$500) level including complimentary in-person (1) or virtual (2) registrations!

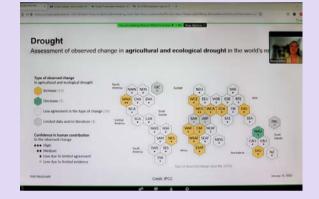
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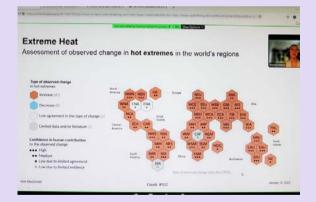
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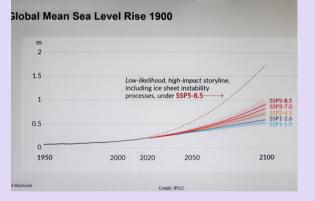
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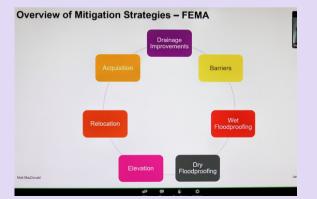
Eleanor Killiam

The climate will continue to change, and we need to adapt our infrastructure accordingly.











Tide Gate in the Netherlands

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Recent Oil Industry Headlines... February 2022

2/10/2022 - TotalEnergies to withdraw from North Platte deepwater project - TotalEnergies E&P USA Inc. will not sanction the North Platte deepwater project in the US Gulf of Mexico. The decision to withdraw from the project was taken because the company decided to allocate its capital to better opportunities within its global portfolio. North Platte field straddles four blocks of the Garden Banks area, off the coast of Louisiana in 1,300 m of water. <u>Read Full Article</u>

2/8/2021 - U.S. sees record oil production next year moving even higher - U.S. oil production will grow even more than the government previously expected as a price rally drives producers to boost drilling. Oil output will average 12.6 million barrels a day in 2023, an increase from its previous estimate of 12.41 million, according to Energy Information Administration data. The current annual all-time high of 12.3 million barrels a day was set in 2019. This year's production forecast was also revised higher to 11.97 million barrels a day from an earlier projection of 11.8 million, the EIA said in its monthly Short-Term Energy Outlook report. <u>Read</u> <u>Full Article</u>

2/8/2022 - Plans for oil and gas lease sales in development, Interior official says - Federal planning for oil and gas lease sales, onshore and offshore, continues despite a courtroom setback, an Interior official told Congress Feb. 8. Laura Daniel-Davis, nominated by President Biden to be Interior assistant secretary for land and minerals management, told the Senate Energy and Natural Resources Committee that a court ruling Jan. 27 invalidating the latest offshore lease sale did not stop the program. Interior continues to obey a court ruling from June 15 of last year that required Interior to resume lease sales, she said. <u>Read Full Article</u>

2/2/2022 - W&T Offshore Completes Acquisition of Shallow Water GoM Oil Fields - W&T Offshore has completed the acquisition of shallow-water U.S. Gulf of Mexico oil and gas fields from ANKOR E&P Holdings Corporation and KOA Energy LP, ahead of schedule. The oil firm has bought oil and gas producing properties in Federal shallow waters in the central region of the Gulf of Mexico at Ship Shoal 230, South Marsh Island 27/Vermilion 191, and South Marsh Island 73 fields. <u>Read Full Article</u>

2/1/2022 - U.S. natural gas inventories near five-year average after mild December, cold January - After starting the winter heating season (November–March) below its previous five-year average, Lower 48 working natural gas in storage surpassed its five-year average in mid-December during one of the warmest Decembers on record. However, colder-than-normal temperatures in early January, along with increased liquefied natural gas (LNG) exports and increased power demand compared with last year, have lessened these gains, and working natural gas is again less than the five-year average. <u>Read Full Article</u>

2/1/2022 - Chevron CEO Says \$100 Oil May Be Coming Within Months - Triple-digit oil prices are possible in the next few months as geopolitical risks and "struggling" supply hit global crude markets, said Chevron Corp.'s top executive. Demand for petroleum is growing faster than production as the world transitions away from the worst of the pandemic, Chief Executive Officer Mike Wirth said Friday on Bloomberg TV. <u>Read Full</u> <u>Article</u>

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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.

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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.

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

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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.



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.

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.



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