

NAGS LOG

JANUARY 2021
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Year



NOGS JANUARY 2021 MEETING

MONDAY, JANUARY 11, 2021

11:30 AM ZOOM MEETING

AN UPDATE ON THE DEEP WATER TURBIDITE PLAY IN GUYANA AND SURINAME



Presented by:

John R. Dribus

This presentation begins with a brief exploration history of Guyana and Suriname where ExxonMobil has 18 Cretaceous turbidite fan discoveries since 2015 which have identified over 9 billion barrels of recoverable oil and gas. Next door, to the east offshore Suriname, Apache has found three discoveries in 2020 totaling another 1.5 billion barrels of oil and gas equivalent. The talk includes a brief review of the geologic evolution of the Atlantic margin focusing on the plate tectonic events, sequence stratigraphy, and resulting depositional processes that have created the source, reservoir, and seals in this area. Regional data in the public domain is utilized to examine the pattern of discoveries and remaining exploration potential is discussed.

Biography of John Dribus: John Dribus is an independent Global Geologist and Advisor who retired from Schlumberger in 2018 after 19 years working various deep-water plays around the world. He is a Reservoir Geologist with over 40 years' experience, and specializes in Deep Water Depositional Systems, the Geology of Salt, Exploration Below Salt in the Atlantic Corridor, the Geology of the Gulf of Mexico, Petroleum Systems and Risk Analysis, and Global Deep Water Geologic Hazards. He worked five years as a uranium field geologist for Bendix Corporation, then worked in the Gulf of Mexico for 18 years for Mobil Oil Corporation, and the next 19 years for Schlumberger in various basins around the world. His experience includes working deep water basins along the Atlantic margin from Western Greenland south to the Falkland Islands and across the basin from South Africa and north to Morocco. He has also worked the Black, Red, and Mediterranean Seas. In 2013, he was awarded the Reservoir Description and Dynamics Award by the SPE (Society of Petroleum Engineers). In 2014, he was an invited speaker at the AAPG Discovery Thinking and Playmaker Forums, and received the Meritorious Service Award from the American Petroleum Institute (API) Delta Section. In 2017 he was recognized as an AAPG Heritage Geologist at the 100th Annual Convention in Houston, and received the 2017 Best Technical Paper of the Year Award from the New Orleans Geological Society (NOGS). In 2018 he received the A.I. Levorsen Award from AAPG for best technical paper at the Gulf Coast Association of Geological Societies Annual Meeting. He is the current President of NOGS.

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IN THIS ISSUE

On the Cover



Lower Yellowstone Falls is located in the Yellowstone National Park in Wyoming.

Cascading from the 590,000 year old Canyon Rhyolite lava flow, Lower Yellowstone Falls is the largest volume waterfall in the Rocky Mountains of the United States. This fall is 308 feet (94 m) high, or nearly twice as high as Niagara Falls. The volume of water flowing over Lower Yellowstone Falls can vary from 680 cu ft/s (19 m³/s) in the autumn, to 8,400 cu ft/s (240 m³/s) at peak runoff in late springtime. The flow rate of Lower Yellowstone Falls is much less than that of Niagara Falls, as the Yellowstone River is only 70 feet (21 m) at the point at which it goes over the lower falls, whereas the Niagara River is 2,600 feet (790 m) in width as it approaches the crest line of Horseshoe Falls.



From the Editor...

Thanks to all those who continue to contribute to the monthly LOG. If you have any suggestions for future issues or have an article/photo(s) to contribute, please email me at cmiller@ocsbbs.com. We would certainly love your input and any additional LOG content to be considered that may be of interest to NOGS members.

Charlie



Charles Miller III
NOGS LOG Editor





JOHN R. DRIBUS

A MESSAGE FROM NOGS PRESIDENT

To members and friends of the New Orleans Geological Society:

As I write to you today amidst the continuing uncertainty caused by the current surge in Covid-19 cases in Louisiana, and the prospect of a long national mandatory mask mandate should Joe Biden become President, I am unable to offer a reasonable prediction of when we will be able to meet again as a society in person. Here in Louisiana we remain under Phase Three Covid guidelines and are also under a statewide mask mandate. For more details on Phase Three, please visit the Louisiana Department of Health website at <http://ldh.la.gov/Coronavirus/>.

I hope that we can meet in person in Q-1 2021, but that is looking less likely every day. Consequently, we are planning to continue with our monthly technical webinar program in 2021. I will personally start the year off in the January session by presenting an update on the exploration activity that has been occurring in Guyana and Suriname where over twenty new discoveries combine to hold over 10 billion barrels of recoverable oil in three Cretaceous horizons. I invite you to join us for that webinar in January to learn about this important new play. I also invite you to contact me or Hillary Sletten, NOGS VP, if you have an interesting technical talk that you would like to share with the organization. We would be happy to schedule you in 2021.

Please be aware that we still have some very nice NOGS calendars for sale created from photographs taken by our own members, and we have some NOGS logo mugs and shirts available as well in our on-line NOGS store. As always, the money we collect from such sales, as well as from your yearly dues and additional end-of-year contributions, will help to fund our support of the local children's museums.

As I close my letter today I want to wish all of you a joyous Holy Day season and a much better and less uncertain New Year. I've noticed, at least in my neighborhood, that it seems more people have decorated their houses this season than in years past. I hope you are able to take some time to spend with your loved ones the next couple of weeks and that you stay safe and healthy.

Regards,
John Dribus



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PICTURE FROM THE PAST



Fieldtrip leader Dr. Roger Slatt of the University of Oklahoma, holding chart, describes to NOGS participants the depositional history of the area. The field trip was held in June of 1992 and organized by Dr. Bill Craig of UNO, who subsequently published a guide book titled "Field Trip Guidebook Geology of Ouachita Mountain Core Area, Vicinity of East Shore of Lake Ouachita Garland County Arkansas," W.W. Craig et al., 1993. The guide book is available digitally in the three-disk set, which can be ordered from our website. Note: Dr. Slatt died on February 22, 2020 at 78.

***Submitted by
Ed Picou, Chairman - Historical Committee***

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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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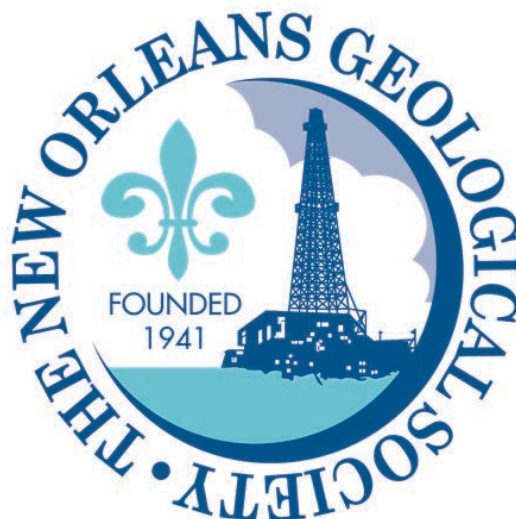
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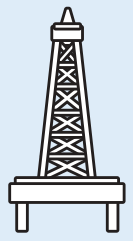


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DRILL BITS

OFFSHORE GULF OF MEXICO SHELF AND
DEEPWATER ACTIVITIES
BY AL BAKER



During November 2020, the U.S. Department of the Interior Bureau of Safety and Environmental Enforcement (BSEE) approved 63 Gulf of Mexico (GoM) drilling permits. Five of the permits were for shelf wells, and the remaining 58 permits were for deepwater wells. Of the total number of permits, there were 5 new well permits issued, 2 on the shelf and 3 in deepwater.

The two shelf new well permits were for development wells. ANKOR Energy was awarded a permit for their South Marsh Island 69 #E-2 well, and Arena Offshore was given a permit for their Eugene Island 237 #K-4 well.

Two of the three deepwater new well permits were for exploration wells, and 1 was for a development well. Shell Offshore was given a permit for their Mississippi Canyon 657 #4 exploration well in Coulomb Field. BHP Billiton Petroleum was granted a permit for their Green Canyon 608 #SN-101 exploration well in Marco Polo Field. Walter Oil & Gas received a new well permit for their Ewing Bank 833 #2 development well that is west of and adjacent to their Coelacanth Field.

On November 25th, IHS-Petrodata indicated that the GoM mobile offshore rig supply stood at 58, which is 4 less than last month. The marketed rig supply consisted of 35 rigs, of which 23 were under contract. The marketed rig supply and the contracted rig supply number were the same as last month. The marketed contracted versus total rig supply utilization rate stood at 60.3%, and the marketed contracted versus marketed supply utilization rate stood at 65.7%. By comparison, the November 2019 total fleet utilization rate stood at 59.2% with 42 rigs under contract out of the 71 rigs in the fleet.

On November 25th, Baker Hughes reported that there are 12 active mobile offshore rigs in the GoM, which is 52.2% of the rigs under contract mentioned above. This active rigs number is 1 less than reported last month. Currently, all 12 rigs are drilling in deepwater. They include 7 rigs in the Mississippi Canyon Area, 2 rigs in the Walker Ridge Area and 1 rig each in the Green Canyon, Garden Banks and Alaminos Canyon Areas.

On November 25th, the Baker Hughes total U.S. rig count stood at 320 rigs, which is 34 more rigs than reported at the end of October 2020. Of the 320 rigs, 241 (75.3%) are oil rigs and 77 (24.1%) are gas rigs. The remaining 2 rigs are listed as miscellaneous. A year ago, there were 802 rigs working in the U.S. inferring that the current rig figure represents a 60.1% decline in rigs year over year. Texas continues to have the largest number of rigs presently with 147, which is 45.9% of the total number of rigs in the U. S. Louisiana currently has a total of 39 rigs, up 2 rigs from last month. Nationwide, Louisiana still ranks third in the rotary rig count. New Mexico continues to rank second with 58 rigs.

The Bureau of Ocean Management (BOEM) Gulf of Mexico Region held OCS Sale 256 on November 18, 2020 in New Orleans. A total of 23 companies submitted 105 bids on 93 blocks. Twelve of the 93 blocks were situated on the shelf, and 81 are in deepwater. The sum of all bids was \$135,558,336, and the sum of all high bids was \$120,868,274. Repsol E&P USA and Equinor Gulf of Mexico entered the highest joint bid for a block, which was \$11,999,979 for Walker Ridge Block 365. Shell Offshore was the most active bidder offering \$27,877,809 on 21 high bid blocks. EnVen Energy Ventures ranked second in number of bids with 13 high bids totaling \$7,699,000. BP Exploration & Production and Chevron U.S.A. tied for third place with 10 high bids each. BP spent a total of \$17,130,319, and Chevron exposed \$17,098,072. Equinor was second in most money spent in the sale, bidding \$22,158,274 on 7 blocks.

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Oil Industry Headlines ..In The News (December 2020)

11/9/2020 - WWL TV - Joe Biden's plan to transition from the oil industry could impact Louisiana - Some major companies are already transitioning as Shell recently announced it would close a plant in Saint James Parish for a loss of 675 jobs. Louisiana is the number two producer of crude oil and the number four producer of natural gas in the United States. According to a 2020 report, the industry has a nearly \$74 billion economic impact in the state and supports about 250,000 jobs.

11/16/2020 - Houston Chronicle - Future of offshore drilling in the Gulf hangs on Biden's leasing pledge - For close to a century, the Gulf of Mexico's offshore oil and gas industry has pumped vast wealth into the economies of coastal Texas and Louisiana. Even if Republicans retain control of the Senate, Biden will have executive authority over federal lands and the Outer Continental Shelf. Should he carry through on his campaign promise, his administration would begin winding down the Gulf of Mexico's offshore industry, along with drilling operations in states with an abundance of federally controlled land, such as Colorado and New Mexico.

12/2/2020 - BOEM - Trump Administration Charts Path for Geological & Geophysical Survey Activities in the Gulf of Mexico - BOEM today issued a Record of Decision (ROD) establishing safeguards to reduce or eliminate impacts to marine life while setting a path forward for appropriate geological and geophysical (G&G) survey activities on the Gulf of Mexico Outer Continental Shelf (OCS). G&G surveys help provide an increased understanding of the nation's OCS, including providing information to safely identify and evaluate resources and hazards for BOEM's oil and gas, renewable energy, and marine minerals programs.

12/3/2020 - Chevron - Chevron Completes Acquisition of Noble Energy - Chevron Corporation announced today that its acquisition of Noble Energy, Inc. has been completed.

12/7/2020 - Offshore Magazine - Economic policy changes could increase deepwater GoM production - Certain economic policy changes may help increase oil and natural gas production in the Gulf of Mexico, according to new research from BOEM and BSEE. The study evaluated and recommended updating economic parameters used by BOEM's sister agency, BSEE, in the evaluation of certain special case royalty relief applications. BOEM recommends that BSEE allow companies to self-report discount rates, but that BSEE impose an upper bound on reported discount rates of 20% for deepwater subsea tiebacks requiring EFAT. This 20% upper bound would allow companies to earn appropriate rates of return, help ensure deepwater resources are not stranded, and protect the government's right to receive appropriate royalty payments.

12/14/2020 - Oil & Gas Journal - Morgan Stanley: US energy sector could see sustained rally - Poor capital allocation, deflationary commodity prices, and weak returns have led to a 250% underperformance for the US energy sector over the past decade. However, the trend has begun to reverse, Morgan Stanley said in a research note. "Energy transition is a risk, but not enough to de-rail the recovery," Morgan Stanley said. While oil demand has historically grown at a steady rate, COVID-19 has accelerated the trend towards decarbonization. Mounting energy transition concerns create uncertainty around the durability of the sector's cash flow and potential for structural de-rating over time. Despite this, Morgan Stanley sees a strong case for multiples to re-rate higher from currently discounted levels.

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The GCAGS Journal, the Journal of the Gulf Coast Association of Geological Societies, is soliciting manuscripts for the 2021 edition (our 10th volume). This peer-reviewed journal is focused on publishing studies of the geology of the onshore and offshore Gulf of Mexico. For the 2021 Journal, although other themes are welcome, we are soliciting manuscripts focused on the conference themes: Innovative Use of Technology, Gulf Coast Carbonates (e.g., Smackover), Sustainability, including Carbon Capture, Geohazards, Geomechanics, Temperature and Pressure, and Oil and Gas Field Studies.

Please submit an extended abstract of at least 600 words, including 1–2 representative figures, to the GCAGS Journal Editor, Bob Merrill, at rmerrill@catheart.com by January 15, 2021. Once topic is approved, a full manuscript must be submitted by April 12, 2021. GeoGulf (GCAGS) Convention presentations of Journal submissions are encouraged but not required—please advise upon initial abstract submission if you are interested in presenting your Journal topic. GeoGulf 2021 is scheduled for Austin, Texas, Sept. 19-21, 2021.

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The GCAGS Journal, a peer-reviewed Journal published yearly by the Gulf Coast Association of Geological Societies, is soliciting member societies for associate editors. You would be involved with managing the peer-review process for 1 to 3 manuscripts that are submitted for publication in the GCAGS Journal. Ideally associate editors will contribute their local knowledge and expertise to the editorial process. If you are interested in being an Associate Editor for the GCAGS Journal, please contact Bob Merrill at rmerrill@catheart.com.

A Memorial Duncan Goldthwaite 1927 – 2020

Our Society lost one of its eldest members with the death of Duncan Goldthwaite on December 6, 2020. He was 93 years old. He was a past president, past chairman of the Memorial Foundation and served several three-year stints as a Director. Duncan was an Honorary Member of the Society and in 1995 he was awarded a Distinguished Service Award by the Gulf coast Association of Geological Societies. He was a Fellow of the Geological Society of America and a member of the American Association of Petroleum Geologists.

Duncan was born and raised in Jackson Heights, NY. He served in the US Navy 1945-46. After an honorable discharge, Duncan earned a BA degree from Oberlin College in 1950 and a MA from Harvard in 1952, both in Geology. He joined Chevron in 1952 and had a 33-year career as an Exploration Geologist. On retiring from Chevron, he became an Independent Petroleum Geology Consultant. He had a passion for science and teaching. Not surprisingly, he teamed up with fellow Chevron colleague, Bob Branson, and the pair taught a course for NOGS titled "Petroleum Geology for the Non-Scientist." They co-taught this course for about two decades for oil company secretaries and other non-technical employees. Always an eager volunteer of NOGS, he accepted to be Editor for a publication, finally published in 1991, titled "Introduction to Central Gulf Coast Geology." This book contains contributions from all aspects of surface and subsurface geology. Coordinating and editing so many articles was daunting, but Duncan prevailed, turning out a superior book.

Duncan was perhaps prescient in that he highly recommended the Society should change its officer nomination process where only one member would be nominated for each office. Through the years, there was always strong opinions to maintain two nominees per office. Duncan argued that the nominee who lost may not be so willing to accept another nomination in the future. His rationale was that several professional organizations, of which he was a member, only nominated one person per office. He would be pleased to know that the "single" nominee per office has been in place for at least the past few years.

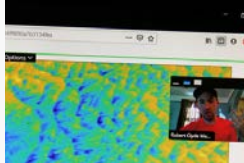
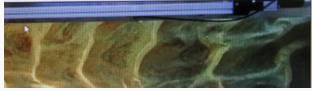
Duncan was an avid outdoorsman who had a passion for hiking. Like his father, he was a lifelong member of the Appalachian Mountain Club. From his initial encounter in 1953 until the late 1990s, Duncan rarely missed their summer camp events, held either at their shared base camp in Northern New England or in the Mountain West. From these events he forged life-long friendships with many of his fellow hikers.

For sure, all of his friends and colleagues will miss him dearly. May he rest in peace.

Edward Picou, Jr.
Chairman, Historical Committee

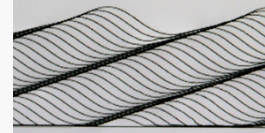


Duncan Goldthwaite
1927 – 2020

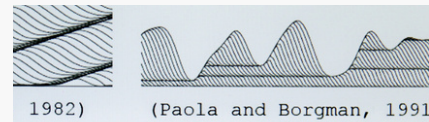
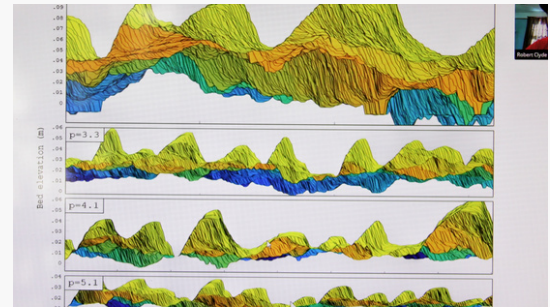


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NOVEMBER VIRTUAL MEETING

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