

# NAGS LOG

**FEBRUARY 2020**  
**Volume 60 No. 8**

**FEBRUARY 2020  
MEETING  
Relating GOM Shallow  
Water Flows  
to Drainage of  
Pleistocene Proglacial  
Lakes**

**MONDAY  
FEBRUARY 3**



# UPCOMING EVENTS

**FEB 3**



NOGS Luncheon  
Relating GOM Shallow  
Water Flows to Drainage of  
Pleistocene Proglacial Lakes  
Presented by:  
Thomas W. Bjerstedt  
Holiday Inn Superdome

**MAR 2**

NOGS Luncheon  
Speaker & Topic TBA  
Holiday Inn Downtown  
Superdome

**APR 6**



NOGS Luncheon  
Speaker & Topic TBA  
Holiday Inn Downtown  
Superdome

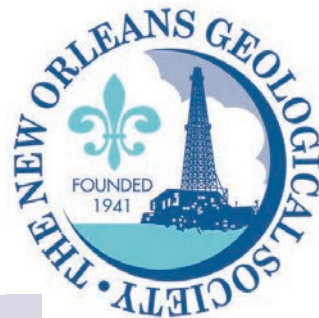
**MAY 4**



NOGS-PLANO-SPWLA  
Golf Tournament

**Click Here to Register!**





# IN THIS ISSUE



## On the Cover

Antelope Canyon is a slot canyon in the American Southwest, on Navajo land east of Page, Arizona. It includes two separate, scenic slot canyon sections, referred to as Upper Antelope Canyon (or The Crack), and Lower Antelope Canyon (or The Corkscrew). Antelope Canyon was formed by the erosion of Navajo Sandstone due to flash flooding and other sub-aerial processes. Rainwater, especially during monsoon season, runs into the extensive basin above the slot canyon sections, picking up speed and sand as it rushes into the narrow passageways. Over time, the passageways eroded away, deepening the corridors and smoothing hard edges to form characteristic "flowing" shapes. Flooding in the canyon still occurs. A flood occurred October 30, 2006 that lasted 36 hours, and caused the Tribal Park Authorities to close Lower Antelope Canyon for five months.

## *From the Editor...*

Well, the Saints were not as lucky to make it all the way to the Super Bowl this year, but we can celebrate the LSU Tigers winning the National Championship with an impressive comeback. Thanks to all those who continue to contribute to the monthly LOG. We had a few new people submit upcoming events of interest to notify members. If you see something of interest to share or would like to write some original content, please let me know.

If you have any suggestions for future issues or have an article/photo(s) to contribute, please email me at [cmiller@ocsbbs.com](mailto: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**

# FEBRUARY 2020 NOGS MEETING

MONDAY FEBRUARY 3, 2020  
HOLIDAY INN DOWNTOWN SUPERDOME

## Relating GOM Shallow Water Flows to Drainage of Pleistocene Proglacial Lakes

Operators in the Gulf of Mexico (GOM) have reported 163 shallow water flow (SWF) events to Bureau of Ocean Energy Management (BOEM) and predecessors since 1983. SWFs are known in water depths outboard of the continental shelf typically between 90 m (300 ft) and 1067 m (3500 ft) below mudline (BML). The stratigraphic conditions within which SWFs could occur are difficult to predict. The consequences resulting from mud programs that cannot compensate when encountering the compartmentalized differential pore pressures in such zones range from costly rig delays to severe well and site stability issues. The spatial and temporal distribution of SWFs in GOM serve as proxy for high sedimentation rates.

There are two SWF hot spots; one in northeast Green Canyon (GC) and the other in southwest Mississippi Canyon (MC). BOEM mapped the Mississippi Fan over all or parts of 28 3D seismic surveys (time domain) and used 2D seismic lines to tie non-contiguous seismic volumes. Mapped units were migrated into GIS for geoprocessing and rationalized with BOEM's Pleistocene sequence stratigraphy and chronozones.

One third of the SWFs in MC and GC hot spots are Middle Pleistocene age and 40 percent are Late Pleistocene age (BOEM's PLM and PLU chronozones). Middle Pleistocene SWFs occur in a relatively thin stratigraphic zone approximately 30-45 m (100-150 ft) thick. In GC this zone is ~395-425 m (1300-1400 ft) BML and in MC it is slightly deeper, ~425-455 m (1400-1500 ft) BML.

With the aid of GIS tools, analyzing sediment volume deposited on the fan during the Pleistocene helps place the age and location of SWFs within the context of events in the glaciated catchment. High sediment influx volume into the GOM and the stratigraphic position of SWFs are favorably timed with draining of proglacial lakes. The Middle Pleistocene (PLM) SWF population, between the 700 and 460 Ka sequence boundaries, follows the draining of Lake Tigh (West Virginia). This period of time appears related to mass sediment movements in the ultra-deepwater sink of the eastern Mississippi fan. The early-Late Pleistocene (PLU n1) included glacial meltback that unified the Missouri and Mississippi catchments (~77 Ka) roughly doubling the size of the watershed. The latest Pleistocene (PLU n2) SWF population follows the breach of Lake Kankakee (Illinois); the "Kankakee Torrent" variably dated as ~14-15 Ka and ~19 Ka, and also correspond to establishment of a drainage conduit from Lake Agassiz (Canada) (~13.5-10.6 Ka) that was shut down by 10 Ka.



**THOMAS W. BJERSTEDT**

Dr. Bjerstedt has undergraduate and graduate degrees in geology from Kent State University and a Ph.D. in geology from West Virginia University. Over his career he authored dozens of articles, posters, and conference presentations based on research or agency mission. He taught for 1 year at St. Lawrence University in New York after which he worked 9 years with the Department of Energy's Yucca Mountain Site Characterization Project in Nevada. In 1997 he joined Texaco's GOM deepwater exploration team, first in New Orleans and then Houston, during its late-1990s buildout. After the Chevron merger he joined the GOM Region of the Department of the Interior's Minerals Management Service in 2002. During 18 years with MMS/BOEM he has worked for the Office of Environment and the Office of Resource Evaluation in both technical and supervisory capacities. This year he was promoted to staff geologist supporting the Regional Supervisor in coordination between BOEM's environmental compliance programs, geological and geophysical permitting in the Gulf of Mexico and the Mid- and South Atlantic planning areas, and federal agencies having independent responsibilities under environmental laws.

**Click to Register Now!**





# Drill with confidence.

Diversified Well Logging, LLC brings the accuracy and expertise only a company with over sixty years in the oil and gas industry can deliver. We are your eyes and ears in the field, especially when it comes to deep water or high pressure, high temperature areas.

DWL offers 24-hour formation evaluation. We provide secure and customized real-time data communication, in-house research and development, and 24/7 on-call support for our equipment and our engineers.

Whether you have a 10-day job or a 110-day job, we provide the specialized attention you require. **Our experience means you can be confident in the safety and performance of your well.**



- *Formation Evaluation*
- *Geosteering*
- *Drilling Optimization*
- *Real-time Data Transmission*
- *Early Kick Detection*



*Serving the Oil and Gas Industry for Over 60 Years*

## FROM THE NOGS PRESIDENT ROBERT ROONEY



Go Tigers! What a season for the football team, and for the Golden Band from Tigerland! It has been a pleasure to watch the team and band share their talents and perform in top fashion. Congratulations to LSU, the students, fans, and to all those in Louisiana who have supported the team and the program over the years!

Likewise, I hope 2020 is shaping up to be a good year for you. In reflecting back to the beginning of this administration of the NOGS 2019-2020 Board, it is easy to get caught up in the challenges that NOGS, and other Geological societies face. One of the initial struggles as president to come to grips with the financial workings of our Society. If we breathe a sigh of relief at our financial status, it is because of two factors: 1) our first Board meeting passed a motion to immediately cease physical publication of our newsletter and go to a fully online version. This motion allowed Christy Himel to build the online pdf-flip version of the *NOGS LOG* that we now have, and saved the Society from the expense of printing and mailing, which was not sustainable; and 2) the investment account of NOGS has performed well enough due its portfolio position and the current economic momentum.

We can improve on our mission to further the profession of geology in our region by increasing our participation in industry conventions by providing organizational and administrative resources, field trips, short-courses and seminars. Within the past year, NOGS participated in the Deep Water Technical Symposium, which was a success thanks to Chris McLindon and the other organizers and volunteers. In my opinion, we need to participate more in these geological and technical conventions such as GeoGulf (formerly called the GCAGS convention). GeoGulf Chairman James Willis, of LGS, addressed our technical luncheon in January and explained the joint support of NOGS and BRGS, in helping with the Lafayette GeoGulf Convention, which will be held in Sept. 30 to Oct. 2, 2020. I urge our membership to be supportive of the GeoGulf convention by offering your help. It is my hope that NOGS will be able to host at least one field trip and at least one short-course, submit abstracts per the call for papers in this *LOG*, and attend the convention. NOGS will benefit directly through any sponsored events that we host, and NOGS can also benefit through your attendance when you choose NOGS as your affiliated society on the registration form. So please consider helping with the GeoGulf this year in any way you can.

# FROM THE NOGS PRESIDENT ROBERT ROONEY



Go to [www.geogulf.org](http://www.geogulf.org) for more information, or contact me at [Robert.rooney@cantium.us](mailto:Robert.rooney@cantium.us) to discuss your field trip, seminar or short course ideas. Locally, NOGS continues to provide our industry members and colleagues with relevant technical presentations at our monthly luncheons, which generate much discussion. I believe these presentations move the scientific understanding of petroleum geology in a constructive direction. Some people learn through probing of issues, raising contrary viewpoints and accepting compromise. The Q&A sessions following our presentations provide the membership the opportunity to probe deeper into the speaker's content by asking questions and providing their viewpoints. This is a conventional method of social discourse where, through give and take, we build relationships and move forward in understanding.

Likewise, I hope that all feel free to offer feedback to me if you have any questions or suggestions as to how I can better help NOGS to serve our mission. Coming soon, the February 3rd luncheon meeting will be presented by Thomas W. Bjerstedt of the BOEM titled Relating GOM Shallow Water Flows to Drainage of Pleistocene Proglacial Lakes which is a great opportunity for geologists involved with deep water exploration, development, drilling and well planning to hear from an expert in the field. We hope to see you at the Holiday Inn on February 3rd!

We are now over the half-way mark for this 2019-2020 administration of the NOGS Board. It is my hope that there are NOGS members who may be inclined to run for a board position. Please consider putting your name in the mix by contacting the NOGS Nominating Chairperson Jennifer Connolly at [Jennifer.Connolly@shell.com](mailto:Jennifer.Connolly@shell.com). It is a great opportunity to put your talents to work in support of this unique organization, which will be approaching its 80th anniversary next year. It is my opinion that NOGS is unique in our community in that it is an organization that has a specific mission to support the profession of geology.

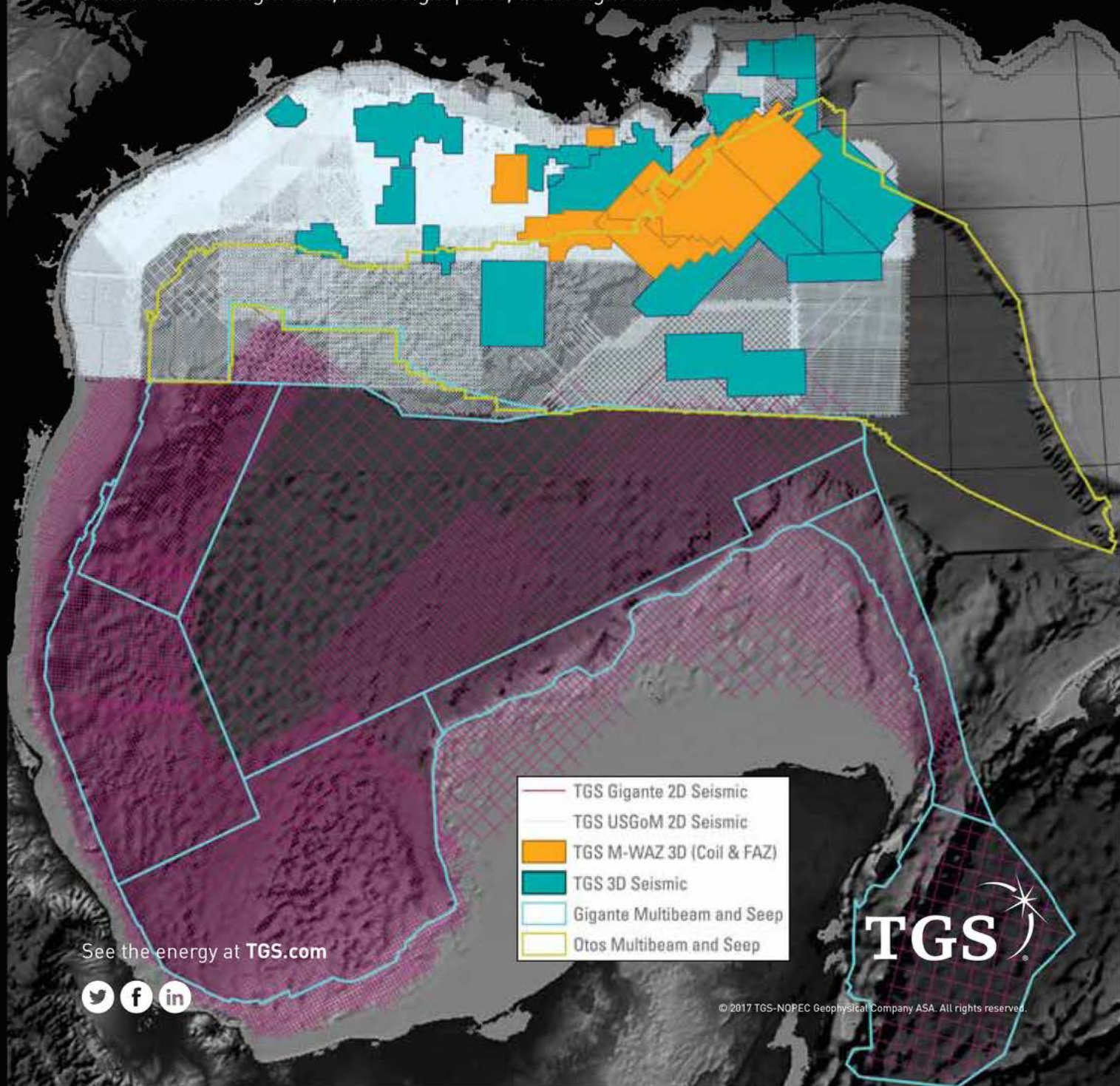
Best wishes for an enjoyable and safe Mardi Gras season!

A handwritten signature in blue ink that reads "Robert Rooney". The signature is written in a cursive, flowing style.



# Set your sights. Gulf of Mexico

TGS provides industry-leading offshore seismic data using an innovative mix of technologies and unmatched imaging capabilities. Through strategic partnerships, we provide a comprehensive collection of advanced marine acquisition technologies for enhanced reservoir delineation, characterization and monitoring. TGS delivers the E&P industry unlimited potential with our collection of advanced offshore data including **Declaration M-WAZ 3D** survey, **Fusion M-WAZ 3D**, **Otos Multibeam and Seep** and **Gigante 2D Multibeam and Seep** programs. Explore the Gulf of Mexico with the right data, in the right place, at the right time.





# PICTURE FROM THE PAST



## NOGS

**Outgoing and Incoming Joint Board Meeting, July 15, 2015**

**From left – Jim Zotkiewicz, Director 2016, Jennifer Connolly, VP, Kelli Hardesty, President 2014-15, Bill Whiting, Director 2015, Rhonda Roederer, Treasurer, Dave Cope, Director 2017, Brenda Reilly, Director 2018, Art Johnson\*, Treasurer, Kathy Haggar, VP, Dave Reiter, President, Andrew Thorne, Secretary, Al Melillo, Pres-Elect 2015-16, Tom Klekamp\*, Editor**

**– Not in photo, Bryan Banks, Secretary**

**\*Deceased**

***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](http://nogs.org).

Advertising rates have not changed since 2008 but the printing process has allowed printing the LOG entirely in color. Please contact Christy Himel [admin@nogs.org](mailto:admin@nogs.org) for placement availability. Full page NOGS LOG advertisers will have their Company LOGO posted on the NOGS Website front page. All advertisers are included on the Society's monthly powerpoint and listed on the website with a link to their home page. Please check out our website [www.nogs.org](http://www.nogs.org)

## 2018-19 RATES

Full Page 7.5" x 10" \$3,500

Half Page 3.75" x 10" or 7.5" x 5" \$1,850

Quarter Page 3.75" x 5" or 7.5" x 2.5" \$1,000

Eighth Page 3.75" x 2.5" \$ 600

Twelfth Page 3.75" x 1.65" \$ 375

Note Size 3.75" x 0.75" \$ 120

Premium Locations Inside Front Cover +30%

Opposite President's Page +20%

Opposite Oral Abstract +20%

Inside Back Cover +30%

Outside Back Cover +40%

**LLOG**  
exploration



### Covington Office

1001 Ochsner Blvd., Suite 200

Covington, Louisiana 70433

p: 985.801.4300

f: 985.801.4796

### Houston Office

CityCentre Three

842 W Sam Houston Pkwy N

Suite 600

Houston, Texas 77024

p: 281.752.1100

f: 281.752.1199

### Scott Office

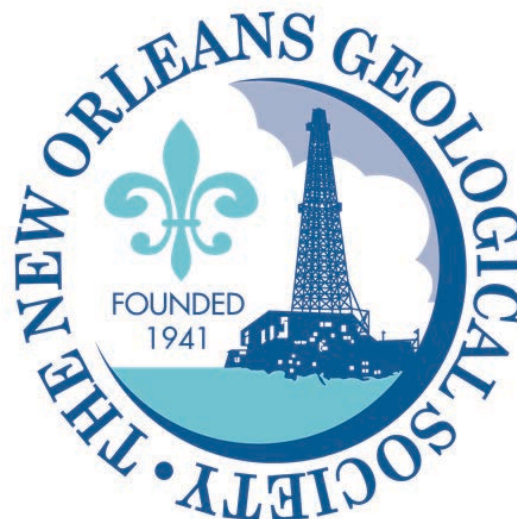
814 S. Frontage Rd.

Scott, LA 70583

p: 337.408.4000

f: 337.408.4049

[www.llog.com](http://www.llog.com)



DOMESTIC &  
INTERNATIONAL



## BIOSTRATIGRAPHY

**ANYTIME.  
ANYWHERE.  
ANY FOSSIL.**

*Complete paleo services*

*Largest single-source GoM  
database*

*Custom projects & mapping*

*Multiple fossil disciplines*



**504-488-3711  
PALEODATA.COM**

**50**  
**PALEO**  
1968 - 2018  
**DATA**  
**NEW ORLEANS, LA**

## ROCK SOLID SERVICE



© 2013 Core Laboratories.  
All rights reserved.



**Core Lab**  
RESERVOIR OPTIMIZATION  
[www.corelab.com](http://www.corelab.com)  
**337-837-8616**





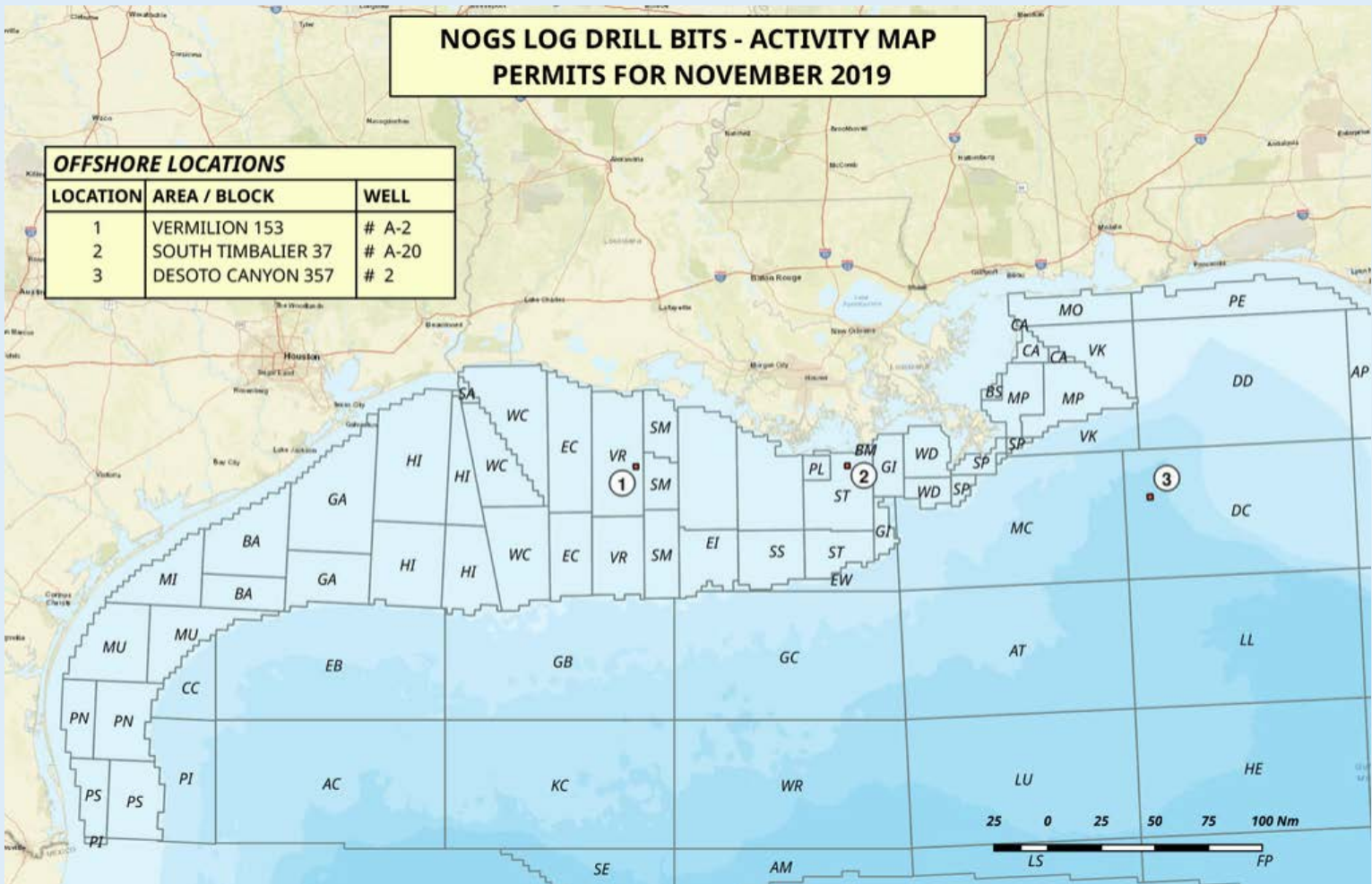
# DRILL BITS

OFFSHORE GULF OF MEXICO SHELF AND  
DEEPWATER ACTIVITIES  
BY AL BAKER

## NOGS LOG DRILL BITS - ACTIVITY MAP PERMITS FOR NOVEMBER 2019

### OFFSHORE LOCATIONS

LOCATION	AREA / BLOCK	WELL
1	VERMILION 153	# A-2
2	SOUTH TIMBALIER 37	# A-20
3	DESOTO CANYON 357	# 2



During December 2019, the U.S. Department of the Interior Bureau of Safety and Environmental Enforcement (BSEE) approved 82 Gulf of Mexico (GoM) drilling permits. Fourteen of these were for shelf wells, and 68 were for deepwater wells. Of the total number of permits, there were 6 new well permits; four were issued on the shelf and 2 in deepwater.

The shelf new well permits included one exploration well and three development wells. The exploration new well permit was issued to Castex Offshore for their Ship Shoal 136 #1 well. The development new well permits were awarded to Arena Offshore for their South Timbalier 38 #H-14 well, to Cox Operating for their South Marsh Island 223 #218 well, and to Walter Oil & Gas for their West Delta 107 #A-7 well.



# DRILL BITS

## OFFSHORE GULF OF MEXICO SHELF AND DEEPWATER ACTIVITIES BY AL BAKER

The two deepwater new well permits were for exploration wells. Equinor Gulf of Mexico received a new well permit for their Walker Ridge 272 #1 well, and Anadarko Petroleum obtained a new well permit for their Walker Ridge 881 #1.

On December 27th, IHS-Petrodata indicated that the GoM mobile offshore rig supply stood at 71, which is the same as last month. The marketed rig supply consisted of 42 rigs, of which 33 were under contract. The marketed rig supply and the contracted rig supply numbers are also both the same as last month. The marketed contracted versus total rig supply utilization rate remained at 46.5%, and the marketed contracted versus marketed supply utilization rate still stood at 78.6%. By comparison, the December 2018 total fleet utilization rate stood at 49.3% with 36 rigs under contract out of the 73 rigs in the fleet.

As of December 27th, BakerHughes reported that there were 23 active mobile offshore rigs in the GoM, which is 69.7% of the rigs under contract mentioned above. This active rigs number is 1 more than reported last month. Currently, there were four rigs drilling on the shelf and 19 in deepwater. In December of last year, there were 24 mobile offshore rigs operating in the GoM representing a slight 4.2% decrease in active rigs year over year.

As of December 27th, the BakerHughes total U.S. rig count stood at 805 rigs, which are 3 more rigs than reported at the end of November 2019. Of the 805 rigs, 677 (84.1%) are oil rigs and 125 (15.5%) are gas rigs. A year ago, there were 1083 rigs working in the U.S. Thus, the current rig figure represents a 25.7% decrease in rigs year over year. Texas typically has the largest number of rigs presently with 404, which is slightly over half (50.2%) of the total number of rigs in the U. S. Louisiana has a total of 58 rigs, up 1 rig from last month. Nationwide, Louisiana ranks third in the rotary rig count; New Mexico ranks second with 108 rigs. U.S. Department of the Interior Bureau of Ocean Energy Management (BOEM) will hold OCS Sale 253 in New Orleans on March 18, 2020.







### C & R EXPLORATION, INC.

Carlo C. Christina

Lawrence G. Ringham

### D-O-R ENGINEERING, INC.

Reservoir Engineering - 3D and Geoscience Services

6161 Perkins Rd.  
P.O. Box 80812



Bus: (225) 765-1914  
Baton Rouge, LA 70898

Thomas L. Davis  
Geologist



+35 Years exploration & development  
experience in the western US,  
overseas and offshore.

Tel: 818-429-4278 [tlavisgeo@gmail.com](mailto:tlavisgeo@gmail.com)  
[www.thomaslavisgeologist.com](http://www.thomaslavisgeologist.com)

Prospects, data and field assessments available. Lots of free petroleum geology info at the website.

## EDWARD B. PICOU, JR.

Shell - Retired

504-975-3096

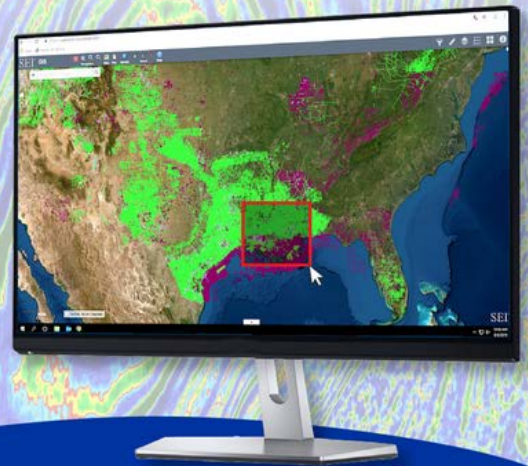


## SEI® SEISMIC EXCHANGE

45 years  
1975-2020

The upstream oil and gas industry's  
premiere resource for onshore and  
offshore seismic data.

Explore our  
expansive  
North American  
2D and 3D  
seismic library  
using an  
interactive  
GIS interface



New Orleans | Houston | Dallas | Denver | Tulsa | Canada

201 St. Charles Ave, Suite 4300  
New Orleans, LA 70170  
504.581.7153

[WWW.SEISMICEXCHANGE.COM](http://WWW.SEISMICEXCHANGE.COM)



**LaBay**  
Exploration Co., L.L.C.

1080 West Causeway Approach  
Mandeville, Louisiana 70471

(985) 951-2011

[www.labayexploration.com](http://www.labayexploration.com)



## 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 FOUNDATION 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!

[click here to  
DONATE](#)



## THANK YOU TO OUR DONORS!

### \$10,000

Gibbet Hill Foundation - *In Memory of Steve & Marion Millendorf, William J. Prutzman, Roger G. Vincent, Ron Youngblood, Uno Numella and Dr. Robert T. Sellars, Jr.*

### \$1,000

Chevron Your Cause

### \$250-\$499

Hillary James Brook

Edward B. Picou - *In Memory of Robert "Bob" Branson, Thomas Klekamp, Donald Andrews*

William M. Whiting - *In Memory of Robert "Bob" Branson, Gene Cobb, Thomas Klekamp*

### UP TO \$249

Woods W. Allen, Jr. - *In Memory of Dr. William C. Ward*

Candace Strahan - *In Memory of James R. Strahan*

Philip J. Valent

Joel Klekamp - *In Memory of Thomas Klekamp*

Linda P. Fulton - *In Memory of Thomas Klekamp*

Fran Wiseman - *In Memory of Steve Widdicombe*

Theresa M. O'Neill - *In Memory of Brian J. O'Neill*

Stephanie Klekamp - *In Memory of Thomas Klekamp*

Margaret McKinney

Donald & Marianne Klekamp - *In Memory of Thomas Klekamp*

Shell Oil Company Foundation

Alex Janeveski



# JANUARY 2020

---

## HOW HOT IS THE KITCHEN? RUDY WILHELM







# GeoGulf 2020 Call for Papers

**70<sup>th</sup> GCAGS/GCSSEPM Convention and Exposition**  
**Sept. 30–Oct. 2, 2020 • Lafayette, Louisiana**

Hosted by the Lafayette, Baton Rouge, and New Orleans Geological Societies

## GeoGulf 2020 Session Themes

- “All Things Salt”—Tectonics, Oil and Gas, Seismic Acq., Proc., and Interp., Mining, etc.
- Machine Learning and Artificial Intelligence Applications
- Gulf of Mexico Temperature and Pressure
- Smackover Session and Core Workshop
- GIS Technology and Applications
- Gulf Coast Environmental
- The Business Side—Legal, Unitization, Finance, Insurance, etc.
- Geoscience Applications of Drone Technology
- Geomechanics—Conventional and Unconventionals
- Special Session for GCSSEPM—topic to be announced
- Special Sessions for LGS, BRGS, and NOGS—topics to be announced
- And more—We are the place for Gulf Coast Geoactivities! We'll fit you in! Got an idea for a theme session, please let us know!

**Professionals and Students: We welcome you to submit an abstract for consideration of oral or poster presentation of 250–300 words by January 15, 2020.**

Early abstract submissions will be reviewed within a day or two of receipt with acceptance/rejection notification. Submit via email title, author(s) (with full contact information for each, including company or school, full address with zip code, email, and phone number), and abstract (preferably with 1–2 representative illustrations including reference from text and with captions) to General Chair, James J. Willis, [james.willis@gcags.org](mailto:james.willis@gcags.org).

All accepted presenters are expected to submit an initial draft of full paper or extended abstract for publication in the *GeoGulf Transactions* by March 15, 2020, to the *GeoGulf Transactions* Editor, James J. Willis, [james.willis@gcags.org](mailto:james.willis@gcags.org). Full information, instructions, size limitations, and helpful hints for abstracts, extended abstracts, and full papers will be posted soon at [www.geogulf.org](http://www.geogulf.org).

If you'd like to publish in the *GCAGS Journal*, the peer-reviewed journal of Gulf Coast geoscience, submit an extended abstract of at least 600 words, including 1–2 representative figures, to the *GCAGS Journal* Editor, Robert Merrill ([rmerrill@catheart.com](mailto:rmerrill@catheart.com)) by December 16, 2019. Once accepted for publication, the deadline for submitting a full manuscript is April 2, 2020. Full instructions for manuscript submissions will be posted online at <http://www.gcags.org>. Convention presentations of *Journal* submissions are encouraged, but not required.



# OFFICIAL NOTICE

NOGS has an opportunity to make nominations to fill two vacancies on the Louisiana Board of Professional Geoscientists. Currently, the Board needs representation from Congressional District 2 as well to fill a member-at-large position. In 2010, the Louisiana Legislature passed Act 974, the "Louisiana Professional Geoscience Practice Act" which established the Louisiana Board of Professional Geoscientists and lay the groundwork for licensing of Professional Geoscientists in Louisiana with a mission to protect the public health, safety, and welfare, and to guard the state's natural resources with regard to environmental and civil projects for which geoscientific review and evaluation is required in the making of recommendations of any geoscientific component.

The Louisiana Board of Professional Geoscientists meets 6 times a year and is charged with administering the various provisions of the Act and its subsequent modifications. It consists of nine members representing Louisiana's six Congressional Districts including at least six licensed professional geologists and one licensed professional engineer. Two at-large board positions can be filled by unlicensed or exempt geoscientists or non-geoscientists. To apply, please follow this link for the APPLICATION FOR GUBERNATORIAL APPOINTMENT TO A BOARD OR COMMISSION

**[https://gov.louisiana.gov/assets/docs/Boards  
Commissions/BC\\_Application.pdf](https://gov.louisiana.gov/assets/docs/Boards%20Commissions/BC_Application.pdf)**

or find the application on the Governor's website under Boards and Commissions. For more information about licensing of Professional Geoscientists, please visit the Louisiana Board of Professional Geoscientists website at [lbopg.org](http://lbopg.org) or this link: Louisiana Board of Professional Geoscientists. Liz McDade ([ecmcdade@lbopg.org](mailto:ecmcdade@lbopg.org)) can also help answer questions regarding Board activities and the nomination process.

# 14TH ANNUAL LOUISIANA WATER CONFERENCE

March 23 & 24, 2020

Dalton Woods Auditorium  
Energy, Coast, & Environmental Building  
Louisiana State University, Baton Rouge, Louisiana

Opening date to send titles & abstracts January 2, 2020

Registration opens January 6, 2020

Abstracts due March 2, 2020

End of early registration March 4, 2020

Abstract submission [easychair.org/conferences/?conf=lawater2020](https://easychair.org/conferences/?conf=lawater2020)

To register [www.lsu.edu/lgs/](http://www.lsu.edu/lgs/)



Presented by the Louisiana Geological Survey &  
the Louisiana Water Resources Research Institute



[www.lsu.edu/lgs/](http://www.lsu.edu/lgs/)

[www.lsu.edu/lwri/](http://www.lsu.edu/lwri/)





# 1<sup>st</sup> International Congress on Coastal Research

6-9 October, 2020 AL Hociema, Morocco

## 1<sup>st</sup> Circular



#ICCR2020

[HTTPS://ICCR2020.SCIENCESCONF.ORG](https://iccr2020.sciencesconf.org)

SUPPORTED BY THE FACULTY OF SCIENCES AND TECHNIQUES OF AL-HOCEIMA



# Welcome

It is with great pleasure that we invite you to 1<sup>st</sup> International Congress on Coastal research (1<sup>st</sup> ICCR, 2020), to be held at the Faculty of Sciences and Techniques of Al Hociema, Morocco from Tuesday 6<sup>th</sup> October to Friday 9<sup>th</sup> of 2020. 1<sup>st</sup> ICCR covers all aspects of coastal research.

The 1<sup>st</sup> ICCR brings together delegates from all over the world to collaborate and discuss the most current advances in coastal research and projects. It also provides a premier interdisciplinary platform for researchers, practitioners and educators to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered and solutions adopted in the fields of coastal sciences.

## COMMITTEES

### Honorary Chair

**Pr. Mohammed BAKKALI**

Dean of the Faculty of Sciences and Techniques of Al Hociema  
Abdelmalek Essadi University, Al Hociema — Morocco

### General Chair

**Pr. Hinde CHERKKAUI DEKKAKI**

Head of the earth and environmental sciences department  
Faculty of Sciences and Techniques of Al Hociema  
Abdelmalek Essadi University, Al Hociema — Morocco  
[hcherkkauidekkaki@uae.ac.ma](mailto:hcherkkauidekkaki@uae.ac.ma)

### General Co-chair

**Pr. Hajar EL TALIBI**

Faculty of Sciences and Techniques of Al Hociema  
Abdelmalek Essadi University, Al Hociema — Morocco  
[heltalibi@uae.ac.ma](mailto:heltalibi@uae.ac.ma)

### Steering committee

**Pr. Issam ETTEBAI**

Faculty of Sciences and Techniques of Al Hociema  
Abdelmalek Essadi University, Al Hociema — Morocco

**Pr. Said EL MOUSSAOUI**

Faculty of Sciences and Techniques of Al Hociema  
Abdelmalek Essadi University, Al Hociema — Morocco

**Pr. Lahcen BENAABIDATE**

Faculty of Sciences and Techniques of Fez  
University Sidi Mohamed Ben Abdellah, Fez — Morocco

**Pr. Houssine NIBANI**

AGIR Association, Al Hociema — Morocco

**Pr. Mohammed HASSANI ZERROUK**

Faculty of Sciences and Techniques of Al Hociema  
Abdelmalek Essadi University, Al Hociema — Morocco

**Pr. Yossine EZZOUBI**

Faculty of Sciences and Techniques of Al Hociema  
Abdelmalek Essadi University, Al Hociema — Morocco



## TOPICS

- Coastal Hazards and risk assessment
- Integrated Coastal Zone Management
- Adaptive ecosystem management
- Marine and coastal policies
- Territorial Intelligence
- Sustainability, Ecosystems, and Environment
- Ecology and Natural Resource Management
- Ocean, Fisheries and Coastal Economics
- Coastal ecology and Biodiversity
- Marine Ecosystems and Conservation
- Oceanography
- Geomorphology and Coastal Processes
- Climate and Carbon Exchange
- Environmental Chemistry & Toxicology
- Marine Microbiology
- Coastal Hydrology and Hydrogeology
- Artificial intelligence and coastal engineering
- Modern Technologies and Water Treatment
- Anthropogenic activities and health risks
- Climate impacts on water resources and ecosystems
- Hydrogeophysical exploration and coastal geology
- Governance and water policy
- Emerging pollutants in water, sediments and soils
- Water desalination
- Innovative techniques in water treatment and water reclamation
- Coastal aquifers: Quality, Diagnosis and Monitoring;
- Advanced techniques of water resources management

## Official language

The official language of the 1<sup>st</sup> International Congress on Coastal research is English. Simultaneous interpretation is not provided. It is therefore expected that authors are able to present their research more or less fluently in the English language.



# ABSTRACT SUBMISSION

Abstract Submission will be handled via the website :

<https://iccr2020.sciencesconf.org>

Please note the following dates :

- Abstract Submissions Open : January 1, 2020
- Abstract Submissions Close : March 15, 2020
- Abstract Authors Notified : March 30, 2020
- Short Paper Deadline : May 31, 2020
- Early Bird Registration Closes : June 30, 2020
- 1<sup>st</sup> ICCR 2020 Beginings : October 6, 2020
- Full Paper Deadline (Optional) : February 1, 2021

The content of 1<sup>st</sup> International Congress on Coastal research (1<sup>st</sup> ICCR, 2020) abstracts is the responsibility of their authors. 1<sup>st</sup> ICCR reserves the right to reject abstracts that are not written in English, do not meet basic standards of scientific quality, or do not adhere to conventional standards of civil discourse and common decency.

# PRACTICAL INFORMATION

## About the congress location

The 1<sup>st</sup> International Congress on Coastal research (1<sup>st</sup> ICCR, 2020) will be held at the Faculty of Sciences and Techniques of Al-Hoceima, Morocco, from 6th to 9th October 2020.

As facilities, we have a large Amphitheater for the plenary session, a large conference room (72 places) up to 6 classrooms (80 places each) for regular sessions, a board meeting room (25 places).

<https://iccr2020.sciencesconf.org/register>

# REGISTRATION INFORMATION

Three-day conference and exhibition

Registration category	Early Bird before June 30	Late Bird after June 30
For Student participants		
Short Paper**	170 Euro	220 Euro
Oral/Poster presentation*	120 Euro	170 Euro
Listener	80 Euro	130 Euro
For Moroccan academic participants		
Short Paper**	230 Euro	270 Euro
Oral/Poster presentation*	150 Euro	200 Euro
Listener	130 Euro	180 Euro
For Non-Moroccan academic participants		
Short Paper**	280 Euro	330 Euro
Oral/Poster presentation*	200 Euro	250 Euro
Listener	150 Euro	200 Euro
Additional Registration Fee		
Accompanying Person	100 Euro	
Additional Paper	100 Euro	
Additional Abstract	50 Euro	
Cruises	55 Euro	
Field trip	55 Euro	
Conference dinner	50 Euro	

## Registration includes:

Attendance to all sessions; Conference program; Name tag; Certificate of attendance; Conference bag; Lunches and coffee breaks.

\* Oral/Poster registration includes also : Abstract book

\*\* Short paper registration includes also : Publication fees, Indexed Proceedings and the Abstract book.

To register, please visit our website on:

<https://iccr2020.sciencesconf.org/register>



# Thank you! to our sponsors



## CONTACT US

Congress website: <http://iccr2020.scienceconf.org>

Congress e-mail: [iccr2020@outlook.com](mailto:iccr2020@outlook.com)

Postal address: 1<sup>st</sup> International Congress on Coastal Research  
Faculty of Sciences and Techniques of Al Hoceima  
BP 34: Ajdir 32003 Al-Hoceima - Morocco

## THANK YOU!

Thank you to our sponsors from the The 1<sup>st</sup> International Congress on Coastal Research. Without your generosity, many of the convention programs would not exist. A full list of available sponsorship opportunities can be found at

<https://iccr2020.sciencesconf.org/resource/sponsors>