

HGS Bulletin

Volume 62, Number 10

Houston Geological Society

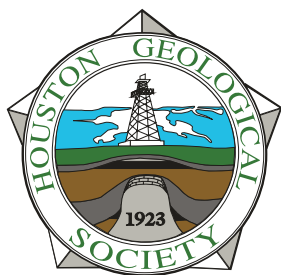
June 2020

**CURIOSITY: THE SCIENCE,
THE PEOPLE, THE FUTURE
OF MARS EXPLORATION**
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Houston Geological Society

Volume 62, Number 10

June 2020

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Technical Meetings

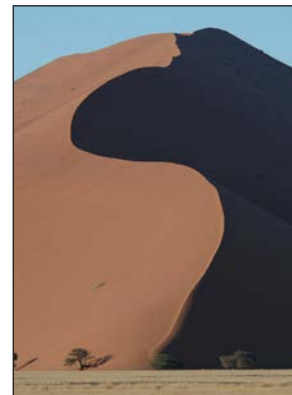
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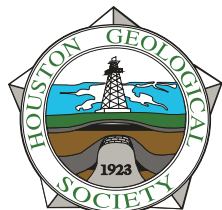


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About the Cover: The cover photo shows the scenic road on the way from the City of Calgary to Banff National Park, Canada in Spring. The image is taken and provided by Dr. Fang Lin from Chevron Corporation.

It's Time to Renew Your HGS Membership

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The Calvert Memorial Fund is a scholarship program for U.S. students enrolled in earth science graduate programs in our region. It is managed by a 5 member HGS board of trustees that provides annual support for graduate studies.

The HGS Foundation Fund is a scholarship program designed specifically for undergraduate geoscience students from area universities.



GeoGulf 2020 Call for Papers

70th 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
- GCSSEPM Special Session—Topic to be announced
- 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
- Carbon Capture / Underground Storage
- Shallow Hazards
- Success from Failure—Learning from our Mistakes
- 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 February 3, 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.

All accepted presenters are expected to submit an initial draft of full paper or extended abstract for publication in the *GeoGulf Transactions* by April 1, 2020, to the *GeoGulf Transactions* Editor, James J. Willis, 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.

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) 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.

2020 HGS-PESGB Africa Conference



A Virtual Conference Thursdays in October



Abstract Deadline Extended Through August 1

The conference will be held during the month of October every Thursday from 8:00-10:00 am CST. It will be a virtual conference with Q&A. Participants can purchase a day session or the entire series.

Day sessions: \$50USD • Entire Conference: \$175USD

Registration now open <https://www.hgs.org/civicrm/event/info?id=2146>

For Exhibitor/Sponsorship Information Contact: andrea@hgs.org

Africa and its Conjugate Margins – New Ideas, Plays, and Innovation

Technical Session Themes

1. **Offshore Africa and its Conjugate Margins –
New Ideas in an Old Area, Old Ideas in a New Area**
 - Known Plays to be Tested in New Areas
 - Mapping Known Plays Across Multiple Basins
2. **Applications of New Technology**
 - Adding Reserves in Existing Basins
 - Reducing Cycle Time and Costs in Exploration
 - Integration of Multiple Technologies to Unlock Future Potential
3. **North Africa Focus – New Areas and Ideas –
Central Atlantic and Mediterranean Margins**
 - Frontier Exploration Plays
 - New Exploration Plays in Under-explored Areas
 - Field Appraisal and Development Case Studies
4. **Africa – A New Approach to Increase Investment**
 - Government Participation and Cooperation
 - Corporate Responsibility, and Ways to Engage Communities
 - Sustainable Solutions to Africa's Energy Needs

Submit abstracts – Africa2020@hgs.org



Jon Blickwede
president@hgs.org

Blind Alleys in Exploration, Part II

In my column last month, I made the point that the petroleum exploration process should at times involve going down some blind alleys. In the case of a new exploration play, the technical and commercial risks are especially high. But the world would have run out of oil and gas long ago if it weren't for companies, and individuals, willing to take on a high level of risk. I described a moment in my career when an exploration manager was unwilling to accept the risks of deepening a wildcat beyond the main reservoir target, missing the opportunity of possibly opening up a new play. This month, I recall a different and more positive experience – where a manager was not only willing to accept a high level of risk, but actively encouraged the technical staff to use their geological imagination and bring forward new and bold ideas.

It was 1983, when I only had a couple of years of industry experience under my belt. I was working in a Gulf of Mexico regional team and was assigned a project to study the structural styles of the offshore Texas continental shelf, where some sizeable natural gas discoveries had been made in recent years, most notably by Shell in the so-called Corsair Trend. To evaluate the area in its basinal context, the seismic data set I selected included the 1970's-vintage 2D survey acquired by the University of Texas at Austin – the first seismic survey ever to cover the entire offshore Gulf of Mexico. One of the UT lines started on the inner Texas shelf and stretched a few hundred miles across the Gulf to the Yucatan Platform. During my presentation to the manager, in which I was talking about the minutiae of the different growth fault systems of the Texas shelf, I laid out a paper copy of the interpreted line on the long conference room table. The shelf portion of the line was located on one end, but the manager kept interrupting me, pointing at some huge anticlines on the continental rise on the central part of the line, and asking "what's that?". "That" turned out to be the massive compressional folds of the Perdido Foldbelt, which were some 200 miles from the nearest well control and located in 7,000-10,000 feet water depth. The size of the anticlines was hard to ignore, but at the time the area wasn't on most companies' radar because of the extreme water depths.

*So for me, it serves
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After the presentation, my supervisor told me that the exploration manager requested that we start a new project on the geology and hydrocarbon potential of the Perdido Foldbelt. It turned out that apart from the couple of UT lines crossing the trend, some seismic contractors had acquired a grid of widely-spaced 2D lines, so I proceeded to map the US portion of the foldbelt and was able

to create a rough structure contour map of a prominent reflector (which later turned out to be the top of the Cretaceous). Many large anticlines were revealed, and if any of these contained significant potential reservoirs and were hydrocarbon-charged, the preliminary resource estimates were of giant or even supergiant magnitude. But the challenges were considered by some to be insurmountable. One memorable event during this period was the first time that I presented the Perdido play to the company's drilling and production engineers, who I needed to help put together some initial "scoping" economics. When the engineers first learned of the water depths, they actually laughed. The ensuing results of the economic analysis were indeed sobering, but nevertheless the exploration manager encouraged us to proceed with the project.

Eventually more seismic was acquired and interpreted, along with a drop core survey in 1986 that recovered visible oil in a few samples. Those documented oil seeps, more than anything else, convinced my company and a few others to bid for the first time on OCS blocks in the area. The first wildcat in the trend, Baha-1, wasn't drilled until a decade later, and the first commercial discovery, Great White-1, wasn't made until 2001. Since then, the Perdido Foldbelt has seen additional discoveries on both the US and Mexican sides of the trend. So for me, it serves as a great example of the importance to the exploration process of geologic imagination, optimism, persistence, and a willingness to sometimes follow hunches down blind alleys.

I'd like to wish all the best to the incoming 2020-2021 HGS Board, who will take the reins on July 1st. It may be a more challenging time than normal, but I have full confidence that your new Board will meet those challenges. *Never stop exploring!* ■

Meet the 2020-2021 Houston Geological Society Executive Board!

**The 2020-2021 HGS Board election results have been announced!
Please see below for details. The proposed changes to
the Constitution and By-Laws have been approved.**

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Stay Connected Through Virtual Meetings

Fellow HGS members: It is hard to believe that eleven months have passed by and this is the last month that I am writing to you as the Editor of the *HGS Bulletin*. When I took the job as the Editor last year, the industry was on its way to recover from a previous downturn. The time was difficult but not as difficult as I could have imagined a year later: lowest commodity prices seen in decades, plus bare minimum demands imposed by a pandemic. No doubt, it is a tough time with lots of uncertainties, which impacts many of us individually as well as many organizations.

I believe that the current situation, however, will change and improve through time, just like the night will be over and the sun will rise again. For now, let's continue to take care of ourselves, our families and our loved ones. After all, nothing is more important than our safety and health in my humble opinion. Meanwhile, the HGS is trying our best to continue to engage and serve our members as much as we can. You may have noticed that our traditional luncheon and dinner meetings have been put on hold since the middle of March this year, our in-person social events planned for the past two months were cancelled. While waiting for the safe time to arrive to return to our "normalcy", the HGS has been offering virtual presentations and workshops lately and in the coming months. Many of these virtual events are free to our members, or free if you renew your HGS membership or join HGS as a new member before July 1, 2020. Big "thanks" to the committee members and the speakers who went the extra mile to put together the virtual meetings. I strongly encourage our members to take advantage of these events, as you will likely gain a broader view of the industry, career and be better prepared for the future.

Two of the virtual events will occur in June, a third one in early July. On June 10th, the HGS NeoGeos Committee will host a virtual meeting on financial smartness. The topic is Show Me the Money, Investment Vehicles: Equities and Options. More detail of the event can be found on page 13 in this issue. On the evening of the same day, the HGS Environmental and Engineering Committee will host a virtual talk on Mars Exploration (detail on page 11 of this issue), should be a fun and continued learning after this year's Scholarship Night discussion. On July 2nd, there will be

a special webinar organized by the HGS Continuing Education Committee, the topic is Business Side of Geology (see page 14 for details). Hope to "see" you virtually at these events.

Looking back into the year, I am grateful for so many people that I have worked with and gotten to know as the Editor of the *HGS Bulletin*. The ten issues of the *Bulletin* are products of teamwork. They were made possible not just by me, but through the great contribution and support of teams. Among them, I particularly want to recognize some of our volunteers. They include the cover photo suppliers: Gregory Schoenborn, Linda Sternbach, Marli Miller, Xiaoli Liu, Charles Sternbach, Michael Forlenza, Zhijing (Zee) Wang and William Dupre. Thank you for the beautiful pictures that you shared with us.

They also include the dinner and luncheon meeting speakers: Brent Boyd, Troy Meinen, Mary Van Der Loop, Lucy Ko, Deborah Sacrey, Laura Murray, Fabien Laugier, Carl Watkins, Matthew Cowan, Bill Fairhurst, Julia Wellner, Jim Gooding, Rog Hardy, Art Donovan, Steven Follmer, Jory Pacht, Ursula Hammes, Jessica Watkins, Jim Rine, Neil Bockoven, Jack Kenning, Rudy Wilhelm, David Bardsley, Andy Pepper, Serena Sneering, Chika Izuakor, Kirsten Siebach, Michelle Foss, John Jacobi and Art Berman. Thank you for sharing your knowledge and experiences with us. Vice President of the HGS Scott Sechrist is especially thanked for securing most of the dinner and luncheon speakers every month. HGS Honorary Life Member John Tubb is thanked for providing the remembrance news every month.

In addition, there are many others who have worked behind the scenes and have contributed significantly to the publication of the *Bulletin*. They include members of the HGS Board, HGS committee chairs, HGS office staff, *HGS Bulletin* graphic designer and commercial partners. Thanks for teaching me and working with me in the past year. It has been a great pleasure to work with each and every one of you. Now, it's the time to say goodbye and welcome our next Editor of the *HGS Bulletin* Ceri Davies. I have full confidence that Ceri will make the *HGS Bulletin* a continued success and take it to a higher level. ■

Houston Geological Society Awards

Rising Star Award

Rising Star Award honors individuals who are relatively new to the HGS and have made significant and promising contributions to the enhancement and success of the society.

Tiffani Kennedy

Lanette Marcha

Jake Schultz

Chairman's Award

Chairman's Award honors members whose extraordinary efforts or unique contributions to their committee deserve special recognition.

Rich Germano

Joe Lynch

Chi Vinh Ly

President's Award

President's Award honors members whose extraordinary efforts or unique contributions in a fiscal year or over a short period of time deserve special recognition.

Casey Langdon

Distinguished Service Award

HGS Distinguished Service Award honors members who have given long-term valuable service to the Society.

Tarek Ghazi

Umesh Prasad

Elliot Wall

Honorary Life Membership

Honorary Life Membership honors members who have distinguished themselves in the science of geology or have contributed outstanding service to the success and welfare of this organization. The honoree must have received the HGS Distinguished Service Award.

Mike Deming

Corporate Star Award

The Corporate Star Award honors companies who have made significant contributions to the Houston Geological Society. These contributions can be monetary (cash) or in kind (donation of services, materials, or an individual's time).

Gold Level

Baker Hughes

Chevron

Silver Level

Occidental Petroleum

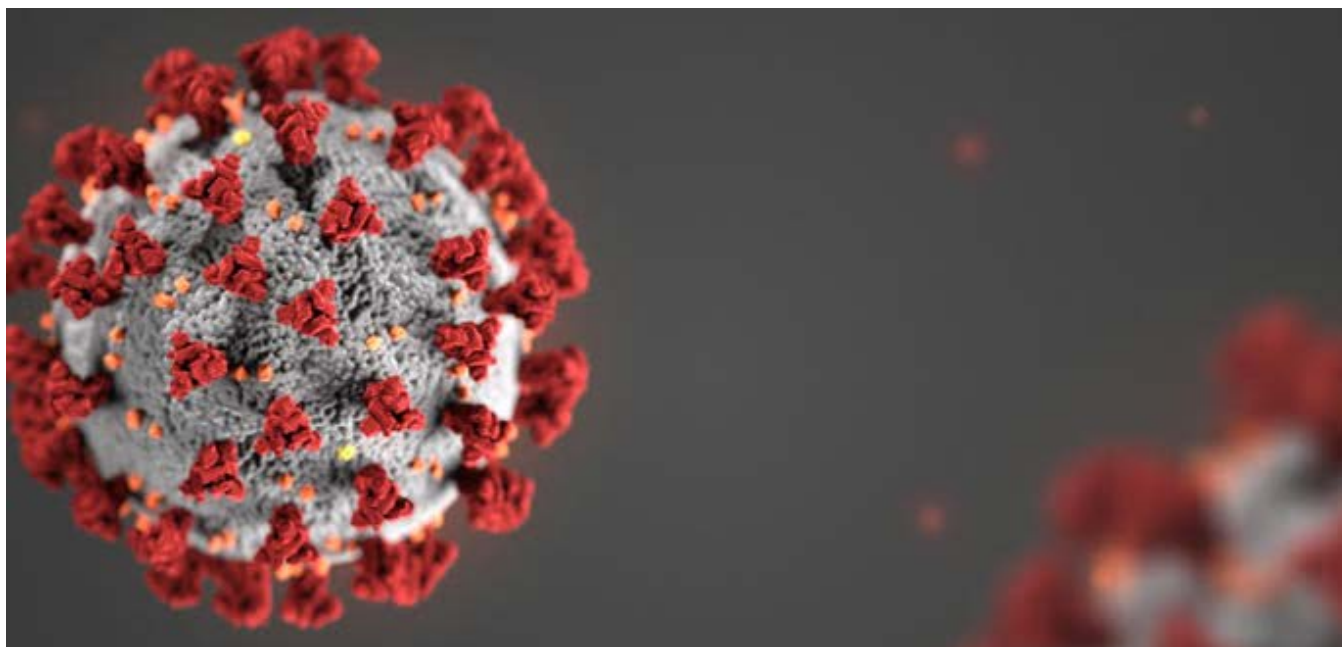
Thunder Exploration

Bronze Level

Black Falcon Energy

Kosmos Energy

Quantico Energy Solutions



Coronavirus (COVID-19) Policy Statement: Updated Thursday, May 28, 2020

Because of the ongoing coronavirus (COVID-19) situation, all in-person HGS events through the end of June 2020 are cancelled/postponed or will be substituted by online events. Please check the HGS website on a regular basis for all HGS online event opportunities.

The HGS Board will continue to monitor the situation and determine whether to extend the cancellation or postponement of HGS in-person events beyond the 30th of June. Please monitor [hgs.org](https://www.hgs.org) and your email for further communication concerning HGS events.

For more information about how you can help to prevent the illness, visit the CDC website: <https://www.cdc.gov/>.

Jon Blickwede
2019-2020 HGS President

The HGS Office will be closed until further notice. If you need to reach us, please contact us by email at office@hgs.org. We apologize for any inconvenience.

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Wednesday, June 10, 2020

Virtual Zoom Meeting

7:00–9:00 p.m.

Registration is FREE for all

<https://www.hgs.org/civicrm/event/register?id=2205&reset=1>

Registered Attendees: Please check your email the day of the event for Zoom meeting details.

Event contact: Matthew Cowan – mrccowan1@hal-pc.org

HGS Environmental & Engineering Virtual Meeting

Kirsten Siebach

Assistant Professor, Rice University
Department of Earth, Environmental,
and Planetary Sciences

Curiosity: The Science, The People, The Future of Mars Exploration

The Mars Science Laboratory Rover Curiosity landed on Mars in August 2012 to investigate the sedimentary rocks in Gale Crater, which tell the story of a time when Mars, like Earth, had liquid water in lakes and rivers at the surface. Curiosity's investigations have revealed that there were lake environments on Mars 3.6 billion years ago that would have supported Earth-like life if it had developed there. I will discuss Curiosity's site selection, landing, the human side of daily science operations on Mars, and some key scientific findings from the rover so far. I will also discuss the upcoming Mars 2020 Rover Perseverance, which will be launching for Mars this July. ■

Biographical Sketch

KIRSTEN SIEBACH is an Assistant Professor in the Rice University Department of Earth, Environmental, and Planetary Sciences and calls herself a Martian Geologist. She researches “source-to-sink” sedimentary processes on Mars and early Earth to interpret the history of water and surface environments early in our solar system. She earned her PhD in geology at Caltech working on the data returned from Mars rovers, and is currently a member of the Science and Operations Team for the Mars Science Laboratory rover Curiosity. Previously, she also worked on the science and engineering teams for the Phoenix Lander and the two Mars Exploration Rovers. She is actively engaged in promoting education and outreach related to Earth and Planetary science and regularly presents at schools and outreach events. Outside of professional interests, she loves travel and photography (on Earth as well as Mars), and enjoys swimming, hiking, and social dancing.



HGS Welcomes New Members

New Members Effective June 2020

ACTIVE MEMBERS

David Kasper
Todd Gibbs

EMERITUS MEMBERS

Bill Hogenson
Bonnie Milne-Andrews
Kurt Tollestrup
Douglas Valleau

STUDENT MEMBERS

Amanda Sandstedt
Benjamin Miller
Samuel Walker

Welcome New Members



2020 GSH-SEG Spring Symposium and Expo



HOW GEOPHYSICIST-MACHINE COLLABORATION IS CHANGING OUR INDUSTRY

JUNE 16-17, 2020

NORRIS CONFERENCE CENTER, HOUSTON TX

**Actual case studies that highlight the applications of new technologies
to solve Geophysical and E&P problems**

- Tom Smith, GEOPHYSICAL INSIGHTS, *Multi-attribute machine learning improves thin bed resolution*
- Mike Li, CHEVRON, *Using Meta Learning to Build Adaptive AI Model for Oil and Gas Exploration*
- Wenyi Hu, AGT & UH, *Progressive transfer learning for low frequency prediction in FWI*
- Long Jin, SHELL, *Scalable seismic attributes computation framework in the age of deep learning and big data*
- Satinder Chopra, TGS, *Some machine learning applications for seismic facies classification*
- Hugo Garcia, GEOTERIC, *Automated Fault Detection from 3D Seismic Using Artificial Intelligence*
- Aria Abubakar, SCHLUMBERGER, *Machine Learning for Geoscience Applications*
- Elive Menyoli, EMERSON, *Wavefield separation via principle component analysis and deep learning in the local angle domain*
- Christopher P. Ross, CROSS QI, *Predicting production metrics for unconventional shale reservoirs*
- Chengbo Li, CONOCOPHILLIPS, *Hybrid learning-based framework for seismic denoising*
- Wen Hu, FORLAND, *Seismic Denoising using Structure-Aware Stacked Denoising Autoencoder Networks*
- Philip Neri, ENERGISTICS, *Standards for Knowledge Metadata are Crucial to Upstream Digital Transformation*
- Tammy Weir, WEIR CONSULTING, *Can I move my data to the Cloud?*
- Keith Gray, BP, *High Performance Computing at BP*

Great opportunities for knowledge sharing and networking
Sponsorships and Exhibit booths available

Tuesday evening Reception

Banquet roasting and toasting Mike Gaul Wednesday



2020 Honoree Mike Gaul

For sponsorship and booth details, call the GSH at
281-741-1624 or visit gshtx.org/symposium2020

SHOW ME THE MONEY

INVESTMENT VEHICLES: EQUITIES AND OPTIONS



Serena Sneeringer,
WFA Financial Advisor



Chika Izuakor,
Founder at Tawt

Moderated By



Mark Hamzat O.
Erogbogbo



Casey Langdon

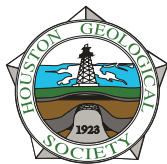
JUNE 10, 6:00 - 7:30PM
SKYPE AND LINKEDIN

Introduction to building wealth through equities
and options trading



[Register Here](#)

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Business Side of Geology A Zoom Webinar

A One-Day Short Course

by **Michelle Foss** – Fellow in Energy and Minerals, Rice University-Baker Institute

John Jacobi – former Co-CEO, Covey Park Energy LLC

Art Berman – CEO, Labyrinth Consulting Services, Inc

Thursday, July 2, 2020 • 9:00 am – 3:00 pm

Low commodity prices coupled with the world-wide Coronavirus pandemic have led to trying and difficult times in our oil industry. The purpose of this Seminar is to provide insight into the current situations within our industry, identify key elements to consider and hopefully provide the groundwork to pinpoint the types of activity for now and the future. What makes sense and what should we do? This Seminar should be meaningful for geologists, landmen and engineers.

AGENDA

9:00 am **Michelle Foss** – Fellow in Energy and Minerals, Rice University-Baker Institute
Topic: *What is the Future for the Energy Markets?*

10:30 am **John Jacobi** – former Co-CEO, Covey Park Energy LLC
Topic: *What are Investors Looking For?*

12 noon to 1:30 pm Lunch Break

1:30 pm **Art Berman** – CEO, Labyrinth Consulting Services, Inc
Topic: *What Geological Plays are Economic?*

Date: Thursday, July 2, 2020 • 9:00 am – 3:00 pm

Pricing

\$30 per person

OR

FREE, if BEFORE JULY 1, 2020

HGS Members renew their membership for 2020-2021, or

Non-HGS Members complete and submit their application to become an HGS Member, Associate Member, or Student Member

In order to receive FREE registration for this event, the single use special code that will be sent to all renewing and new members will need to be entered when registering for this event.

Registration for this event closes at 12 AM, midnight, on July 1, 2020

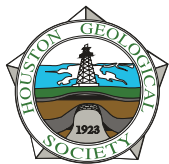
**Please make your reservations on-line through the Houston Geological Society website
<https://www.hgs.org/civicism/event/info?id=2203>**

For more information about this event, email office@hgs.org

Participation in this event will earn 4.5 Professional Development Hours. Certificates will be emailed upon request.

Email your request to acushing@hgs.org, Please include subject: "CE Certificate July 2 webinar"

Special thanks to the East Texas Geological Society and the Shreveport Geological Society for permitting HGS to provide HGS members with this encore of their April 29, 2020 webinar.



Business Side of Geology A Zoom Webinar

A One-Day Short Course

by **Michelle Foss** – Fellow in Energy and Minerals, Rice University-Baker Institute

John Jacobi – former Co-CEO, Covey Park Energy LLC

Art Berman – CEO, Labyrinth Consulting Services, Inc

Thursday, July 2, 2020 • 9:00 am – 3:00 pm

Biographical Sketches



MICHELLE MICHOT FOSS, PhD, is the fellow in energy and minerals at Rice University's Baker Institute, developing policies and conducting research to help build capacity on non-fuel minerals supply chains. She has nearly 40 years of experience in senior positions in energy and environmental research, consulting and investment banking with early career exposure to mining and mined land reclamation.

Over the past three decades, Michot Foss developed and directed research on energy value chain economics and commercial frameworks to support worldwide investment while serving in several positions at The University of Texas at Austin and the University of Houston. She previously served as the chief energy economist and head of the Bureau of Economic Geology's Center for Energy Economics at the University of Texas at Austin. She was also a UH Shell Interdisciplinary Scholar with grants on North American gas and power integration and national oil companies. Her career research highlights include reviewing oil, gas and minerals markets for local, national and international government bodies, including the Texas Comptroller, U.S. Energy Information Agency, U.S. Department of Energy, World Bank, Japan's External Trade Organization and other institutions.

Michot Foss received her BS from the University of Louisiana at Lafayette, an MS from Colorado School of Mines and a PhD from the University of Houston.



MR. JACOBI began his full-time employment in the energy business in 1981 working for Woolf & Magee Inc., a drilling, exploration and production company. In 1991, he co-founded Jacobi-Johnson Energy, Inc., an independent oil and gas producer, and served as its President focusing on acquisitions in the Ark-La-Tex and Gulf Coast Basins. In 1998 Jacobi-Johnson was sold to EXCO Resources where he served as Vice President of Business Development and Marketing, and led the acquisition efforts on transactions valued at approximately \$8 billion. In June of 2013, Mr. Jacobi co-founded Covey Park Energy, Inc., again focusing on acquisitions and served as its Co-CEO. Covey Park was sold to Comstock Resources for \$2.2 billion dollars in July of 2019 and Mr. Jacobi currently serves on its board.



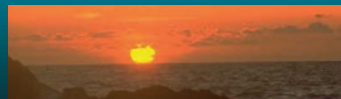
ARTHUR E. BERMAN is a petroleum geologist with 42 years of oil and gas industry experience. He is an expert on U.S. shale plays and is currently consulting for several E&P companies and capital groups in the energy sector.

He routinely gives keynote addresses for energy conferences, boards of directors and professional societies. Berman has published more than 100 articles on oil and gas plays and trends. He has been interviewed about oil and gas topics on *CBS, CNBC, CNN, CBC, Platt's Energy Week, BNN, Bloomberg, Platt's, The Financial Times, The Wall Street Journal, Rolling Stone* and *The New York Times*.

Berman is an associate editor of the American Association of Petroleum Geologists *Bulletin*, and was a managing editor and frequent contributor to *theoildrum.com*. He is a Director of the Association for the Study of Peak Oil, and has served on the boards of directors of The Houston Geological Society and The Society of Independent Professional Earth Scientists.

He worked 20 years for Amoco (now BP) and 22 years as consulting geologist. He has an MS (Geology) from the Colorado School of Mines and a BA (History) from Amherst College. Website: artberman.com

June 2020



Sunday

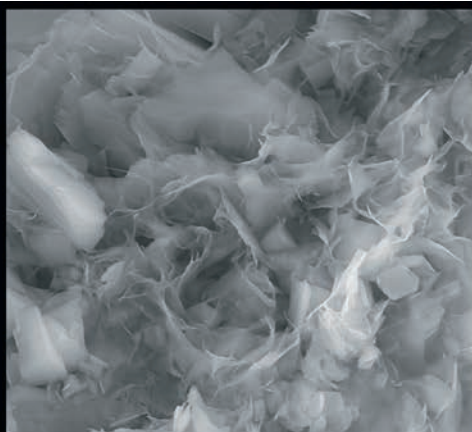
Monday

Tuesday

Wednesday

	1	2	3
7	8	9 HGS Board Meeting 6 p.m.	10 HGS E & E Virtual Zoom Meeting "Curiosity: The Science, The People, The Future of Mars Exploration," Page 11 HGS NeoGeos Virtual Zoom Event "Show Me the Money: Equities & Trading Concepts," Page 13
14	15	16	17
21	22	23	24
28	29	30	

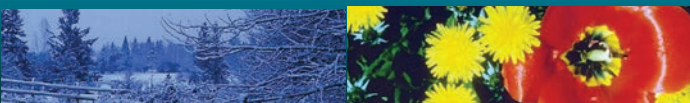
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GEOEVENTS

Thursday

Friday

Saturday



Postponed
AAPG 2020 Annual Convention
& Exhibition
Houston, Texas, USA

Postponed
EAGE Annual Conference &
Exhibition
Amsterdam, The Netherlands

June 16 – 17, 2020
2020 GSH-SEG
Spring Symposium and Expo
*How Geophysicist-Machine
Collaboration Is Changing Our
Industry*
Houston, TX, Page 12

August 22, 2020
Paths to Texas Zero GHG
Emissions: Electricity,
Transportation and Industry
Houston, Texas, USA, Page 19

Thursdays in October, 2020
Virtual 2020 HGS-PESGB Africa
Conference
Page 2

November 19-20, 2020
Second EAGE/HGS Conference on
Latin America
Cartagena, Colombia, Page 19

4

5

**Don't wait,
make
your reservations
online at
hgs.org**

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Reservations:

The HGS prefers that you make your reservations on-line through the HGS website at www.hgs.org. If you have no Internet access, you can e-mail office@hgs.org, or call the office at 713-463-9476. **Reservations for HGS meetings must be made or cancelled by the date shown on the HGS Website calendar, normally that is 24 hours before hand or on the last business day before the event.** If you make your reservation on the Website or by email, an email confirmation will be sent to you. If you do not receive a confirmation, check with the Webmaster@hgs.org. Once the meals are ordered and name tags and lists are prepared, no more reservations can be added even if they are sent. **No-shows will be billed.**

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STGS Fall Field Trip - Friday, October 16th, 2020
"Geology, Frontier History, and Oenology of the Texas Hill Country"



Trip Leader: Pete Rose

Pete will discuss how geology shaped the white man's settlement of the Texas Hill Country beginning with their slim pickings from farming and ranching, their grim encounters with Indian raiding parties and stage coach robbing desperados, to eventual law and order forged by the justice of Texas Rangers. Pete will show that geology creates and controls the extent of the true Hill Country terroir; that is, where actually nurturing vines in Texas soil, to harvest locally raised grapes that yield sustainable and desirable wine, is possible and thriving.

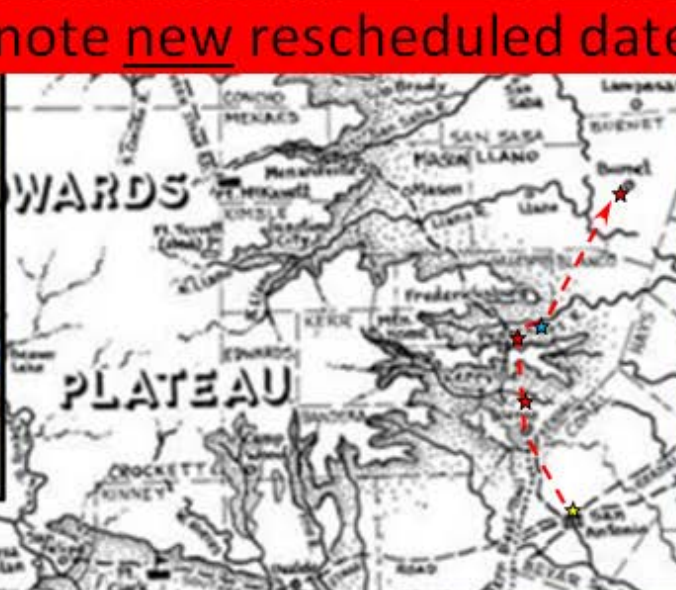
Schedule

40 passenger bus departs Petroleum Club parking lot (8620 N New Braunfels SA TX).....	8 AM
wine tasting at Sister Creek Vineyards.....	9 AM
wine tasting at Becker Vineyards.....	10:30 AM
box lunch by My Own Chef at LBJ Park, Stonewall, Texas.....	High Noon
wine tasting at Perissos Vineyard and Winery.....	2:30 PM
return to Petroleum Club	6 PM

COST: \$125 per person

for reservations and payment information email johnlonggeologist@gmail.com

note new rescheduled date





Paths to Texas Zero GHG Emissions: Electricity, Transportation and Industry

August 22, 2020 University of Houston Student Center
Theater 9am-noon

Engineers, scientists, legislators and the general public are invited to attend a public discussion of vital climate solutions. A distinguished panel will speak followed by a Q/A with the audience. Speakers are Professor Sylvia Dee (PhD Climate Scientist, Rice University), Jeremy Friesen (Director, Business & Corporate Development, NET Power), Gene Preston (PhD Electrical Engineer, CEO of Transmission Adequacy Consulting), Professor Pavel Tsvetkov (PhD Nuclear Engineer, Texas A&M University) and Larry Kremer (PhD Physical Chemist, Citizens Climate Lobby). The symposium chair is Tom Rehm (PhD Chemical Engineer, Chair of Climate Solutions for Texas).

Registration is \$10. If you're a student, registration is free.

<https://stsaiche.regfox.com/ech-climate-solution-community-symposium>



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South Texas Geological Society Seminar & Field Trip

OVERVIEW OF THE AUSTIN CHALK IN SOUTH TEXAS AND LOUISIANA: Depositional Setting, Diagenesis, Porosity Evolution, and Play Development



Seminar Lecturer: Jeffrey Dravis

The Upper Cretaceous Austin Chalk trend in south Texas and Louisiana continues its resurgence in interest. Areas like Karnes Trough in south Texas, and central Louisiana, remain the areas of interest right now, but many companies also are exploiting established field areas like Pearsall and Giddings, and expanding into East Texas. Geoscientists who explore in the Austin Chalk, or hope to exploit existing Chalk field trends, should possess a firm understanding of the Austin Chalk's regional depositional and diagenetic framework. This includes appreciating the influence of regional and local paleogeography, preexisting topography, and underlying structural framework. Developing an appreciation of the various diagenetic pathways that affected Austin Chalk porosity and permeability evolution is critical as well, since fractures are only a part of the story.

Field Trip Leaders: Tom Ewing, John Cooper, David Ferrill

Tom Ewing will show and discuss depositional details of Austin Chalk Group outcrops in the San Antonio area pointing out their implications on hydrocarbons exploration. John Cooper will explore the stratigraphy of the Austin Chalk Group in Bexar County from lower to upper contact and integrate geophysical logs to make ties to the subsurface. David Ferrill will discuss faulting and fractures seen in fault zones exposed in the San Antonio area. David's discussion will focus on understanding typical normal fault patterns and using these patterns as an aid in predicting the fracture zone width when planning oil and gas exploration.

NOTE: The field trip will be moderately strenuous, especially in the event of rain

Friday, November 6th, 2020

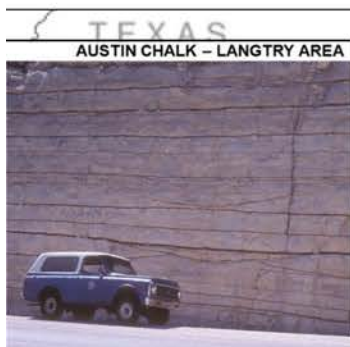
Coffee & pastries at Petroleum Club (7 th Floor, 8620 N. New Braunfels, SA TX).....	8 AM
Buffet Lunch.....	note rescheduled dates Noon
Conclusion and <i>happy hour</i>	5 PM

Saturday, November 7th, 2020

Passenger bus departs Petroleum Club (8620 N. New Braunfels, SA Tx) parking lot....	8 AM
Box lunch	Noon
Return to Petroleum Club by.....	5 PM

\$380 per person (compare to \$895 in Houston with no field trip)
(seminar only: \$320—field trip only: \$100)

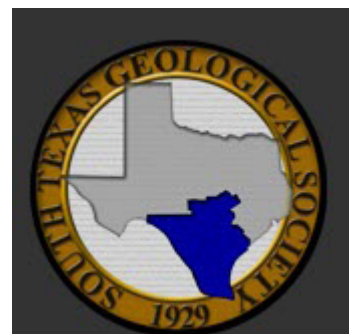
for reservations and payment instructions email: johnlonggeologist@gmail.com
or go to <https://stgs.org/civicrm/event/info?id=84&reset=1> please register prior to April 16th, 2020



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To present your prospect for consideration, please email a summary and/or any associated confidentiality documents to our exploration team:
geology@millenniumpetrocapital.comxs



Remembrance

LAWRENCE "LARRY" SIENKIEWICZ
1953-2020



LAWRENCE "LARRY" JEROME SIENKIEWICZ was born in Milwaukee, WI on June 8, 1953, and passed away peacefully in his sleep on May 2, 2020 at his home in Houston, TX. Larry is survived by the love of his life, Aida Sulzbach.

After graduating from Boys Technical High School in Milwaukee, he attended the University of Wisconsin at Milwaukee and earned a bachelor's degree in Geology in 1978. At that point he headed to New Orleans, LA, where he began his lifelong career in Geology to drill oil wells in several states and the Gulf of Mexico. He worked for NASA, Minerals Management Service, Gulf Oil, Chevron, Unocal, DLB Oil and Gas, ExxonMobil, and completed his career with Extex Operating Services in

Houston, TX. Along the way, he earned a master's degree in Geology from Louisiana State University in 1987, sponsored by Chevron Oil Company. Larry joined HGS in 2009.

He wrote many oil industry "white papers" and was well respected by his peers for his expertise in Geology, Geophysics, and Directional Drilling.

Larry enjoyed travelling around the world, was a world-class athlete in many sports, and enjoyed meeting up with his friends from around the world to run and hike in the woods with an international running club of which he was an active member. He will be missed by all who knew and loved him.

Summarized by Mr. John Tubb from the Life Tributes section of the *Houston Chronicle* Wednesday, May 13, 2020.

Remembrance

C.N. "TOM" TINKER

1933-2020

CLARENCE NORMAN "TOM" TINKER was born in Lansing, Michigan on March 23, 1933, and passed away peacefully on March 11, 2020 in Austin, Texas. Tom graduated from East Lansing High School in 1950 and received his Bachelor of Science and Master of Science in geology from the University of Michigan in 1954 and 1955. He married Janice Wheeler Tinker (East Lansing High School '50, Michigan State '54) on July 2, 1955. They had known each other since the 7th grade and became reacquainted after college. They honeymooned on "Wheeler's Island" on Arbutus Lake in northern Michigan before Tom reported to work for Shell Oil Company, where he worked his entire career of 39 years.

Tom was the first of three generations of geologists in his family and was an active member of many professional geological societies. He and Jan moved a dozen times with Shell between Texas, Louisiana, Illinois, Colorado, and Oklahoma before settling in Houston in 1970. In Shell he ascended to the rank of Senior Technical Advisor. In his later years with Shell he was involved in the organic bioremediation of oil from soil and groundwater in the state of Michigan, an effort that drew recognition from the Governor of Michigan. Tom was passionate about building integrated teams and mentored many young scientists and engineers.

Tom was a third-generation graduate of the University of Michigan. He served the university as a member of the Department of Geological Sciences Alumni Advisory Board for many years and was a committed financial donor. Tom loved watching sports. Whenever the University of Michigan football or basketball teams played, he could be found in his large recliner, TV remote in hand, wearing his U of M hat and sweater, with "Hail to the Victors" at the ready!

Tom was preceded in death by his wife of 63 years Janice Wheeler Tinker. He is survived by his three children Jill Tinker Duncan, Dr. Scott Wheeler Tinker, and Dr. Mark Andrew Tinker and his nine grandchildren. Tom's son Scott Tinker is Director of the 250-person Bureau of Economic Geology, the State Geologist of Texas, professor holding the Allday Endowed Chair in the Jackson School of Geosciences at The University of Texas at Austin and a Past President of the AAPG.

There will be a private memorial service for Tom and Jan on Wheeler Island in northern Michigan.

Summarized by Mr. John Tubb from Life Tributes Section of the *Houston Chronicle* Sunday, May 3, 2020



HGS Bulletin Instructions to Authors

All materials are due by the 15th of the month, 6 weeks before issue publication. Abstracts should be 500 words or less; extended abstracts up to 1000 words; articles can be any length but brevity is preferred as we have a physical page limit within our current publishing contract. All submissions are subject to editorial review and revision.

Text should be submitted by email as an attached text or Word file or on a clearly labeled CD in Word format with a hard copy printout to the Editor.

Figures, maps, diagrams, etc., should be digital files using Adobe Illustrator or Adobe Photoshop. Files should be saved and submitted in .ai, .eps, .tif or .jpg format. Send them as separate attachments via email or CD if they are larger than 5 MEGs each, accompanied by figure captions that include the file name of the desired image. DO NOT EMBED them into your text document; they must be sent as separate files from the text. DO NOT USE POWERPOINT, CLIP ART or Internet images (72-DPI resolution) as these do not have adequate resolution for the printed page and cannot be accepted. All digital files must have 300-DPI resolution or greater at the approximate size the figure will be printed.

Photographs may be digital or hard copy. Hard copies must be printed on glossy paper with the author's name, photo or figure number and caption on the back. Digital files must be submitted in .tif, .jpg or .eps format with 300-DPI or greater resolution at the printing size and be accompanied by figure captions that are linked by the file name of the image. The images should be submitted as individual email attachments (if less than 5 MB) or on CD or DVD.

HGS Bulletin Advertising

The *Bulletin* is printed digitally using InDesign. Call the HGS office for availability of ad space and for digital guidelines and necessary forms or email ads@hgs.org. Advertising is accepted on a space-available basis. **Deadline for submitting material is 6 weeks prior to the first of the month in which the ad appears.**

Random Inside Ad Placement					Specific Page Color Ad Placement					
Black & White Prices Shown – Color add 30% to prices below										
No. of Issues	Random Eighth Page	Random Quarter Page	Random Half Page	Random Full Page	Inside Front Cover Full Page	Inside Back Cover Full Page	Page 2 Full Page	Outside Back Cover Half Page	Back of Calendar Full Page	Calendar Quarter Page
10	\$950	\$1,350	\$2,550	\$4,750	\$8,000	\$7,500	\$7,050	\$6,850	\$6,650	\$3,000
9	\$800	\$1,300	\$2,500	\$4,700						
8	\$750	\$1,250	\$2,250	\$4,300						
7	\$600	\$1,100	\$2,200	\$3,850						
6	\$550	\$950	\$1,800	\$3,500						\$2,000
5	\$500	\$800	\$1,600	\$3,000	\$4,700	\$4,500	\$4,350	\$4,000		
4	\$450	\$650	\$1,300	\$2,500						
3	\$300	\$550	\$950	\$2,000						\$1,000
2	\$250	\$400	\$700	\$1,500						
1	\$150	\$250	\$450	\$1,000	\$1,500	\$1,400	\$1,250	\$1,000	\$1,250	\$850

Professional Directory Section Business Card Ad: 10 Issues – \$160 (\$30 for each additional name on same card)

Website Advertising Opportunities

There are currently 5 opportunities to help spread the word about your business or event and generate traffic to your website or campaign. Please submit all ad materials five (5) days prior to the go-live date for testing.

Placement	Rate	Specifications/Description
HGS Website Home Page Banner Ad	\$800 – Monthly	275 x 875 pixels; home page top banner ad. All Home Page Banner Ads rotate every 10 seconds.
	\$1800 – 3 Months	
	\$2800 – 6 Months	
	\$3600 – 12 Months	
HGS Website Home Page Column Ad	\$700 – Monthly	200 x 400 pixels; home page right column ad
	\$1500 – 3 Months	
	\$2400 – 6 Months	
	\$3600 – 12 Months	
HGS Website Event Page Ad	\$600 – Monthly	200 x 400 pixels; calendar page left column ad. All Event Page Ads rotate every 10 seconds.
	\$1200 – 3 Months	
	\$1600 – 6 Months	
	\$2600 – 12 Months	
Geo-Jobs	\$50 – 14 days	Posting of job opportunities on HGS website. Click the Geo-Jobs tab to get started. Must be filled out completed and the dates set appropriately.
	\$100 – 30 days	
	\$300 – 3 Months	
	\$600 – 6 Months	
	\$1200 – 12 Months	
Vendor Corner	\$250 *4 Pack option with 1 FREE bonus event for \$1000.00 available. Send request to vendorcorner@hgs.org .	Company logo, company website, and company description will be highlighted on HGS Calendar website event. This is an opportunity to display company wares, gain personnel exposure and hand out product information at HGS dinner meetings.
Event/Short Course Calendar Ad	\$100 – Monthly	An event ad posted within the HGS website calendar under the Events tab.
Bundle & Save!	<ul style="list-style-type: none"> • 30% off website ads when combined with print ads in all 10 HGS <i>Bulletin</i> issues. • 20% off website ads when combined with print ads in 5 HGS <i>Bulletin</i> issues. • 10% off website ads when combined with print ads in 3 <i>Bulletin</i> issues. 	



Application to Become a Member of the Houston Geological Society

Qualifications for Active Membership

- 1) Have a degree in geology or an allied geoscience from an accredited college or university; or
- 2) Have a degree in science or engineering from an accredited college or university and have been engaged in the professional study or practice of earth science for at least five (5) years.

Qualifications for Associate Membership (including students)

- 1) Be involved in the application of the earth or allied sciences.
- 2) Be a full-time student enrolled in geology or in the related sciences.

Apply online at www.hgs.org and click on Join HGS

Annual Dues Expire Each June 30. (Late renewals – \$5 re-instatement fee)
Annual dues are \$30.00; emeritus members pay \$15.00; students are free.

Mail this application and payment to:

Houston Geological Society

14811 St. Mary's Lane, Suite 250 • Houston, TX 77079-2916

Telephone: 713-463-9476 Fax: 281-679-5504

Payment method:

☐ Check, ☐ VISA, ☐ MasterCard, ☐ American Express, ☐ Discover

Card # _____

Expiration Date: _____ Card I.D. _____

(Card I.D. – 3 or 4 digit number on front or back of card)

To the Executive Board: I hereby apply for ☐ Active or ☐ Associate membership in the Houston Geological Society and pledge to abide by its Constitution and Bylaws. ☐ Check here if a full-time student.

Name: _____

Address: _____

Home Phone: _____ Spouse's Name: _____

Email: _____

Job Title: _____

Company: _____

Company Address: _____

Work Phone: _____ Fax Number: _____

Circle Preferred Mailing Address: Home Office

Professional Affiliations: _____

☐ AAPG member No.: _____

Professional Interest: _____

☐ Environmental Geology ☐ North American E&P (other than Gulf Coast)

☐ International E&P ☐ Gulf Coast E&P (onshore & offshore)

Membership Chairman _____

HGS Secretary _____

School _____

Degree _____ Major _____ Year _____

School _____

Degree _____ Major _____ Year _____

Earth Science Work Experience _____

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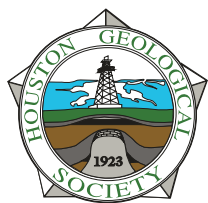
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