

HGS Bulletin

Volume 65, Number 9

Houston Geological Society

May 2023

**ELECTION ISSUE
VOTE BEFORE 5/10!**

**ONCE THE FEDERAL HELIUM RESERVE IS
DEPLETED, WILL NORTH AMERICA BE ABLE
TO SUSTAIN HELIUM SELF-SUFFICIENCY**

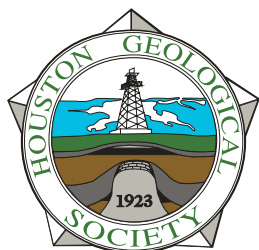
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Houston Geological Society

Volume 65, Number 9

May 2023

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Houston Geological Society

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Technical Meetings

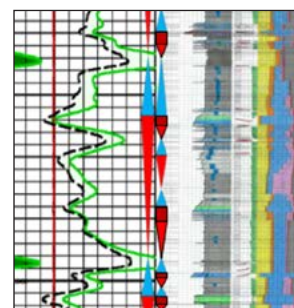
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About the Cover: Interbedded turbidite sands and shales in the Canadian Rockies of Alberta.

Cast Your Vote for the 2023-2024
HGS Executive Board by May 10



ENGINEERING our ENERGY (FUTURE TRANSITION DIVERSITY)



**SPE-GCS
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Hiring Event**

**LIVE! MAY 04, 2023
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[HTTPS://2023.OTCNET.ORG](https://2023.OTCNET.ORG)



Come Rock With Us



The Houston Geological Society is a professional society for petroleum, energy and environmental geoscientists. The HGS supports continuing education, networking, outreach to students, student scholarships and young professional activities. HGS will celebrate its 100th year in 2023!

The objectives of the Houston Geological Society are to stimulate interest and promote advancement in geology for the Houston area, to disseminate and facilitate discussion of geological information, relationships among geologists in the area, and to aid and encourage academic training in the science of geology. The Society strives to achieve these goals through regularly scheduled technical meetings, publication of a monthly Bulletin, a continuing education program, field trips, the publication of timely books, and two student scholarship funds.

Join the Houston Geological Society's wonderful group of volunteers!

The HGS is always looking for energetic members to become volunteers for the society. As the largest local geological society in the country, we depend on the support of our members to help us organize and execute our many activities.

HOW YOU CAN HELP

Field trips: Do you have an idea for a fun field trip? We are always interested in planning exciting trips for adults and kids! Add your name to our list of future field trip guides!

Monthly Technical Meetings: Have you recently heard a great speaker that you think the HGS should host? Let us know! You can also volunteer to help at any of our monthly technical meetings, such as: *General Dinner, General Lunch, Environmental & Engineering Meeting, North American Dinner, International Dinner.*

HGS Committees: Committees such as Educational Outreach, Continuing Education, and NeoGeos are always looking for extra helping hands!

Annual Events: Every year the HGS has annual social events, and we need volunteers to help us organize and set up on the day of the events. They include: *Scholarship Night, Crawfish Boil, Skeet Shoot, Conferences, Golf Tournament.*

If you are interested in adding your name to our list of volunteers, please contact the HGS Office at office@hgs.org



The Houston
Geological
Society

It's time to renew your membership

MEMBERSHIPS EXPIRE
JUNE 30, 2022!



**CLICKING THE QR CODE TAKES YOU TO THE
RENEWAL PAGE ON HGS.ORG**

ACTIVE/ASSOCIATE MEMBERS: \$36 EMERITUS MEMBERS: \$18
STUDENT MEMBERSHIPS FREE

VISIT OUR WEBSITE AT WWW.HGS.ORG



Greetings fellow geoscientists and HGS Members! We continue to build membership, improve attendance/participation in events, and we are making good progress in achieving financial sustainability.

In addition, voting for the 2023-2024 HGS Officers opened April 10 and runs through May 10. The

Nominations Committee has thoughtfully presented us with a fine slate of candidates. Please read the bios beginning on page 15 in this *Bulletin* and cast your ballot for next year's board.

Membership

In-person events that span a range of subjects continue to contribute to membership renewals and new members. Please continue to boost our membership by encouraging your work colleagues and service company contacts to become members. Logical service company sponsors include mudloggers, wireline companies, directional companies, log analysts, and rock labs. Even if folks are not geologists, they can become HGS Associate Members.

A Quick Lookback at Attendance of the April Events

- **April 10** Dinner Meeting – 22 attended
- **April 12** Environmental and Engineering – 15 attended
- **April 21** HGS Shrimp Peel and Crawfish Boil – 150 (Preregistered and walkups)
- **April 22 to 25** GEOGULF 2023 – 405 attendees (A significant increase compared to 2021 participation in Austin)
Thank you, Charles and Linda Sternbach, for your leadership and hard work carrying off a successful event.

Rebuilding Community — In-Person Events Scheduled for May and June

- **May 10 - Environmental & Engineering Group**
Craft Republic 5:30 to 9:00pm
Topic and Speaker to be Announced. For registration and details see HGS.org or HGS Weekly Announcements.

- **May 15 – Dinner Meeting**

Norris Center 5:30 to 9:00pm

Topic: Helium in North America

Presentation Title: “Once the Federal Helium Reserve is Depleted, will North America Be Able to Sustain Helium Self-Sufficiency”

Presented by: Tim Rynott - Four Corners Helium, LLC.

For registration and details see page 9, HGS.org or the HGS Weekly Announcements.

- **May 22 – Continuing Education**

Full-Day Core Workshop taught by Bob Lindsey

Location: Corelab, 6316 Windfern 8:00am to 5:00pm

For registration and details see page 8, HGS.org or the HGS Weekly Announcements

- **June 1-8 – Grand Canyon Raft Trip**

There may still be one spot open. Contact the HGS Office

Financial Sustainability

Achievement of our financial sustainability goal requires membership support and member participation in the society-sponsored events as well as active solicitation of sponsors.

Please encourage your service company contacts to become HGS sponsors. Also, if you are a consulting geologist or have your own generating entity, you could consider advertising in the Bulletin or sponsoring an event to assist in securing work or drilling partners.

The Board of HGS officers and I thank you for your support of the Houston Geological Society with your membership and your participation in the scheduled events. We also thank all the committee chairs and volunteers who help us carry out our mission. We encourage you to join us and get reconnected to your local geological community. Last but not least, we thank our numerous sponsors that have generously supported HGS over the past year. ■

Keep up the great work!

Walter S. Light, Jr. – President

The poster features a background image of a savanna landscape with acacia trees and a sunset sky. In the center, there is an orange square containing a white silhouette of the African continent with a single oil drop falling from its eastern coast. Below the square, the text 'AFRICA CONFERENCE' is written in white. Further down, the dates '20-21 SEPTEMBER 2023' and the location 'LONDON' are displayed. A large white text block reads 'Submit your abstract by 28 April', followed by the URL 'https://africa.pesgb.org.uk/callforabstracts/' and the hashtag '#AFRICA2023'. At the bottom left is the 'PES GB' logo with a drop icon, and at the bottom right is the circular logo of the 'HOUSTON GEOLOGICAL SOCIETY' with the year '1923'.

Unlocking African Energy to Power the Future

2023 sees the PESGB/HGS Africa Conference return to London and more importantly return to in-person talks, posters and exhibitors! The conference will bring together the leading subsurface experts to present and share the latest technical updates emerging from Africa over the last couple of years. The conference is unashamedly technical in its nature, it always has been and will continue to be focused on the rocks of Africa!

Africa has the resources to power the world through the Energy Transition and also to drive its own development out of energy poverty but the key to unlocking this potential remains in the subsurface community. Come and share your thoughts, insights and consider submitting an abstract.



KEN THIES

Science Fact of Fiction

As my penultimate letter as editor, I want to write about what I consider several related items. These are my word only. They do not represent the opinions or positions of the Board of the HGS or its members.

Last week, a major news outlet ran a story over several segments about the loss of land in South Louisiana. The presenter was a national “meteorologist” standing in a boat stating where she said had been dry land not that long ago but now was covered by water several feet deep. She presented a list of 3 causes; one might assume they were in the order of significance. First was climate change and the resulting rising sea levels due to fossil fuel usage. Second was the dredging of canals by oil companies to move drill rigs about to drill for and extract oil. Third was subsidence which she also attributed mostly to oil extraction. All three essentially blaming the loss of land on the oil industry.

I doubt she knows anything about South Louisiana geology and likely she was just reporting what she was told to say. But please, if you are going to present a report on the loss of land in South Louisiana, why not show some level of credibility. The Gulf of Mexico basin is a trailing passive margin where regional subsidence is the norm. Any geologist who has worked the area knows that much of South Louisiana is subject to regional subsidence, and that subsidence has been ongoing throughout the Cenozoic. NASA claims there has been a 6-8 inches of world-wide sea level rise in the last 100 years. This rise is nowhere near the several feet of water the reporter boat was floating in. Canal dredging does not cause the sea to rise or the land to sink.

Fluid extraction can cause local subsidence if the water and oil are extracted at a rate higher than the replenishment rate. We see it here in Houston, where we extract truly massive amounts of water from very shallow aquifers. But this human-forced subsidence is generally considered to be local and can only happen if the reservoirs are shallow and the volumes removed are massive. The reporter suggested that the regional subsidence of the Gulf of Mexico basin was caused by regional hydrocarbon extractions which, by inference, would suggest there is a very shallow oil field that is bigger than any oil field I can find on any map at any depth.

Regional subsidence in the Gulf Coast basin has been long offset

by over-bank deposits derived from Mississippi River floods (this is sediment filling accommodation space, in geological terms). But this natural flooding process is no longer allowed to happen because of the continuous dykes and levees built along the length of the Mississippi to stop the very floods that bring sediment to the low areas. So, you can't have it both ways. If you stop the floods, you also stop the very sediment that fills the accommodation space, and the land seems to “sink” — but what it lacks is sediment influx.

So sure, sea level rise can happen and human-induced subsidence can happen. But these two factors are not happening to the degree and extent the reporter suggested. It was junk science and misinformation.

Recently I saw an interview of a relatively famous astronomer from the American Museum of Natural History's Hayden Planetarium. (I don't know his qualifications on climate change, but he was actually misrepresenting another AMNH geologist's work). He stated that if we don't stop “climate change”, sea level will rise to reach the elbow of the Statue of Liberty, about 70 meters. Scary, but is it realistic? Of course not. The IPCC reports (<https://www.ipcc.ch/report/ar6/wg2/>) have completely dropped scenario RCP 8.5, the most extreme model ever presented for sea level rise. Not even RCP 8.5 predicted a 70 meter rise in sea level.

Antarctica has been located over the south pole and glaciated for about the last 34 million years. Much of that ice has survived through periods where the earth's was warmer than the worst warming predictions made by the IPCC. The southern continental glaciers also survived the glacial interstads when the earth was considerable warmer than today. Additionally, it would take many thousands of years to happen — if it were even possible.

Put another way, there is not basis in history or the currently accepted IPCC scenarios where sea level rises 70 meters. So where did this “expert” get his information? I suggest Twitter, or maybe this “scientist” is getting his “facts” from the sensational movie about climate change I saw almost 3 decades ago.

This brings me to a phone call I heard on a national call-in program where a 10 year old girl was in tears because she has been told many times that the world is **From the Editor** continued on page 7

coming to an end because of climate change. She is not the first or likely not the last I will hear telling this. In a recent speech, ex-Vice President Gore claimed that we are going to be destroyed by a rising sea level and at the same time he predicts that the oceans are going to boil away. Yet there is no basis for these fear-mongering in the IPCC reports. We have some education to do at our schools. No wonder our children and grandchildren are scared. But is it true and will eliminating the fossil fuel industry and pushing us all to electric cars, jet planes and even the latest electric military tanks save us? When are we going to refute these unsubstantiated assertions and claims?

My last story is about my recent trip to a school to present the Bones in Schools program to fifth graders. I taught 6 classes of twenty-five students, aged 10 -11 year old, about fossils and the world they came from. The morning four classes went well. I actually had two students approach me at the end of their class and thank me. One drew a dinosaur on the back a thank you note. The second asked if he could hug me for coming to his class to teach them. That is much of the reason I do it but I wish we had more volunteers to have that experience.

The afternoon classes were a different story. The first teacher fell asleep five minutes into my presentation (I guess I was too boring for her to listen) and did not wake until I asked her how much time

I had left. She answered that I had already run over.


The students did not want to leave and asked if I could let the other class in to sit on the floor so they could stay over to hear more. The second teacher left the room after 10 minutes to talk on the phone and did not return until the class was about over. I'm sure the students learned more about the level of uncaring of the teachers or the science they hopefully learned from me.

So, do we sit back and allow these young people to be scared and misinformed and allow our industry to be destroyed or do we speak out about the truth? We cannot stop earthquakes, volcanic eruptions or plate tectonics and we can have little if any sustainable affect the climate trends we see today.


All of the increases in CO₂ over the last 15 years come from coal-fired power generation in China and other Asian countries — not from the US, not from oil and gas, and not from Western Countries individually or as a whole.

What we can do is learn to adapt to our ever-changing climate like all species do rather than go extinct. But we need to teach our students, and teach the public, a lot more about the importance of real science over sensationalism. ■

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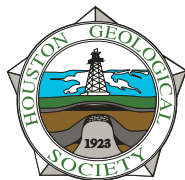
Celebrating 30+ years of prospect generation and exploration in the following South Texas plays and trends.

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Jackson	Austin Chalk	Pearsall
Yegua	Eagle Ford	Sligo
Wilcox	Buda	Cotton Valley
Olmos	Georgetown	Smackover

Thunder is currently seeking non-operated working interest participation in projects and prospects.

Contact Walter S. Light Jr.
President/Geologist
 713.823.8288
 EMAIL: wthunderx@aol.com

The Houston Geological Society Continuing Education Committee Presents



The Rocks Never Lie: Classic Permian Basin Conventional, Tight and Unconventional Reservoir Core

Robert F. Lindsay • Lindsay Consulting LLC • Midland, Texas

Wednesday, May 24, 2023 • 8:00 am – 5:00 pm

<https://www.hgs.org/civCRM/event/info?id=2462>

Course Description

Using core data and a good core descriptions, participants will learn about

1. Depositional Environments
2. Diagenetic Modifications
3. Porosity-Permeability Relations
4. Flow Units
5. Fluid Types
6. TOC
7. Migration Pathways
8. Reservoir Potential

This course will focus on Permian Basin cores. But the insights and methods can be applied

to any cores from any formation for any purpose (e.g., CCUS, EOR, development geology). The class includes 140 feet of core that will be laid out at Core Lab. Examples to be studied:

- **Conventional reservoir core:** Abo; San Andres, reservoir and ROZ; and Grayburg.
- **Tight reservoir core:** Clear Fork.
- **Unconventional reservoir core:** Woodford and Wolfcamp.

The short course will start with an overview on how to describe a core. This will give participants an appreciation of how to make a good core description. The class will alternate between lectures and core viewing throughout the full day.

Participants learn how of core descriptions can be utilized to build a reservoir-scale sequence stratigraphic model. Reservoir-scale models can be utilized to do conformance work which will improve vertical sweep efficiency and ultimately lead to improved reservoir performance.

An informal poll by the HGS found that over 90% of the working geologists and engineers in Houston have never had a formal class on core description, or the interpretation of core data. So if you are a working geologist or engineer and your work includes rocks in the subsurface, this class will make you more knowledgeable and more successful at your job!

Dr. Lindsay's class has been presented in Abilene and Fort Worth where it had 50 and 90 participants respectively. **Seating is strictly limited to 45 participants!**

Date: May 24, 2023 • 8:00am – 5:00pm

Location: Core Laboratories

6316 Windfern Road, Houston, TX 77040

Please make your reservations on-line <https://www.hgs.org/civCRM/event/info?id=2462>

For more information about this event, contact HGS Office 713-463-9476 • office@hgs.org

Pricing

Limited to 45 participants

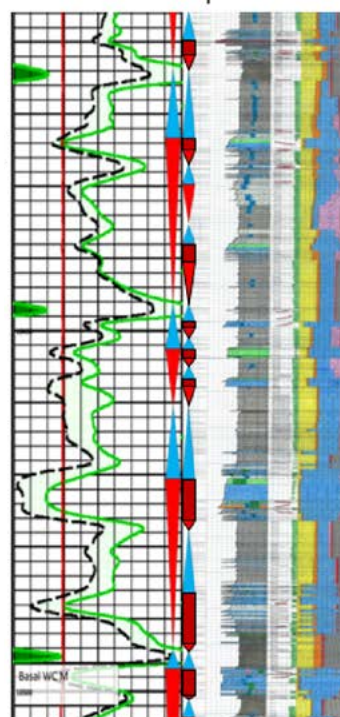
\$570 for HGS Members

\$220.00 Student/Those in Transition (call HGS office)/ Emeritus

\$670 Non-Members, join now and pay member price

NO WALK-UPS ACCEPTED

Wolfcamp core



Once the Federal Helium Reserve is Depleted, will North America Be Able to Sustain Helium Self-Sufficiency

The Bureau of Land Management's Federal Helium Reserve (FHR) located ~12 miles northwest of Amarillo, Texas, currently supplies 35-40% of Americas helium needs (~2,000,000 cubic feet of helium/day), was offline for over 6 months in 2022 due to maintenance issues. This development, along with a major disruption in Russia, plus reduced output in Qatar and Algeria, is emblematic of the fragility of our domestic helium supply/demand balance.

If these combined supply disruptions sent shockwaves to many helium end users (e.g. - MRI's, semi-conductors, rocket propulsion, cryogenics, lifting applications) — what happens when the final 10-12% of helium in the FHR has been exhausted?

Starting around 2018, a cavalry of small independents with highly varied technical acumen began the charge for new helium discoveries, but to date, the results have been less than stellar. Since helium is 7x lighter than air and can travel through steel given enough time (Hu, 2013), it's considered one of the more elusive gases on the planet.

Historically, most of the known helium accumulations were found serendipitously while in search of hydrocarbons. Therefore, explicit helium prospecting is still in its infancy. Fortunately, many of the same exploration methods used in oil and gas exploration are utilized in helium exploration, although source and seal play higher priorities in the risk-analysis game.

Modern helium exploration can be subdivided into two broad categories: 1) Drilling host rock overlain by salt/evaporitic seals; and 2) drilling host rock with clastic seals (e.g. - hard shales or tight carbonates). There is nothing in the subsurface that can trap helium — but certain formations slow it down better than others — tight evaporites being the best.

Over millions of years, basins associated with the Ancestral and modern Rockies developed the thickest and most laterally contiguous salt layers. Top subsalt players include ExxonMobil (LaBarge, SW Wyoming); Kinder Morgan/Air Products (Doe

Canyon, SW Colorado); Grand Gulf Energy (Red Helium Project, SE Utah); Paradox Resources, (SE Utah); Blue Spruce (LaBarge); and Wesco (Three Mile Unit, SE Utah).

All of the sub-salt helium accumulations above are associated with Mississippian-aged carbonates. Through early porosity enhancement via the diagenetic conversion of limestone to dolomite, and further porosity enhancement by localized hydrothermal dolomitization, these reservoirs possess world class porosities and permeabilities, and in cases like LaBarge and the Red Helium project, can cover areas in the 10's of square miles. ExxonMobil's LaBarge Field in Southwest Wyoming currently produces ~20% of the global helium supply and hasn't needed to drill a development well since 1993.

Non-subsalt fields can have alluring economics when helium is trapped at anonymously shallow depths. The best example is the prolific Pinta Dome/Navajo Springs helium accumulation located on the northwestern edge of Arizona's Holbrook Basin. Although multiple operators have made numerous attempts for a repeat performance of Pinta/Navajo, nothing substantial has been proven to date — largely due to inefficient seismic at 800-1200' reservoir depths.

New production in the US Four Corners Area has shown excellent recent success. Helium trapped at DBK Field in NW Arizona is associated with a highly anomalous granitic sill seal, while in northwest New Mexico a Devonian low porosity, helium rich sandstone is a fast moving frac-driven project.

In SE Colorado and western Kansas, chasing helium bearing lower Pennsylvanian Morrow channel sands utilizing advanced seismic attributes shows promise over time, and a sprinkling of other Mid-Continent projects are in early stages of development.

In SW Saskatchewan the big player is still North American Helium. NAH has raised significant capital; built an enviable midstream; and has drilled ~50 wells to date. Although lack of 3D control and pre-mature water influx can be an issue. NAH's estimated

current production of over just 300,000 cubic feet of helium/day is relatively minor considering the number of wells drilled to date. Keep in mind the latter is partially due to numerous wells held up by facility construction.

The most exciting non-subsalt development is Avanti Helium's Cambrian discovery in northwest Montana (Greater Knappen). Based on a prolonged test, this 20% porosity sandstone had an open flow test of 20 MMCFGD with only 3% drawdown. This basement derived anticline, identified by 3D seismic, represents a conventional play-style Texas and Louisiana explorers know well.

With helium contracts presently ranging from \$450 to \$500 per thousand cubic feet of helium at the time of this writing, and spot prices in select areas exceeding \$1000 per thousand cubic feet, opportunities abound for helium operators. In the near term, high-rate subsalt discoveries could provide immediate relief to Helium Shortage 4.0. In the longer term, the addition of sustained organic growth in certain non-subsalt play areas could bode well for counterbalancing the depleting Federal Helium Reserve.

Lastly, capital constraints are problematic. High-rate subsalt wells are CAPEX intensive, and other than Avanti's discovery; most non-subsalt play areas will require hundreds of wells to make an impact. Due to the nascent nature of helium exploration, and investors who maintain a proclivity for playing in a familiar sandbox, the headwinds are strong for raising much needed capital. The best estimate suggests \$80-100MM USD could be required in the next 3-6 years for North America to be able to turn the helium corner. It's not easy to envision the origin for this sizable investment.

Can the United States become helium self-sufficient for our kids and grandkids? At this early stage of the game, the answer is a hard maybe. Then again, unencumbered hard driving entrepreneurs possess an amazing track record for success when individual gain is the carrot. ■

Biographical Sketch

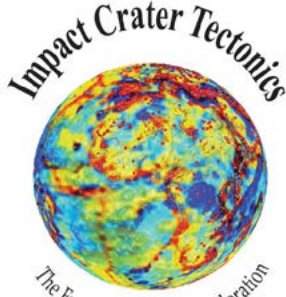


MR. RYNOTT, founder of Four Corners Helium, LLC (FCH) and Ridge Resources, LLC has spent the majority of the past four decades successfully exploring for oil and gas in over twelve US Basins, including the Gulf of Mexico Deep Water. During his career he has generated/endorsed countless discoveries, and has been personally investing in oil and gas drilling projects since 1985.

The most recent 3.5 years has been an immersion in applying natural gas exploration techniques into successful helium endeavors. The newly formed Four Corners Helium technical team, comprised of five geoscientists, three geophysicists, and a top geochemist, has mapped almost ten million acres of the helium charged Colorado Plateau. Having also reviewed helium projects in eastern Colorado, Northern Montana, the Texas Panhandle, New Mexico, and Arizona, the team has gained appreciable insights for the geologic and geochemical challenges inherent in helium exploration.

Over the past 28 years, Mr. Rynott has served on the following Boards: AAPG Advisory Council, AAPG House of Delegates, AAPG Associate Technical Editor, Louisiana Oil & Gas Assoc, Gulf Coast Assoc of Geological Societies, and Gulf Coast Prospect Expo. In 2019 he was awarded the AAPG Distinguished Service Award. Mr Rynott is a Domestic and International speaker and author, providing technical presentations for multiple Oil and Gas Conferences, including AAPG, SEG, GCAGS, SIPES, and RMAG's recent North American Helium Conference.

He is presently serving as Rocky Mountain Section Counselor for the Division of Professional Affairs of the AAPG and is a member of good standing with the AAPG, DPA (Cert #5803), LOGA, HGS, LGS (Honorary Member), and FCGS.



Impact Crater Tectonics provides a universal geologic framework for the prediction of mineral resources: oil, gas, gold, rare earth minerals--a plethora of treasures underfoot. Based on solid scientific, mathematic, and geologic principles, this work consecrates an imminent paradigm shift in the manner we interpret geologic structures. **Impact Crater Tectonics** will change your viewpoint of Earth forever.

Full-color, 297-page, 8.5" x 11" perfect-bound book, with over 200 photos, graphs, and illustrations. Available on Amazon, or signed copy from author at DButhman@ImpactCraterStudies.org.

The Future of Resource Exploration
David Buthman

Cast Your Vote for
the 2023-2024
HGS Executive
Board by May 10

GSH Annual Golf Tournament 2023

The Woodlands Country Club Tournament Course has been chosen to host this year's Geophysical Society of Houston's Annual Tournament. Winding through the village of Grogan's Mill, the overall design of the Tournament Course promotes the feeling of tranquility, with well-integrated ponds, lakes, natural trees, and pristine landscaping. The Tournament Course serves as host to The Insperity Invitational.

Monday May 22, 2023

9 am Shotgun Start



**The Woodlands Country Club
Tournament Course**

**\$200 Per Golfer
Or \$800 Per Team**

**Click the QR code
to register**



***Space is limited to 130 Players - *Sponsorships are still available**

For more information contact: Fernando Verver {e} fernando.verver@tgs.com

Or Kathy Sanvido {e} kathys@gshtx.org

Volunteer with HGS



Annual Events

Every year the HGS has annual social events, and we need volunteers to help us organize and set up on the day of!

These include events such as:

- Golf Tournament
- Shrimp Peel & Crawfish Boil
- Skeet Shoot
- Tennis Tournament
- Field Trips



Committees

HGS committees such as Educational Outreach and Continuing Education provide geoscience learning resources to students and the local geoscience community. These groups are always looking for volunteers! If you or someone you know is interested in lending a hand, please contact the HGS Office!

Interested in Volunteering?

The HGS is always looking for energetic members to become volunteers for the society! As the largest local geological society in the country, we depend on the support of our members to help us organize and execute our many activities. Committees such as Educational Outreach, Continuing Education, and our annual social event committees are always looking for extra helping hands! Contact the HGS Office at office@hgs.org to learn more!

May 2023



SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3	4	5	6 AAPG Southwest Section Meeting Wichita Falls https://www.hgs.org/civicrm/event/info?id=2457
7	8	9	10 HGS E&E Dinner Meeting TBA https://www.hgs.org/civicrm/event/info?id=2419	11	12	13
14	15 HGS General Dinner Meeting Helium Reserve Tim Rynott Page 9 https://www.hgs.org/civicrm/event/info?id=2466	16	17	18	19	20
21	22	23	24 HGS Short Course The Rocks Never Lie Page 8 https://www.hgs.org/civicrm/event/info?id=2462	25	26	27
28	29 Memorial Day HGS Office Closed	30	31	Reservations The HGS prefers that you make your reservations online 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, contact the HGS office at office@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.		

RENEW
YOUR HGS MEMBERSHIP
HGS.ORG

Volunteer Opportunities

Interested in Volunteering?

The HGS is always looking for energetic members to become volunteers for the society! As the largest local geological society in the country, we depend on the support of our members to help us organize and execute our many activities. Committees such as Educational Outreach, Continuing Education, and our annual social event committees are always looking for extra helping hands. Contact the HGS Office at office@hgs.org to start volunteering today!

I.T. Specialist Needed

Do you specialize in I.T.? Would you be willing to donate your services to the Houston Geological Society? HGS is in need of an I.T. specialist who has experience with website building/coding and other computer technologies. If you or someone you know would be interested, please contact the HGS Office at office@hgs.org.

Dinner Meeting Liaison

HGS is in search of volunteers to assist with our monthly dinner meetings. Volunteer responsibilities would include pickup/return of meeting materials to/from the HGS office, and managing the registration table at the meeting. Please contact the HGS Office at office@hgs.org if you are interested.

Exhibits Chairman

HGS is proud to participate in a number of exhibits each year such as NAPE, GCAGS, etc. We are in search of volunteers to help us at these events! Responsibilities include transportation of the HGS booth to and from conferences, manning the booth at these events, and signing up new or returning memberships. If you or someone you know is interested in lending a helping hand, please contact the HGS Office at office@hgs.org.

Educational Outreach Committee Chairman

The Educational Outreach Committee provides geoscience learning resources to students, educators, and the general public of southeast

Texas. Outreach activities include geoscientist visits to classrooms, scout troops, and other public assemblages, with presentations and hands-on activities about geology and careers in geoscience.

Interested? Please contact the HGS Office at office@hgs.org for more information.

Membership Committee

Houston Geological Society is 100 this year! Yes, HGS started in 1923. Just imagine how the organization thrived and has grown all these years. Purely by the volunteering efforts of Geoscientists. The Membership Committee is responsible for promotion of memberships and contribute to the growth of HGS! The Membership Committee needs two (2) student members to help process membership applications. Please contact: Sharma Dronamraju; Chair, Memberships at Sharma@akdpsi.com. The information on HGS membership criteria is [HERE](#).



Candidates for the 2023–2024 Executive Board

Houston Geological Society Officer Election

The candidates put forth by the Nominations Committee are:

President-Elect: Bryan Guzman, Penny Patterson

Vice President: Bruce Blake, Linda Sternbach

Secretary: Kenneth Mohn

Treasurer-Elect: Ceri Davies, Tuan Vo

Editor-Elect: Ted Godo, Ross Harrison

Directors: (2 positions): Bryan Bottoms, Janet Combes, Sharma Dronamraju, Judy Schulenberg

HGS Election Voting Instructions

Members will be able to vote online only

HGS Members will be able to vote online at the HGS website.

You must be logged into your account to cast your vote.

Voting will be online only - no mailed ballots!

Please check the HGS website for updates and announcements.

The voting period opens April 10, 2023 and continues to May 10, 2023.

President-elect (two candidates)



Bryan Guzman

Education

BS Geology, University of Texas at San Antonio, 2008

MS Analytics, Texas A&M University, 2018

Experience

2008 – 2011 Geologist – Ingrain Inc.
2011 – 2013 Geoscientist – Ingrain Inc.
2014 – 2015 Product Champion – Drill Cutting Technologies – Ingrain Inc.
2015 – 2017 Geologic Advisor – Ingrain Inc.
2017 – 2018 Senior Technical Advisor – Halliburton
2018 – 2019 Senior Account Manager – TGS
2019 – Present Veilvox LLC – Founder
2020 – 2021 Senior Account Manager – Premier Corex
2021 – Present Director Global Business Development & Technology – Premier Corex

Professional Affiliations

HGS, AAPG, SPE, SPWLA, GCAGS

Professional Activities

2011 – 2017 HGS Chairman Exhibits Committee
2013 – 2014 HGS Secretary
2015 – 2016 HGS Treasurer Elect
2016 – 2017 HGS Treasurer
2017 – Present HGS Advertising Committee Chairman
2018 – 2019 GCAGS Houston Treasurer
2019 – Present GCAGS Treasurer

Bryan Guzman continued on page 22



Penny E. Patterson

Education

PhD, Geology, University of Colorado Boulder, 1990

MS, Geology, University of Colorado Boulder, 1981

BA, Geology, University of Colorado Boulder, 1976

Experience

2018 – Present Research Affiliate and Instructor, University of Colorado Boulder
2016 – 2018 Senior Technical Advisor, ExxonMobil Production Company
2013 – 2016 Senior Technical Advisor, ExxonMobil Development Company
2006 – 2013 Senior Geoscience Advisor, ExxonMobil Exploration Company
1990 – 2006 Senior Research Geologist, ExxonMobil Upstream Research Company
1981 – 1986 Geologist, Research Planning Institute
1975 – 1976 Field Assistant, USGS

Professional Affiliations

HGS (25 years); AAPG (41 years); SEPM (41 years); GSA (41 years)

Professional Activities

2022 – Present Chair of Advisory Board, Department of Geological Sciences, University of Colorado Boulder

Penny E. Patterson continued on page 22



Candidates for the 2023–2024 Executive Board *(continued)*

Vice President (two candidates)



Bruce Blake

Education

Education

1977 – BS in Geophysics, Texas A&M

University

1985 – MBA, HBU

Professional Experience

1977-1980 Geophysicist, Houston Oil & Minerals
1980-1988 Geophysicist, exploration manager, Hunt Oil Company
1988-2016 Exploration advisor, Maxus then YPF then Repsol
2016-2017 Geophysical consultant
2017-present Geophysicist, Tri-Star Petroleum

Professional Affiliations

Houston Geological Society
Geophysical Society of Houston
Society of Exploration Geophysicists
American Association of Petroleum Geologists, CPG #5562
Society of Independent Professional Earth Scientists
Texas Board of Professional Geoscientists #1624

Statement

I'm honored to have been asked to run for Vice President of the HGS. The main function of this position is to help bring technical talks to the membership. Since 1977, my career has been focused on conventional exploration having worked for companies of various sizes from a family owned small shop to a major international company. I've traveled to and seen exploration projects in six of the seven continents. And I've given talks at several local and international society meetings including being the 2014 Honorary Lecturer, Middle East & Africa for the SEG.

Having returned to Houston in 2016 from a dozen years as an expat in Calgary, Madrid, and Tripoli, I've become involved in HGS serving as this year's Treasurer. As Vice President of the HGS, I'll focus on bringing interesting exploration topics to the membership. ■



Linda Sternbach

Education

1984 M.S., Geology Rensselaer

Polytechnic Institute, Troy, New York.

1981 B.S., Geology, Syracuse University,

Syracuse, New York

Work Experience

2007-present Vice President of Star Creek Energy
1984-2007 ARCO Oil and Gas, Globex Energy, Kerr McGee, Oxy, Anadarko; as geologist and geophysical seismic interpreter, US and International projects.

Society Service

2020-2022 AAPG Vice President-Sections, AAPG Executive Committee
2020 AAPG Honorary Life Member
2023 GCAGS GeoGulf Conference, Technical Chair
2019 GCAGS GeoGulf Conference, Technical Chair
2015 GCAGS Conference, Technical Chair
2017-18 SIPES Houston Technical Chair
2011 HGS Honorary Life Member
2011 AAPG Annual Convention Technical Chair
2007-2008 HGS President
2005-2006 HGS Vice President
1996-97 HGS Bulletin Editor
1985 Joined HGS as Active Member

Statement

I would be honored to serve as HGS Vice President and celebrate HGS' 100-101st year as a geological society. I would organize the monthly dinner and luncheon talks, and work with the leaders of HGS International Explorationists, E&E, and North American groups to recruit highly valued speakers. My experience with the recent GeoGulf conferences will guide my selection of scientific, applied petroleum exploration, and business-oriented speakers that will benefit HGS membership. I see the value of remote online access to technical talks like we experienced using Zoom in past years. I think this should be part of the HGS technical program, but in a way that lets HGS recover the cost of the running online meetings. I have worked to increase HGS membership renewal and growth after the pandemic. We found that personal contact (calls, email) was the most effective way to motivate membership renewal. I think we should reach out to potential new members using the HGS technical program as a reason to get new members to join HGS. ■



Candidates for the 2023–2024 Executive Board *(continued)*

Secretary (two candidates)



Kenneth Mohn

I spent my entire career in the oil and gas industry as a geologist, primarily working for seismic companies putting together upstream exploration seismic projects, both domestic and international. The importance of understanding the geology of a region when working on a project can make the

difference between a well laid out program and a waste of time.

I recently formed Mohn & Associates to leverage my skills and the skills of other likeminded professionals to provide services to our clients. Designing a project without considering all the geological and geophysical factors that could affect the project can be a waste of money. Just doing things, like we always have, just because that is the way we do it, can achieve the same objective. We live in a world that is changing and we have to change with it. That does not mean we destroy what we have built and learned, but we improve on the systems we have.

I am honored to run as a Board Member for the Houston Geological Society. ■



Bryan Ott

Education

PhD, Geology, University of Houston, 2015

BS, Geology, The University of Texas at Austin, 2011

Work Experience

2015-Present Hess Corporation

Professional Affiliations

HGS, AAPG

Statement

I'm honored to be nominated for the position of secretary of the Houston Geological Society. The HGS is a historic society that has served geologists in the city of Houston for 100 years. Now, more than ever, is the time for our community to come together and stand proud for the role we play in providing the world with affordable and reliable energy. As an active member on the HGS Continuing Education Committee, and long-time Houston resident, I have a deep appreciation for the role the HGS plays in advancing the field of geology and promoting its value to the wider community. Through technical meetings, conferences, publications, social functions, and scholarships, the HGS is the premiere society that represents and serves geologists in Houston. If elected, I would be honored to work with the other board members to not only continue to carry the torch of those who served before us, but to help accelerate the HGS into the future. I am eager to contribute my skills and knowledge to further the goals of the Geological Society of Houston and ensure its continued success. Thank you for your consideration. ■



Candidates for the 2023–2024 Executive Board *(continued)*

Treasurer-elect (two candidates)



Ceri Davies

Education

Masters of Geophysics with Geology,
University of Liverpool, 2001-2005
PhD in Paleomagnetism, University of
Liverpool, 2005-2009

Professional Experience

2010 – Present CGG (formerly Roberson Research), Various
Sales, Business Development and Project
Management roles across the Americas.

Professional Affiliates

Houston Geological Society
AAPG
Rocky Mountain Association of Geologists

Statement

I am very appreciative of the nomination to run for Treasurer-Elect of the Houston Geological Society. I moved to Houston 10 years ago and have always enjoyed the events and education provided by the HGS and look forward to supporting the Society as it celebrates its centenary. The Africa and Latin America conferences have become a staple of my calendar and I enjoy the variety of talks provided by the evening dinners and general lunches.

My recent involvement with the HGS has included co-chairing the North American Explorationist Group, Board Member, Editor and most recently Chair of the Latin America conference held November 2021. As with all Societies, the HGS must adapt and evolve in order provide our members with applicable and interesting events and I look forward to working with the rest of the HGS team in the coming years, either through a Treasurer-Elect capacity or volunteering when resources are needed. ■



Glenn R. Lowenstein

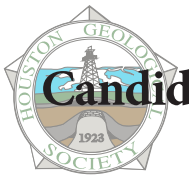
Glenn Lowenstein has been involved with the HGS since the 1990s serving as the chairman of the Environmental/Engineering Group and a field trip coordinator to Big Bend. He was awarded the Rising Star and a Lifetime honorary membership.

Glenn obtained his B.S. in Geology at Queens College in New York and his M.S. in Geology at Texas A&M. He has been an environmental consultant in the Gulf Coast area for twenty years. Mr. Lowenstein managed a staff of up to ten geologists, engineers, and technicians for the Houston office for Professional Service Industries from 1990 until 1997. In 2001, he formed the company Terrain Solutions, Inc. where he currently serves as President.

Mr. Lowenstein was selected as one of the first one hundred in the State of Texas to be a licensed Geoscientist due to his active role in the profession and is licensed as #28. Mr. Lowenstein was selected by the Governor of Texas to serve as a six-year term Secretary/Treasurer and head of Compliance and Enforcement for the Texas Board of Professional Geoscientists (TBPG).

He has completed or supervised the performance of over 900 Phase I and II Environmental Site Assessments since 1990 for the private and public sectors. He has several written papers on the ASTM environmental assessment process and trained other consultants in environmental investigative procedures. He has been involved with many aspects of environmental assessment and remediation and has served as an expert witness in litigation. He has been involved in the assessment of many types of properties from fueling station to manufacturing facilities and protected the environment and human health through the proper assessment/remediation of such contaminants as heavy metals, volatile and semi-volatile organic compounds, PCBs, petroleum products, and pesticides.

His wife, Lisa, is a veterinarian with her own clinic. They have three adult children and, as of last year, three grandchildren. ■



Candidates for the 2023–2024 Executive Board *(continued)*

Editor-elect (two candidates)



Ted Godo

Ted originally began his geologic studies at the age of 9 and continued through his master's degree in Geology from Ohio State University in 1979. Upon graduation, he joined Shell's exploration department as a geologist. At Shell, he gradually rose to a position of chief geologist, supplying

risking and ranking of the exploration portfolio in the western hemisphere. After his 35-year career at Shell he joined Murphy Oil as a geologic advisor. At Murphy, he evaluated New Venture opportunities in basins on both sides of the Atlantic margin (West Africa, Brazil, Mexico, and Canada). After 5 years with Murphy, he formed the geologic consulting company named Geodog Exploration LLC. At Geodog, Ted has consulted for companies exploring subsalt and Mesozoic opportunities in the Gulf of Mexico. Most of the consulting during this time has focused on the Mexican deep-water exploring for both Mesozoic and subsalt Tertiary targets.

Ted has published works on various subjects such as Mississippian aged turbidites and chert/novaculite formations in Arkansas; Tertiary turbidite stratigraphic traps in the Gulf of Mexico and more recently, with several papers on the Jurassic Norphlet aeolian sandstones. These publications were with organizations such as the Royal Geologic Society of London, AAPG (memoirs) and oral presentations at national conventions such as the past Discovery Thinking forum, Gulf Coast Geological Society and with the Arkansas Geologic Surveys with 3 information circular books. Ted has participated in AAPG's Imperial Barrel programs as both an industry mentor and finalist judge. He also has been a committee member as an industry advisor for both MS and PhD dissertations at Texas universities.

Among other involvements, Ted has given geologic talks to Colorado Audubon societies and outdoor clubs. His most recent additional activity has been elected to the Homeowner's board of directors for his subdivision in Texas Grand Ranch. ■



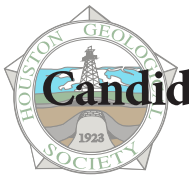
Ross Harrison

Ross is a geologist with expertise in secondary and tertiary recovery from Permian fields. In addition, he leads and plans the certification of CO₂ injection for Enhanced Oil Recovery and CCUS projects. Ross began his career at Oxy in 2017 and has identified, developed, and

produced resources from large carbonate and mixed-carbonate-siliciclastic reservoirs.

Ross earned a BA in English with a General Business Minor from Texas Christian University, a BS in Geology from Louisiana State University, and an MS in Geology from Texas Christian University. While in school, Ross supported applied research projects including characterization of modern siliciclastics of the Gulf Coast and a depositional evaluation of coal beds in the Raton Basin.

Ross attended the 2021 HGS Grand Canyon Field Trip and enjoyed it so much that he will be co-leading the trip for HGS in 2023. Ross currently serves on Oxy's Early Career Network Steering Committee as President, having previously served as the Chair of Technical Development. He enjoys doing anything in the sun, running, climbing, fishing, mountaineering, reading, and learning. ■



Candidates for the 2023–2024 Executive Board *(continued)*

Director – Two-year term *Vote for two candidates*



Bryan Bottoms

Education

M.S. Geology, University of Arkansas,
2015-2017

B.S. Geology, University of Arkansas,
2007-2012

B.A. Geography & French, University of
Arkansas, 2007-2012

Work Experience

2023 – Present Detring Energy Advisors – Vice President –
Geology
2021 – 2022 Detring Energy Advisors – Associate – Geology
2019-2021 Detring Energy Advisors – Analyst – Geology
2017-2019 Tapstone Energy – Associate Geologist
2015-2017 University of Arkansas – Research and Teaching
Assistant
2013 -2015 Nomac Drilling/Chesapeake Energy –
Measurement While Drilling Engineer
2013 Nomac Drilling/Chesapeake Energy –
Mudlogger

Statement

I am incredibly honored to have been nominated for a position on the HGS Board of Directors this upcoming year. Since moving to Houston in 2019, I have found a great sense of community in the HGS and have continued to increase my involvement with the society as time has gone on. This past year I served as the NeoGeos committee chair, hosting happy hours and trivia events aimed at encouraging the younger members of Houston's geologic community to become involved with the society. I have also volunteered my time for the society in educational outreach events like teaching fossils in elementary schools and participating as a judge in the Houston Science & Engineering Fair. I look forward to continuing my involvement with the society and hope to encourage turn out, especially amongst early career geoscientists.

I grew up in Oklahoma City but attended college at the University of Arkansas where I majored in Geology, Geography, and French. After undergrad I worked on a rig as a mudlogger and MWD engineer across northern and western Oklahoma (Miss. Lime and Granite Wash plays) as well as in the Eagle Ford Shale play of south Texas. After a few years I went back to school to obtain my masters in geology. After school, I worked as a geologist for Tapstone Energy in Oklahoma City where we were focused on drilling in the western Anadarko Basin and the STACK. I moved

Bryan Bottoms *continued on page 23*



Sharma Dronamraju

Sharma earned his Master's degrees in Geology from the Indian Institute of Technology, Texas A&M University, and an MBA from Rice University. He worked as Geologist and held technical and leadership positions in the upstream oil & gas and mid-stream companies for 38

years, in Houston and internationally. Currently, he is a Founder/ Director of AKD Professional Solutions Inc. serving primarily the upstream oil & gas industry.

He has been a member and a volunteer with HGS for 25 years, an active Member of the AAPG(30 years), and a delegate with the AAPG HoD. He served on Continuing Education and International Exploration Committees, organized and chaired three workshops (Geopressures, Coal Bed Methane, and Reservoir Modeling, 2000), Co-Chaired the International Business of Exploration Symposium (2000), and received the Rising Star award (2000). Served as Session Chair for GCAGS and AAPG ICE. He now serves as Chair of the Memberships Committee. He has been a Guest Speaker at HGS and GSH.

Sharma's expertise lies in subsurface reservoir modeling rejuvenating mature fields and offshore Geohazards. He was associated with several deepwater field developments, exploration appraisals in GoM, deep-water Nigeria, Equatorial Guinea, and the South China Sea, and exploration for stranded gas resources in Europe, South East Asia, and Australia. Sharma's recent work includes Geomodeling for EOR in mature oil fields in Miocene syn-rift clastics and carbonates, Gulf of Suez, Egypt, addressing subsurface heterogeneity of Mishrif Carbonates in Southern Iraq, reservoir modeling of HPHT fields in offshore East Malaysia and Borneo, heavy oil development in Powder River Basin, tight oil&gas, and CBM in Greater Green River basins.

Sharma loves teaching, and taught at Lone Star and San Jacinto colleges, as an Adjunct Professor. He taught classes for AAPG/ SEG in the US, Middle East, Asia, and Mexico, in Reviving Mature Fields. High-resolution Sequence Stratigraphy, and Deepwater Depositional Environments. Visit the AAPG Learn Blog on Sharma's expertise. Sharma is passionate about Earth Observation, and the use of Satellite Imagery and data in managing natural resources and planning.

Sharma Dronamraju *continued on page 23*



Candidates for the 2023–2024 Executive Board *(continued)*

Director – Two-year term *Vote for two candidates*



Janet Combes

I have been an active member of HGS since 1995 and have been involved in multiple committees and activities, especially educational outreach, including:

- Earth Science Week committee (since HGS began involvement in 1998)
- HGS exhibit at the Houston Gem and Mineral Show
- Reach for the Stars STEM Fest at Rice (since the Sally Ride Festival began in 2006)
- HGS Science Museum Committee

I am interested in exploring new opportunities for the Houston Geological Society related to the approaching energy transition change – new approaches will involve geoscience techniques. Interaction with local colleges will be needed also. I believe that I can offer a broad perspective and represent the diverse members of the world's largest local geological society. I especially appreciate HGS outreach endeavors to promote geology, both in schools and to the general public, as well as its efforts to support its membership and our industry. I feel honored that I was asked to run for the office of Director of the Houston Geological Society.

I have more than 40 years of experience as an interpretation geoscientist (geologist and geophysicist), working in industry, government agencies, and as an independent consultant. I took time between getting my degrees to work and also had jobs while enrolled. My focus has been primarily in petroleum exploration, production, and research, and I have worked both domestic and international projects for multiple companies, including Tenneco, Amoco, ExxonMobil, and ConocoPhillips and several independents. I also have experience with the Kansas Geological Survey, the Texas Bureau of Economic Geology, and the USGS. I think that having this depth and range of industry and non-industry experience helps prepare me for the diverse issues affecting the HGS

My Education and Background Include

BS in Geology from Louisiana State University

MS in Applied Geophysics from the University of Houston

PhD in Geology from the University of Texas

I have published 22 papers/extended abstracts, and 21 abstracts. I have also developed and taught short courses on coalbed methane

Janet Combes *continued on page 23*



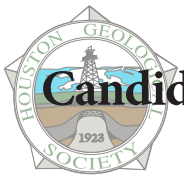
Judy Schulenberg

Judy Schulenberg has over 30 years' experience in all aspects of exploration and development, in both conventional and unconventional plays. She has supervised multidisciplinary teams, written "best practices" guidelines for unconventional development, and has

developed and delivered training courses for both geoscientists and non-geoscientists. She has extensive experience in all aspects of recruiting, mentoring and training in the oil industry.

She is the President/owner of The Explorer Group 1 specializing in attribute analysis and machine learning applied to prospect generation and development, shallow hazard analysis, and breathing new life into older fields. She enjoys the challenge of "out of the box" situations and projects, especially where the application of new technology can be used to enhance previously successful plays.

Ms. Schulenberg is an active member of American Association of Petroleum Geologists (AAPG), Society of Exploration Geophysicists (SEG), Houston Geological Society (HGS), AAPG House of Delegates, and Geophysical Society of Houston (GSH). She serves as Secretary of the Warren L. and Florence Calvert Memorial Scholarship board and has previously served as secretary on the board of HGS. She is active on the GSH Outreach committee especially as a judge for the annual Science and Engineering Fair. She has served as an industry mentor for the University of Houston IBA competition team and is currently involved in establishing a mentoring program at University of Houston EAS. Additionally, she has been involved in SPE's mentoring program utilizing its Members in Transition program to reach both students and newly graduated employees. She was a founding member of the University of Houston College of Natural Sciences and Mathematics Alumni Association and served several years as chair of its scholarship committee. ■



Candidates for the 2023–2024 Executive Board *(continued)*

continued from page 15

Bryan Guzman—*Candidate for President-elect*

2020 – 2021 HGS Vice President

2022 – 2023 Geogulf Treasurer

Statement

Ever since I joined the HGS, I have enjoyed the benefits of education, networking, and friendship. Currently, I am working with the GCAGS as Treasurer. For about 7 years, I had spent much of my time working on the exhibits committee organizing the set-up and transportation of the HGS booth for various conventions throughout the year. When I served as HGS

Secretary, it afforded me the opportunity to learn more about the many functions of the HGS. I was also exposed to the duties as the HGS Treasurer-elect and Treasurer where I witnessed the society's dedication to the various efforts through the annual budget. I was then given the opportunity to serve as the HGS Vice President during the COVID19 pandemic where I was able to schedule all our monthly technical talks digitally for the first time. It has been a pleasure meeting many people along the way and I am thankful to the opportunities the HGS has provided me while serving as a Chairman, Secretary, Treasurer, and Vice President. It would be my great pleasure to serve in the capacity of HGS President Elect. ■

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Penny E. Patterson—*Candidate for President-elect*

2007 – 2022 Advisory Board Member, Department of Geological Sciences, University of Colorado Boulder

2018 – 2019 Houston Geological Society, Vice President

2014 – 2016 Houston Geological Society, Director of Science and Education

2006 – 2018 Science Ambassador Program (Outreach Government Program)

Awards and Honors

Best Speaker Awards

Rocky Mountain Association of Geologists, 2006

Houston Geological Society, 2010

Invited Keynote Speaker at Technical Conferences

Sakhalin Island Petroleum Conference; Moscow, 2016

International Petroleum Technology Conference, Tight-Gas Reservoirs; Beijing, 2013

SEPM, Rivers to Rock Record Conference; Aberdeen, 2009

Geological Society of London, Traps for fossil fuels Conference; London, 2008

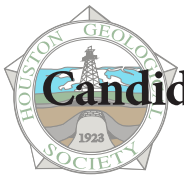
AAPG, Hedberg Conference on Lacustrine Systems; Baku, 2004

Statement

As the Houston Geological Society begins its 100th year as a professional society, it continues to be an integral organization in our geoscience community, which provides critical resources to our members through HGS technical meetings and conferences, publications, networking social functions, and the HGS website. HGS is also a vibrant professional society that is evolving as our geoscience community is expanding in diverse areas such as improved technologies for renewable resources, carbon capture and sequestration, as well as our growing focus on environmental issues.

I am honored to be a nominee for the position of President-elect of the Houston Geological Society. If elected, I look forward to working with the HGS Board, our HGS members, and the greater Houston-area geoscience community to advance HGS's objectives of 1) stimulating interest and promoting advancement of geology, and 2) disseminating geological information through building geoscience community relationships and encouraging training in the science of geology. I support HGS Board's on-going business initiatives of building HGS membership, improving attendance at HGS events, and strengthening HGS's financial sustainability. My past HGS Board member positions have ideally situated me to assist with advancing HGS objectives and business initiatives. As HGS Vice President (2018-2019), I developed Luncheon and General Dinner Meetings speaker programs that brought in diverse presentations, which, in turn, increased HGS meeting attendance and engaged a broad spectrum of our geoscience community. As HGS Director of Science and Education (2014-2016), I worked with seven committees, which provided exceptional training and learning opportunities for geoscientists of all ages, including our young K12 scientists, industry and academia scientists, and our retired scientists. It is this dynamic engagement of our community that continues to advance and transfer our excellence in geoscience.

I enthusiastically support HGS and enjoy the camaraderie and benefits of networking with fellow geoscientists. HGS technical meetings, seminars, and workshops are all vital to our geoscience community and provide a sounding board and exchange for new ideas and technologies. Hence, HGS is uniquely poised for providing the platform for geoscientists to work together in developing innovative technologies that will lead our energy industry with sustainable environmental advancements into new directions. HGS should be an integral linkage to guide us into future geoscience opportunities and adventures. ■



Candidates for the 2023–2024 Executive Board *(continued)*

continued from page 20

Bryan Bottoms—Candidate for Director

to Houston in 2019 to join Detring Energy Advisors where we focus on selling upstream oil and gas assets across the entirety of the lower 48. I have been an active member of HGS since moving

to Houston and have previously been a member of the Oklahoma City and Ft. Smith Geologic Societies. I have been a member of AAPG since 2015. I'm a registered Professional Geoscientist in the State of Texas. ■

continued from page 20

Sharma Dronamraju—Candidate for Director

Mr. Sharma is a Certified Geologist, with the Texas Board of Professional Geoscientists (#12543). He volunteers with the Science and Engineering Fair of Houston, the Eternal Gandhi Museum of Houston, and a KEYS Mentor with Katy ISD. He lives in Katy. Post Harvey, Sharma spent more time with Fort Bend County on contingencies for future flooding behind the Barker and Addicks reservoirs, and the improvement of the Buffalo Bayou drainage system.

Why do I want to be a candidate for the Executive Board?

The geology profession seems to have taken a back seat, at least that is the perception in the oil&gas capital of the world! It is true to some extent, Jobs are slowly transforming as we speak. Oil & gas

companies have transformed into energy companies, increasing their renewables share in portfolios. However, we at the Houston Geological Society promote geoscience at large, manage precious natural and mineral resources, and the environment, educate about responsible energy usage, conservation, and transformation, manage and store carbon, educate about managing natural resources and geohazards, and just enjoy the pure joy of sharing the Earth's history! Geoscience has never changed. We continue to do what we are good at. Let us be good scientists first. I think, as the 100-year-old organization that we are, we have a job to do. Geoscience has become more relevant in the new energy economy and the climate dialogue and has a larger influence on human society. As one of the Directors on the Executive Board. I would do just that, promote the Geoscience education and profession. ■

continued from page 21

Janet Combes—Candidate for Director

and on the Vicksburg Formation. I have judged at multiple science fairs and for convention presentations, participated in abstract reviews and chaired convention sessions and several professional society committees. I was a member of the AAPG House of Delegates for one term. I am a Master Docent at the Houston Museum of Natural Science and a co-chair of the Energy Exchange focus committee for volunteer docents. I am a long-time member

of the AAPG, SEPM, GSA, SEG and SIPES, and I was a member of the AAPG House of Delegates for one term. ■

HGS Awards

2001	Rising Star Award
2006 and 2010	President's Award
2008 and 2022	Distinguished Service Award
2016	Honorary Life Membership Award

Advertise with HGS

The Houston Geological Society has many advertising opportunities to help you promote your business. The money raised through advertising helps the HGS to be able to support continuing education, networking, outreach to students, student scholarships, and young professional activities. Check out some of our advertising opportunities below!



Vendor Corner

Promote your business with a booth at an in-person luncheon or dinner meeting. HGS will also post your logo, website/social link(s) and a brief company summary on the HGS website below the technical meeting's announcement and abstract.



HGS Bulletin

Published 10 months out of the year and available digitally on the HGS website, the HGS Bulletin is an outstanding technical journal sent electronically to all current members and to subscribing libraries around the world.



Virtual HGS Event Sponsorship

Promote your business at a virtual meeting. Along with the opportunity to reach a global audience, HGS will promote your business on the event page, on our social media, and at the technical talk.



GeoJobs

The HGS GeoJobs section provides a variety of employment information to interested HGS members and the geological and geophysical community at large. If your business has an employment opportunity, let us help you fill the position!



HGS Weekly Newsletter

The HGS Weekly Newsletter is published digitally every week, and reaches a global community of 8,000+ people. HGS will promote your business with an ad of your design or your logo and a link to your website or social media.

To learn more about advertising rates and how you can promote your business with us, visit our website or contact the HGS Office at 713-463-9476 or office@hgs.org.





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					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
No. of Issues	Random Eighth Page	Random Quarter Page	Random Half Page	Random Full 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	
Vendor Corner	\$1200 – 12 Months	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.
	\$250	
	*4 Pack option with 1 FREE bonus event for \$1000.00 available. Send request to vendorcorner@hgs.org.	
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. 	



HGS Membership Application

Houston Geological Society
14811 St Mary's Lane Suite 250 Houston
TX 77079

Phone: (713) 463-9476

Email: office@hgs.org

Active Membership

In order to qualify for Active Membership you must have a degree in geology or an allied geoscience from an accredited college or university or, 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 5 years. Active Members shall be entitled to vote, stand for election, and serve as an officer in the Society. Active Members pay \$36.00 in dues.

Associate Membership

Associate Members do not have a degree in geology or allied geoscience, but are engaged in the application of the earth sciences. Associate Members are not entitled to vote, stand for elections or serve as an officer in the Society. Associate Members pay \$36.00 in dues.

Student Membership

Student membership is for full-time students enrolled in geology or an allied geoscience. Student Members are not entitled to vote, stand for elections or serve as an officer in the Society. Student Member dues are currently waived (free) but applications must be filled out to its entirety. Student applicants must provide University Dean or Advisor Name to be approved for membership.

Membership Benefits

Digital HGS Bulletin

The HGS Bulletin is a high-quality journal digitally published monthly by the HGS (with the exception of July and August). The journal provides feature articles, meeting abstracts, and information about upcoming and past events. As a member of the HGS, you'll receive a digital copy of the journal on the HGS website. Membership also comes with access to the online archives, with records dating back to 1958.

Discount prices for meetings and short courses

Throughout the year, the various committees of the HGS organize lunch/dinner meetings centered around technical topics of interest to the diverse membership of the organization. An average of 6 meetings a month is common for the HGS (with the exception of July and August). Short courses on a variety of topics are also planned throughout the year by the Continuing Education Committee. These meetings and courses are fantastic opportunities to keep up with technology, network, and expand your education beyond your own specialty. Prices for these events fluctuate depending on the venue and type of event; however, with membership in the HGS you ensure you will always have the opportunity to get the lowest registration fee available.

Networking

The HGS is a dynamic organization, with a membership diverse in experience, education, and career specialties. As the largest local geological society, the HGS offers unprecedented opportunities to network and grow within the Gulf Coast geological community.

Please fill out this application in its entirety to expedite the approval process to become an Active/Associate member of Houston Geological Society.

Full Name _____ Type (Choose one): Active
Associate Student
Current Email (for digital Bulletin & email newsletter) _____
Phone _____
Preferred Address for HGS mail _____
This is my home address _____ business address _____
Employer (required) _____ Job Title (required) _____ Will you
volunteer? _____ (Y/N) Committee choice: _____

Annual dues Active & Assoc. for the one year (July 1st-June 30th) **\$36.00** _____

Student **\$0.00** _____

OPTIONAL Scholarship Contributions- Calvert/HGS Foundation-Undergraduate **\$5.00** _____

Total remittance _____

Payment:

Check # _____
Credit card: V MC AE Discover
Credit Card# _____
CVV code (req'd): _____ Expiration: _____ (mm/yy)

Signature: _____ Date: _____

To the Executive Board: I hereby apply for membership in the Houston Geological Society and pledge to abide by its Constitution & Bylaws.

Company (required, mark 'in transition' if unemployed) _____

Company Address _____

City (Work) _____ **State** (Work) _____ **Postal Code** (Work) _____

School (required) _____

Major (required) _____ **Degree** (required) _____

Year Graduated _____

School (optional) _____

Major (optional) _____ **Degree** (optional) _____

Year Graduated _____

Years Work Experience (required) _____

Please submit a brief statement regarding your work experience in the practice or application of earth science or an allied science.

AAPG Member Number _____ OR

HGS Sponsor's Name _____

Signature: _____ **Date:** _____

Professional Directory

Consulting, Evaluate Prospects:
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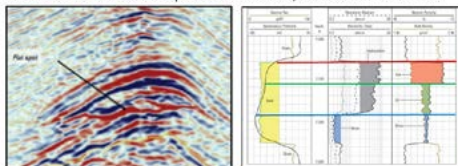
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