

BULLETIN

HOUSTON GEOLOGICAL SOCIETY

MEET THE 2022-2023
BOARD CANDIDATES



In this issue:

HGS VIRTUAL GENERAL MEETING

Incorporating Geoscience
Uncertainty into Economic
Evaluations: Concepts & Examples

HGS VIRTUAL E&E MEETING

Studies in Applied Engineering
Geophysics

HGS VIRTUAL SHORT COURSE

Multiple Dimensions of the Future
of the Energy Business: Promises,
Policies, Pragmatism, Production,
and Prices

HGS VIRTUAL GENERAL LUNCH

K-AR Geochronology & Trace-
Element Geochemistry

Board of Directors 2021-2022

President (P)	Mike Erpenbeck	Upstream Advisors Group	832-418-0221	mike.erpenbeck@hotmail.com
President-Elect (PE)	Walter Light, Jr.	Thunder Exploration	713-823-8288	wthunderx@aol.com
Vice President (VP)	Patricia Walker	Retired	832-444-0900	pattywalker1@icloud.com
Secretary (S)	Lucia Torrado	AGI Exploration LLC	832-360-3930	secretary@hgs.org
Treasurer (T)	William Gough	In Transition	713-446-0868	wgough@gmail.com
Treasurer-Elect (TE)	Bruce Blake	Tri-Star Petroleum	713-459-7508	bruce.blake@tri-stargroup.com
Editor (E)	Scott Sechrist	Acoustic Geoscience Consulting	281-638-1213	editor@hgs.org
Editor-Elect (EE)	Ken Thies	Toxodon Exploration	713-598-0526	kenthies.kt@gmail.com
Director 21-23 (D1)	Lanette Marcha	Chevron	832-808-0263	lmarcha@hotmail.com
Director 20-22 (D2)	Barbara Hill	Schlumberger	315-706-4709	bhill8@slb.com
Director 20-22 (D3)	Casey Langdon	TGS	703-727-7893	clangdo3@gmail.com
Director 21-23 (D4)	Dianna Phu	INTECSEA	281-236-3131	dianna@exabyte.org

Committee	Chairperson	Phone	Email	Board Rep.
AAPG House of Delegates	Kenneth Mohn	713-485-9696	kwmohn123@gmail.com	P
Academic Liaison	Paul Mann	713-743-3646	pmann@uh.edu	D2
Advertising	Bryan Guzman	832-503-4645	bryanguzman85@gmail.com	E
Africa Conference	Caroline Wachtman	281-825-9627	carolinewachtman@gmail.com	PE
Applied Geoscience Conference	Jason Simmons	832-573-2687	jason.simmons@bhge.com	P
Geomechanics	Umesh Prasad	713-879-2529	umesh.prasad@bhge.com	P
Arrangements	Patricia Walker	832-444-0900	pattywalker1@icloud.com	VP
Awards	Mike Nieto	281-783-6130	michael.nieto@pofg.com	P
Ballot / Elections	John Jordan	713-594-5648	john.jordan.062255@gmail.com	S
Calvert Fund	Jeff Lund	713-253-7481	jeff.lund@corridoroilandgas.com	PE
Continuing Education	Thom Tucker	281-413-0833	century@flash.net	D4
	Cheryl Desforjes	713-816-9202	cheryldesforjes@hotmail.com	D4
Communications Committee	Dianna Phu	281-236-3131	hgs.socialmedia@gmail.com	PE
	Rosemary Laidacker	713-805-9672	rmlgeo@gmail.com	PE
Earth Science Week	Lynn Travis		lynnstravis@gmail.com	D2
Educational Outreach	Steven Johansen	346-234-7032	geosjjohansen@gmail.com	D2
Employment Committee	Sushanta Bose	281-857-9831	sbose4u@gmail.com	D3
Environmental & Eng, Geology	Matthew Cowan	713-777-0534	mrcowan1@hal-pc.org	VP
	Troy Meinen	713-962-5495	troy.meinen@erm.com	VP
Exhibits	Marcus Zinecker	469-693-1285	marcuspzinecker@gmail.com	D3
Field Trips	Constantin Platon	832-686-3231	constantin@oakgeosciences.com	D4
Finance	VACANT			T
Foundation Fund	Joe Lynch	346-333-9872	joelynchtx@gmail.com	PE
General Meetings	Patricia Walker	832-444-0900	pattywalker1@icloud.com	VP
Golf Tournament	Jimmy Bagley	832-564-6028	jbagley@continentallabs.com	D1
	Kenny Baucum	713-882-6010	kenneth.baucum@stratagraph.com	D1
Government Affairs	Henry Wise	281-242-7190	hmwise@yahoo.com	D4
	Arlin Howles	281-753-9876	arlinhowles@yahoo.com	D4
Guest Night	Dave Orchard		dmorchard_geology@outlook.com	D1
HGS New Publications	William Rizer	503-852-3062	rizerwd@gmail.com	EE
International Explorationists	Steve Getz	713-304-8503	slgetz@outlook.com	VP
International Group Treasurer	VACANT			VP
Latin American Conference	Ceri Davies	281-777-0683	ceri.davies@cgg.com	P
Membership Growth	Gustavo Carpio	832-706-7619	gecarpio@gmail.com	S
Membership, New	Sharma Dronamraju	713-503-5011	parsonal.sharma@gmail.com	S
Museum of Natural Science	Inda Immega	713-661-3494	immega@swbell.net	D2
	Janet Combes	281-463-1564	jmcombes@msn.com	D2
NeoGeos	James Cassanelli	203-305-1145	james_cassanelli@oxy.com	D3
Nominations	Jim Tucker	301-807-9255	jtuckergeo@aol.com	P
North American Explorationists	Mark Hamzat	832-540-3216	mark@prosperoog.com	VP
	John Bishop	713-819-0891	johnwbishop@outlook.com	VP
Office Management	Mike Erpenbeck	832-418-0221	mike.erpenbeck@hotmail.com	P
Scholarship Night	Charles Strenbach	832-567-7333	carbodude@gmail.com	P
	Fang Lin	281-253-0430	fanglin@chevron.com	P
Outcrop Family Campout	VACANT			D1
Science & Engineering Fair	Dorene West	281-413-7172	dbwesthou@earthlink.net	D2
Shrimp Peel & Crawfish Boil	Michael Salazar	713-410-4391	msalazar@coregeologic.com	D1
Clay Shoot	Howard Wood	832-277-0141	hw@coregeologic.com	D1
Social Media	Dianna Phu	281-236-3131	hgs.socialmedia@gmail.com	D4
	Lauren Robinson	317-402-6482	lseidman5.robinson@gmail.com	D4
Tennis Tournament	Constantin Platon	832-686-3231	constantin@oakgeosciences.com	D1
Vendor's Corner	HGS Office	713-463-9476	office@hgs.org	TE
Video Committee	Linda Sternbach	832-567-7337	linda.sternbach@gmail.com	D3
Web Management	Ollie & Deborah Costello	713-618-2491	opcstello@gmail.com	D4
HGS Executive Office Director	Andrea Peoples	713-463-9476	andrea@hgs.org	
HGS Web Content Manager	Alyssa Cushing	713-463-9476	acushing@hgs.org	

Table of Contents

ON THE COVER: Black sand beach in Waimea valley on the Big Island of Hawaii. Photo provided by Patty Walker.

5 LETTER FROM THE PRESIDENT

by Mike Erpenbeck

7 LETTER FROM THE EDITOR

by Scott Sechrist

9 LETTERS TO THE EDITOR: AAPG-SPE MERGER

by Tom Fett, Dick Bishop & team

11 SEQUENCE STRATIGRAPHY

3rd installment by Marc Helsinger
Seismic Stratigraphic Visualization
Optimizing Large Seismic Data Volumes

12 HGS VIRTUAL GENERAL MEETING

Incorporating Geoscience Uncertainty into
Economic Evaluations: Concepts & Examples
by Rachel Paez

13 HGS VIRTUAL E&E MEETING

Case Studies in Applied Engineering
Geophysics *by Rusty Branch*

14 HGS VIRTUAL SHORT COURSE

Multiple Dimensions of the Future of the
Energy Business: Promises, Policies,
Pragmatism, Production, & Prices *by William DeMis*

15 HGS VIRTUAL GENERAL LUNCH

K-AR Geochronology & Trace-Element
Geochemistry *by Dr. Giovanni Zannoni*

16 VOLUNTEER WITH HGS EDUCATIONAL OUTREACH

*by Steven Johansen, HGS Educational
Outreach Committee Chair*

21 HGS SPECIAL AWARDS SCIENCE & ENGINEERING FAIR

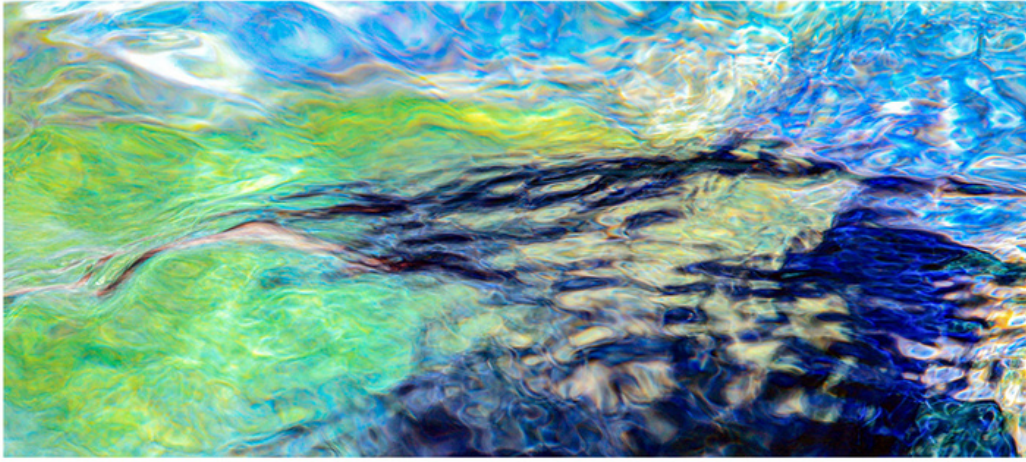
*by Dorene West, HGS Science & Engineering
Fair Committee Chair*

25 MEET THE 2022-2023 HGS EXECUTIVE BOARD CANDIDATES

Voting begins April 10th through May 10th

33 HGS SCHOLARSHIP NIGHT 2022: NEW HIRES PASS THE BATON TO FUTURE HIRES!

*by Charles Sternbach, HGS Scholarship Night
Committee Chair*



Larry Garmezy Shell Global Exploration Advisor, retired
Invites the HGS community to his solo exhibition

Stuck in the backyard **March 5 - 31**
Opening Reception: Saturday, March 5, 12 - 8 p.m.
Photographs on metal and watercolor paper

HGS Social and Closing Party,
Saturday, March 26, 6 - 9 p.m.
Reconnect with Houston geoscientists
Live music and light refreshments



Garmezy's work captures
impressions or abstractions
of the visual landscape,
distorted by physical processes
that create surprising patterns.



2305 Dunlavy, Houston, Tx. 77006 Mask Required
https://www.archwaygallery.com/store/c42/Larry_Garmezy

**Archway
Gallery**
Art for home & office

FROM THE PRESIDENT *"HGS Carries on in its Mission"*

MIKE ERPENBECK



The overwhelming news these days is focused on the Russian invasion of Ukraine and what the fallout from it will be like. It has moved the subject of energy even more to the fore, as the price of oil has again topped \$100/bbl, and the likely interruption of natural gas supplies to Europe has put the health of its nations' economies even more at

risk. It has to cause people to question what they have been hearing from the media about the impending death of the fossil fuel industry. Maybe it isn't so urgent after all that we all pivot our careers away from oil and gas exploration to that of lithium and cobalt. Meanwhile as our current administration in Washington tries to figure what sanctions to put on Russia, it has already sanctioned the oil and gas industry by removing more public lands from leasing by US drillers.

At Houston Geological Society we are and will carry on as usual, with only minor tweaks to our finances (we had to raise the dues a bit and are always discussing new ways to cut costs). Also we constantly explore ways to increase services to our members and stakeholders. We remain ever enthusiastic about our community outreach efforts, as we tackle a primary mission of HGS- to educate and inspire all members, groups, and factions of society as to the amazing beauty of our science, and how fascinating is its study. Not to mention the practical benefit in studying the earth in detail, since nearly everything in our lives comes from it.

Steve Johansen, Chair of our Educational Outreach Committee, has submitted an article in the Bulletin this month detailing the many activities the group is engaged in. Read this article if you want to see how we are reaching out to the public, and consider joining the committee to be a part of the outreach. It really is amazing the scope of our outreach and we could cover a lot more of our city-wide schools if we had additional volunteers. Steve and his crew have many irons in many fires, as the article relates.

HGS has recently completed its annual judging of the Science and Engineering Fair of Houston, held in late February every year. HGS encourages its members to represent HGS as individual judges through the Science Fair website and we get a lot of takers. Other members choose to join the HGS Special Agency judging team, in which we locate and pick a Junior and Senior Division winner in the earth sciences-related projects. Also we pick and fund (\$1,000 each) three winning earth-science project entrants to be "our" summer interns at the Houston Museum of Natural Science. See this month's Bulletin article by Dorene West, Chair of the HGS Science Fair Committee to learn more.

There has been a great deal of discussion within HGS concerning the proposed merger of the American Association of Petroleum Geologists (AAPG) and the Society of Petroleum Engineers (SPE). Since it is likely most HGS members are also AAPG members, it seems important that we have some kind of discussion about it within HGS. Fortunately, we have been given some breathing room for additional discussion, as the independent AAPG and SPE member voting scheduled to begin on March 4 has been suspended. Passions are running high on both sides of the issue, particularly with those who are opposed to the merger. Their view is that there has not been enough time to flesh the issues out, that there has somehow been a rush to get the voting conducted. I don't think I can present a viewpoint that speaks officially for HGS, but I strongly suggest AAPG members read the two submissions to the "Letters to the Editor" section in this issue of the Bulletin. I believe these add to the transparency and clarity of the discussion.

These are definitely interesting times we are living in, and I believe it will become increasingly evident to all parties how critical hydrocarbons are to our future. As geologists we should keep our skills sharp.

Mike Erpenbeck
President, HGS

"Maybe it isn't so urgent after all that we all pivot our careers away from oil and gas exploration to that of lithium and cobalt."



COVID-19 Policy Statement

Updated March 1, 2022

The Houston Geological Society continues to maintain a cautious approach to indoor social and educational gatherings. 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 governmental directives to determine the pace of opening up the holding of HGS in-person events or whether the situation calls for reversing the trend in some measure.

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 spread of the virus, visit the CDC website: <https://www.cdc.gov/>.

2021-2022 HGS Board

FROM THE EDITOR

SCOTT SECHRIST



NEWS FLASH: AAPG - SPE MERGER VOTE POSTPONED

The proposed merger of AAPG and SPE has been postponed for an indefinite period of time. The need for change to assure survival will remain. Every AAPG Member must determine and express their own opinion.

LETTERS TO THE EDITOR

We have TWO actual Letters to the Editor this month, both addressing this very subject of the proposed AAPG - SPE merger. Just to be clear, the HGS Bulletin welcomes all points of view. The Bulletin provides an objective forum for ALL HGS members who wish to express their opinions, either pro or con.

PRICE HEADLINES

War in Central Europe and the depths of Winter are inching prices higher, worldwide. As of this writing, WTI is above \$115, Brent is above \$120 and Natural Gas is has fallen [only in the USA] to the mid and upper \$4.00 per MCF range.

The HGS Virtual International Evening Meeting presentation is from Dr. Art Berman, on Monday, February 28, 2022. Art's talk is titled: 'Oil & Gas Prices, Inflation, & Supply Chains: The Long Emergency' Dr. Berman will address these interrelated effects of pandemic related shortages and supply chain disruptions, complicated by Geopolitical tensions, and wild swings in Commodity trading, resulting in severe price volatility. Don't miss this one!

HGS Emeritus Member and Author Dr. Marc Helsinger continues with his third installment of applying Sequence Stratigraphic Integration to increase the Probability of Success and Risk Reduction when drilling large, untested prospects onshore in the Gulf Coast and worldwide.

HGS needs Educational Outreach volunteers for K-12, College and University support plus the HGS Continuing Education Committee!

Here is an immediate opportunity: HGS members and friends are needed on Saturday, March 5, 2022 for our HGS Annual Volunteer days at YMCA Camp Cullen, near Trinity, Texas. The work planned for this year includes general carpentry and painting simple graphics, so please consider donating part of your Saturday to this effort. See the adverts in the Bulletin For more information. You can sign up at the following link which provides more details: <https://www.signupgenius.com/go/10c0c44aaae2fa6f94-ymca>. If you have any questions, please contact HGS member John Adamick at jadamick@stauroliteconsulting.com.

HGS rejuvenates the Fine Arts committee in Spring 2022 to celebrate a cautious exit from the COVID pandemic. Longtime HGS member and Retired Shell Global Exploration Advisor Larry Garmezy's Opening and Closing Receptions for his Solo Art Exhibition entitled "Stuck in the backyard", opens at Archway Gallery on March 5th, 2022 from 12:00

Noon thru 8:00 PM. While "Stuck in the backyard" during the Pandemic, Larry started taking photos of the interesting shadows in his backyard pool, caused by leaves landing on the surface of the water. The most amazing thing is that Larry has used NO digital enhancement software, in ANY way, to create these beautiful images. Attendance is free, no online registration is required; masks are required in the Gallery. This will be HGS's first Fine Arts event. Come 'Reconnect' with Houston geoscientists while enjoying live music and light refreshments.

Monday, 7 March, 2022 the HGS Virtual General Meeting is titled: 'Incorporating Geoscience Uncertainty into Economic Evaluations: Concepts & Examples'; presented by Rachel Paez, 20 year Senior Principal Geoscientist in Upstream Integrated Solutions for ExxonMobil. Rachel will discuss Subsurface risk and uncertainty in petroleum geoscience, incorporating subsurface uncertainty into economic evaluations to yield Expected Monetary Value (EMV). Two examples will illustrate the application of probability-weighted economics across a spectrum of business stages and asset types: a deep-water oil prospect and an unconventional shale asset.

Wednesday, 9 March, 2022 the HGS Engineering and Environmental Group will host 'Case Studies in Applied Engineering Geophysics'; presented by Rusty Branch, VP and Geoscientist at Gehrig, Inc. Rusty will address the application of engineering geophysics to add value to the subsurface characterization process by increasing the "sample size" and filling in the gaps between the borings. Geophysical imaging techniques can also allow scientists and engineers to obtain data in areas where it may not be feasible to install bores.

On Tuesday, 22 March, 2022, the HGS Continuing Education Committee will present an HGS Short Course: 'Multiple Dimensions of the Future of the Energy Business: Promises, Policies, Pragmatism, Production, and Prices'; presented by William DeMis, Rochelle Court, LLC, Houston, Texas. Bill will discuss a pragmatic energy transition, future demand and oil production, business cycles of the industry, and the economic fundamentals that will drive future oil and gas prices. The class will also address future hydrocarbon demand scenarios as well oil cycles that affect employment and the skills that will be needed to be successful in the future as our industry evolves.

On the next day, Wednesday, March 23, 2022, the HGS Virtual Luncheon will feature 'K-Ar Geochronology & Trace-Element Geochemistry', presented by Dr. Giovanni Zanoni of the Premier Oilfield Group. Dr. Zanoni will share his insights into the sediment origin and drainage pathways in the Anadarko Basin, USA by applying K-Ar geochronology and trace-element geochemistry to reconstruct sediment origins at the peak period of subsidence of the Anadarko Basin.

On Saturday March 26th, don't forget, Longtime HGS member and Retired Shell Global Exploration Advisor Larry Garmezy's Closing Reception for his Solo Art Exhibition entitled "Stuck in the backyard", at Archway Gallery will be Saturday March 26th, 2022 from 6:00 PM til 9:00 PM, at the

FROM THE EDITOR ...continued

SCOTT SECHRIST



Archway Gallery, 2305 Dunlavy Houston, TX 77006. No online registration is required, Houston geoscientists while enjoying live music and light refreshments, Saturday March 26th, 2022 from 6:00 PM til 9:00 PM, at the Archway Gallery, 2305 Dunlavy Houston, TX 77006. No online registration is required on March 5th, 2022 12:00

Noon thru 8:00 PM.

For all those interested in supporting the HGS Educational Outreach Committees' Student Expo 'Student Expo Spring Informational Session'. This virtual event is free to register and will be held from 3:00 PM till 4:00 PM CST, on Thursday 31 March 2022. This spring event is for those students and recent grads to learn more about the Student Expo and prepare for the event coming up in the Fall! See the HGS Website and Calendar for further details.

For all those interested in supporting the HGS Educational Outreach Committees' Student Expo 'Student Expo Spring Informational Session'. This virtual event is free to register and will be held from 3:00 PM till 4:00 PM CST, on Thursday 31 March 2022. This spring event is for those students and recent grads to learn more about the Student Expo and prepare for the event coming up in the Fall! See the HGS Website and Calendar for further details.

We truly appreciate and thank ALL our HGS Members, Volunteers and HGS educational outreach teams! Wishing Everyone the best of health and continuing success in 2022!

HGS Editor 2021-2022

Scott C. Sechrist

Editor@ HGS.org

LETTERS TO THE EDITOR

AAPG-SPE Merger

BY TOM FETT, GEOLOGICAL CONSULTANT, AAPG MEMBER EMERITUS, MEMBER STGS, CCGS, HGS, WTGS

For over fifty years the AAPG and the GCAGS and their associated Societies have been my principal sources of practical geological information worldwide.

I see no good reason to risk losing this. Not to mention the comradery.

If the reason for doing this merger is financial, I recommend going back to the structure and staffing levels that we had when last we were at this our current membership level.

By the way, a brief report on our financial status, including membership numbers and stall levels then and now would be useful information and should be provided by AAPG.

[Editor's Note: This may be available on the AAPG website, in a possibly different format than Tom suggests].

For those who want to take the "Petroleum" out of AAPG, I would remind the members who put up most of the money and who did most of the work over the years.

Pay your dues and be sure to vote – it's your Association!

Tom Fett

LETTERS TO THE EDITOR

BY DICK BISHOP AND TEAM

Vote No on the proposed AAPG-SPE Merger

1. Proposed New Organization ('NewOrg'): We Become Subscribers, Not Members

a. The only organizational material provided by the merger Management Team and AAPG executive committee is a list showing 24 positions on the Board of Directors plus a Nominations Committee. Geologists can expect a diminimus representation of 4 to 8 of the 24 positions. This is the current top-down SPE governance model but with 4 geological technical directors added. Three of the 10 Regional Directors will represent Mexico, US and Canada. Importantly, around 80 percent of AAPG consists of US members so their representation will be a maximum of 3 seats on the Board. Any geotechnical regional representatives will be selected by the Nominations Committee and approved by the Board.

b. The NewOrg Board will have complete authority for all matters including budget, bylaws and governance. There is no information on lines of authority or responsibilities of anyone. This is to be worked out 'later'.

c. There will be NO more elections except for President, thus NO Divisions, No House of Delegates, No Sections in the NewOrg. The unelected Nominations Committee will choose all candidates to be considered and approved by the Board. AAPG's democratically run organization and culture will be gone.

d. The NewOrg Board can re-write the by-laws for any reason at any time. There will be no other credible group such as the House of Delegates or Advisory Council to explain, influence, persuade, provide perspective or serve as a check on Board decisions or strategies.

2. FINANCES:

No Plans Until After the Vote: Voting ends May 4 and the financial plan will be presented by July 4 after the vote. Importantly, both organizations have lost money over the last 5-7 years but there is no concept and no one assigned responsibility to show how NewOrg will generate either economic benefits or new value. AAPG leadership repeatedly talks of new revenue coming from integration of the disciplines. Well, there is no one responsible for planning the integration. How will it work, who will design it, how will it generate revenue? *This is a core/ fundamental basis for the merger but no one knows how it might work, let alone generate revenue.*

Lack of a Financial Plan AAPG President Gillis wrote to HoD 1/18/2022 that there is no written, guaranteed, minimum income percent that will go to geosciences. This appears to be very imprudent given the imbalance in representation on the proposed board. Thus, a board dominated by SPE will dictate to AAPG its entire budget.

Surrender of AAPG Assets AAPG would be surrendering ALL of its assets to the New Org, including the \$14MM in the bank, DataPages, over 100 years of intellectual property including all contractual relations with other organizations. We expect SPE to monetize these assets, especially Search and Discovery which is currently free to the world.

Follow the Money A "confidential" donor gave money to AAPG and some of this money is used to promote this merger, per David Curtiss' 1/22 memo. This anonymity illustrates a lack of transparency by AAPG and gives an untoward appearance in the process.

SIZE

Geologists Lost in a Crowd AAPG has between 10,000 and 12,500 voting members; SPE has about 75,000 professional members plus about 65,000 student members. Thus, there are well over 60,000 more SPE members than AAPG members. This makes it difficult for geoscientists to make a name for themselves let alone get the attention of the engineering Directors or to be nominated. President Gillis stated that 'member participation will determine the culture'. OK, how??

GOVERNANCE

Loss of Our Historical Affiliations SPE has no Section designation. This means dis-affiliation of Sections from AAPG. There are no allowances for local affiliated Societies (like the HGS, ETGS, or DGS) because SPE owns and governs the local SPE "chapters". This means New Org chapters will be competing with the local geological societies.

Loss of Our History of Great Accomplishments

North America is the fertile crescent of technology and innovation because of private mineral rights and the economic system that allows entrepreneurs like Roy Huffington, George Mitchell, Wallace Pratt, A.I. Levorson, Harold Hamm and so many others to be rewarded for taking risks. American independents built AAPG and we prefer being a member to being a subscriber.

TRANSPARENCY IS ESSENTIAL BUT LACKING

We expect the AAPG leadership to explain their assertions of "unicorns and rainbows" in a formal plan to merge. This plan must include assignments of authority, responsibilities, explain the financial strategies and define anything of unique value that comes from a merger.

IN SHORT, THERE IS NO PLAN TO CREATE NEW VALUE. NONETHELESS, AAPG NEEDS TO ADOPT SIGNIFICANTLY BETTER MANAGEMENT PRACTICES.

Signed

Cheryl Desforges	past president HGS
Deborah Sacrey	past president HGS, past treasurer AAPG, past president SIPES
Paul Britt	past president AAPG
Dick Bishop	past president HGS, AAPG
Ken Mohn	House of Delegates, current foreman, Houston
Richard Howe	Former HGS Board Member
Ted Flanigan	past president STGS, past member HoD



FOR YOUTH DEVELOPMENT®
FOR HEALTHY LIVING
FOR SOCIAL RESPONSIBILITY



GIVING BACK

Annual Volunteer Day at YMCA Camp Cullen

HGS Members and friends needed for our annual Volunteer Day at YMCA Camp Cullen!

March 5, 2022

Do you have a burning desire to give back? The HGS is teaming up with the YMCA to have a Volunteer Day on Saturday March 5th. The volunteer work we do that day will be at Camp Cullen, a YMCA summer camp located near Trinity, Texas.

We chose to help Camp Cullen for several reasons. First of all, most of the kids attending Camp Cullen are from the Houston area. Also, many campers are from underprivileged families and attend the camp free of charge. Last, but not least, there is a significant geology component to the camp's programs with an actual geologic field trip in the quarry, a geology lab with hand samples onsite, and a "gold" panning area for younger kids. HGS has also conducted its Outcrop Family Campout at Camp Cullen in the past.

The work planned for our group this year is to work with other volunteers on "Prospect Ridge", an Old West mining town. We will continue work on a project to build a Dance Hall Façade and to do some additional work on the mostly completed Gold Panning area, General Store, Bank, and Boot Hill to complete the look and feel of this area. You don't need any special skills, just a willingness to work! In addition to general carpentry, putting things together, etc., we also need some artists to help paint graphics on the dance hall interior walls.

For those interested, we'll also take a break at midday so you can see the quarry field trip area and the geology lab.

So, if you would like to do a good deed, spend a nice day in the Piney Woods, and perhaps help get kids interested in geoscience, please consider donating part of a Saturday to this effort. Depending on where you are located in the Houston area, it takes about 1 to 1 ½ hours to get to the camp. We plan to start work at ~9am and will conclude by mid-to-late afternoon. Breakfast, lunch, and refreshments will be provided. You are welcome to have your older kids participate as volunteers but there will also be childcare provided by camp staff.

You can sign up at the following link which provides more details:

<https://www.signupgenius.com/go/10c0c44aaae2fa6f94-ymca>

If you have any questions, please contact HGS member John Adamick at jadamick@stauroliteconsulting.com.



Seismic Stratigraphic Visualization Optimizing Large Seismic Data Volumes

BY MARC H. HELSINGER, PH.D. PRESIDENT, DYNAMIC GEOVENTURES, LLC.

Creating value and opportunities for small independent companies is a matter of “**Big Data optimization**”. “Oil firms are swimming in data they don’t use” (McKinsey and Company). Most companies have not maximized the potential of their seismic data assets.

Many independent companies lack the capability and capital to purchase, process and interpret large volumes of seismic data. The advent of generating multiple seismic attribute volumes (amplitude, AVO, inversion) further increases data volumes for the interpreter.

The technology needed to uncover new opportunities has not been sufficiently applied to the onshore Gulf Coast region. Seismic Stratigraphic Visualization is a powerful predictive tool that can substantially improve success and reduce risk. Seismic Stratigraphic visualization can also **rapidly data mine large volumes of seismic volumes** uncovering **previously unrecognized large potential** prospects (100-400 BCF). The primary potential resides in deep water slope fan environments.

Seismic Interpretation should begin with Seismic Stratigraphic Analysis to delineate the most optimum depositional fairways and reservoirs. Then the slope fan depositional sequences can be interpreted throughout the entire seismic data volume. Once the optimum depositional fairways are defined, the opportunity to uncover multiple prospects increases. An integrated multivariate attribute analysis should be undertaken to prioritize the prospects. This method results in projects can be drilled at a significantly reduced risk, resulting in a higher probability of success.

There is a clear path for success for independents because competition is limited in the onshore oil and gas sector. The industry went through the Shale boom and Bust cycle which led to reduced capitalization for conventional onshore oil and gas assets. In addition, ESG, government controls and the pandemic resulted in the U.S. Oil and Gas industry losing 120,000 jobs in 2020 alone. (Rystad report 2021).

The Texas Alliance for Energy reported more than 35% of upstream jobs were lost between December 2018 and August 2020.

Senior explorationists are retiring and newer hires are not being trained by major oil companies as in the past. That causes a shortfall of high-tech evaluation in the development new projects. This personnel situation will continue to worsen going forward.

Those companies with the vision and technical expertise to recognize the substantial reserves yet to be discovered using Seismic stratigraphic techniques combined with multi-attribute processing will discover substantial reserves onshore Texas and Louisiana in slope fan environments. **There is greater than a TCF of potential in undrilled slope fan opportunities** observed in regional work all along the Texas and Louisiana Gulf Coast. This will set the stage for the reemergence of the onshore independent.

Biographical Sketch



Marc Helsinger has 45 years of experience in management and senior technical positions with BP (Amoco), LL&E, Burlington Resources, Focus Exploration and OFS Capital. He is a recognized expert in the risk reduction techniques of enhanced 3-D seismic visualization methods coordinated with specialized attribute analysis providing a critical competitive advantage.

Dr. Helsinger has presented technical seminars to corporations and major geological societies regarding these enhanced risk reducing techniques. He holds a Ph.D. and M.S. in Stratigraphy with specialization in depositional systems from Rensselaer Polytechnic Institute and a B.S. in Geological Oceanography from City College of New York. Marc formed Dynamic GeoVentures LLC to develop new trends and plays in the Texas/Louisiana Gulf Coast.

HGS VIRTUAL GENERAL DINNER MEETING

MONDAY, MARCH 7, 2022 | 6:00 - 7:00PM

ZOOM WEBINAR

HGS MEMBERS \$15 NON-MEMBERS \$30 STUDENTS \$10

[HTTPS://WWW.HGS.ORG/CIVICRM/EVENT/INFO?ID=2317](https://www.hgs.org/civicism/event/info?id=2317)

EVENT CONTACT: PATTY WALKER | PATTYWALKER1@ICLOUD.COM

Incorporating Geoscience Uncertainty into Economic Evaluations: Concepts & Examples

Subsurface risk and uncertainty are recognized as important considerations in petroleum geoscience. Hydrocarbon volume estimates have median errors of $\pm 40\%$ for successful wildcats and $\pm 20\%$ for field developments. Even when volume estimates are relatively accurate, the reservoir characteristics that determine well placement and performance can remain highly uncertain.

Incorporating subsurface uncertainty into economic evaluations, therefore, is critical to improved decision making. Expected Monetary Value (EMV) is an especially useful approach to address uncertainty. EMV uses multiple probability-weighted scenarios to yield an improved characterization of the mean and range of economic outcomes. The early articulation of scenarios is especially useful to help capture alternative views, address conflicting information, and to avoid cognitive anchoring. Scenarios can also lead to a depth of understanding that probabilistic ranges alone do not facilitate.

A special application of EMV is to evaluate the economic attractiveness of options. This includes measuring the benefit of collecting additional data (Value of Information) or in securing future choices such as a seismic option or development contingency (Real Option Analysis). Another consideration is the impact of dependencies, either technical or business. These tend to be underappreciated and can result in a wider range of outcomes. Such dependencies are important in considering aggregate assets, when linkages can reduce the protection afforded by the portfolio effect.

These principles and work practices are demonstrated using two examples: a deep-water oil prospect/development and an onshore unconventional shale development. Based on public domain data, these examples illustrate the application of probability-weighted economics across a spectrum of business stages and asset types.

Biographical Sketch



Rachel Paez, Senior Principal Geoscientist in Upstream Integrated Solutions for ExxonMobil, has worked professionally as a geologist for over 20 years, specializing in development and production geoscience, with a strong background in seismic interpretation, geologic modeling, structural geology and assessment. She's worked on projects around the world, with a recent focus on full asset life-cycle valuations and identifying how geoscience concepts on uncertainty and risk can be translated into economic metrics for improved business decisions.

Rachel earned her bachelor's and master's degree in a joint BS/MS program in geology from Michigan State University in 2000. She currently lives in Houston with her husband Tomas and three children, Suzanna, Sarah and Sophia. Outside of work, she enjoys giggling at silly novels and watching the Astros.

HGS VIRTUAL ENVIRONMENTAL & ENGINEERING MEETING

WEDNESDAY, MARCH 9, 2022 | 7:00 - 9:00PM

ZOOM WEBINAR

HGS MEMBERS \$15 NON-MEMBERS \$30 STUDENTS \$10

[HTTPS://WWW.HGS.ORG/CIVICISM/EVENT/INFO?ID=2322](https://www.hgs.org/civicism/event/info?id=2322)

EVENT CONTACT: MATTHEW COWAN | MRCOWAN1@HAL-PC.ORG

Case Studies in Applied Engineering Geophysics

Applied engineering geophysics can add value to the subsurface characterization process by increasing the “sample size” and filling in the gaps between the borings. Geophysical imaging techniques can also allow scientists and engineers to obtain data in areas where it may not be feasible to install bores.

Geoscientists and engineers are often challenged when tasked with developing a useful model of subsurface conditions at a project site. In fact, relying on limited data from a few borings is analogous to looking at the world through a keyhole. This can lead to design errors that may result in significant cost overruns during construction or even structural failure after completion.

During this presentation we will review four case studies where geophysical methods were applied to resolve issues for engineering projects where boring data were insufficient to develop a viable subsurface model for project design and/or construction. The case studies include transportation, stormwater management, tunneling, and dams and levees.

Biographical Sketch



Rusty Branch is a multi-disciplinary scientist and has been a member of the Gehrig, Inc. team since 2016. He has nearly 15 years of experience in the field of near-surface, applied geophysics, including UAV-based studies. He has served on many local, state, and national

boards and committees of professional organizations and non-profits. Some of the positions include Chair for the Texas Section of the ASCE Geo-Institute, Chair of the Association of Environmental and Engineering Geologists, and a leadership training instructor on the national level for the Boy Scouts of America. Rusty is currently a national board member and Regional Director for the Association of Environmental Geologists. Rusty has authored peer-reviewed publications in the fields of geology, vertebrate paleontology, and botany. His three decades of professional and academic experience covers geoscience, bioscience, computer information systems, and GIS.

Education

B.S. Earth Science from Tarleton State University
M.S. Biology (Vertebrate Paleontology) from Baylor University
M.B.A from University of Texas at Arlington

HGS VIRTUAL CONTINUING EDUCATION SHORT COURSE

TUESDAY, MARCH 22, 2022

8:30AM - 12:30PM

HGS MEMBERS \$30 NON-MEMBERS \$45 STUDENTS \$20

[HTTPS://WWW.HGS.ORG/CIVICISM/EVENT/INFO?ID=2357](https://www.hgs.org/civicism/event/info?id=2357)

EVENT CONTACT: THOM TUCKER | CENTURY@FLASH.NET

Multiple Dimensions of the Future of the Energy Business: Promises, Policies, Pragmatism, Production, and Prices

Course Description

The class covers the economic fundamentals that drive oil prices and provides pragmatic insights into the energy transition. Predictions made by the author in late 2020 for the AAPG IMAGE stated that by early 2022, oil prices would be firming, oil companies would be slow to respond in increased prices, and inflation will force OPEC to push prices higher – all of which is happening today, even before the Ukraine crisis. The class will provide an analysis of the monetary and fiscal forces that could force oil prices to double in the near future, or go even higher, based on an historical analysis.

The energy transition will not evolve according to government aspirations. Conservationist groups across the country are opposing wind and solar projects to protect endangered species. Rural stakeholders are “pushing back” against massive wind and solar projects that turn their bucolic communities into “someone else’s power plant.” Power transmission lines needed to electrify the grid are routinely opposed; not one of the 7 major power lines proposed by the Obama Administration has been started. The class will include an exercise on calculating wind turbine power generation and converting it to barrels oil equivalent.

The class will also show future hydrocarbon cycles that affect employment. The class will briefly introduce skills that will be needed to be successful in the future as our industry evolves. A simple exercise on reservoir architecture will be included.

This is a zoom class so paper distribution will be limited. Please print exercises before the class.

Biographical Sketch



Bill DeMis currently is a consultant and is working with two startup companies; one in the US and one in Europe. He has had positions of Exploration Manager at Marathon Oil Company, Exploration Vice President at Roxanna Oil Company, and, most recently, as Senior Vice President

and Chief Geologist for Goldman Sachs. Bill has held a variety of technical and managerial positions, working on both domestic and international projects. In 2021, Mr. DeMis was awarded the dedicated Service Award from the AAPG. In 2008, he was awarded the “Best Paper Award” from the RMAG/PTTC. In 2000, he received the Dedicated Service Award from the West Texas Geological Society. In 1996 and 2000, Bill was awarded “best paper” at the AAPG National Conventions for his presentations on the effects of US dollar exchange rates and inflation on OPEC price policy. In 1993 he won a “best paper award” from the GCAGS for his work on production-controlling carbonate stratigraphy of the Smackover.

Mr. DeMis is an AAPG Charles Taylor Fellow, and has served as AAPG Books Editor, AAPG Associate Editor. He is an AAPG foundation trustee associate.

Instructor Contact Information:

William DeMis
Rochelle Court, LLC
billdemis@aol.com
713-402-8629 (cell)
Houston, Texas

HGS VIRTUAL GENERAL LUNCH

WEDNESDAY, MARCH 23, 2022 | 12:00 - 1:00PM

ZOOM WEBINAR

HGS MEMBERS \$15 NON-MEMBERS \$30 STUDENTS \$10

[HTTPS://WWW.HGS.ORG/CIVICISM/EVENT/INFO?ID=2348](https://www.hgs.org/civicism/event/info?id=2348)

EVENT CONTACT: PATTY WALKER | PATTYWALKER1@ICLOUD.COM

K-Ar Geochronology & Trace-Element Geochemistry of 2M1 Illite from Upper Paleozoic Shale of SW Laurentia - Insights Into Sediment Origin & Drainage Pathways in the Anadarko Basin, USA

The Anadarko Basin of Oklahoma represents a major Paleozoic depocenter that existed along the rifted margins of southwestern Laurentia. In its infancy it accumulated a thick series of Cambrian through Mississippian detritus while further subsidence caused by inversion of the Cambrian Southern Oklahoma Aulacogen resulted in voluminous Pennsylvanian to Permian sediment. This presentation reports new data on K-Ar ages and trace-element geochemistry of detrital illite from middle and upper Pennsylvanian shale used to reconstruct sediment origins at the peak period of subsidence of the Anadarko Basin. X-ray diffraction was used to unveil mineral compositions and abundances of illite polytypes in two size fractions of separated illite (~1 and 2-1 μm). K-Ar isotopic analyses were completed for both fine fractions, while the laser ablation inductively coupled plasma mass spectrometry was done for the latter. All illite separates consisted of mixtures of authigenic (1Md) and detrital (2M1) illite. The Illite Age Analyses showed that the detrital age of Desmoinesian (Moscovian) shale is the late Ediacaran (584 Ma), while the age of Missourian (Kasimovian) shale is the middle Cambrian (512.5 Ma). Trace-element abundances of all analyzed illite, irrespectively of stratigraphic age, are consistent with those of mica from metamorphic rocks. Based on illite detrital age and geochemistry it was inferred that Desmoinesian (Moscovian) shale represents a mixture of Neoproterozoic and Cambrian detritus sourced locally, whereas Missourian (Kasimovian) shale records a provenance shift toward more distal easterly sources from the Ouachita-(Marathon) foreland. This study has proposed a sediment source transition between the middle and upper Pennsylvanian that likely reflected major changes in the basin paleogeography and progressive development of the east-west (transcontinental) fluvial systems.

Biographical Sketch



Speaker: Dr. Giovanni Zanoni
Company: Premier Oilfield Group

AREAS OF EXPERTISE:

- X-ray diffraction (XRD), clay mineralogy, mineralogy, sedimentary and reservoir geology, and diagenetic studies
- Quantitative mineral analysis of sedimentary rocks and clay separates by XRD
- Fundamental understanding and experience in XRD laboratory methods and procedures, and ability to improve laboratory capabilities
- Relevant knowledge of scanning electron microscopy and automated mineralogy (QEMSCAN).

EDUCATION:

Texas Tech University
Ph.D. in Geology (2022)
University of Geneva (Switzerland)
MSc in Environmental and Earth Sciences (2015)

Volunteer with HGS Educational Outreach

BY STEVEN JOHANSEN, EDUCATIONAL OUTREACH COMMITTEE CHAIR



Educational Outreach Chair, Steven Johansen, presenting to students.

What were they thinking? We've all thought this at some time, maybe while watching a television newscast or when talking to family about a distant cousin's failing investment scheme. You may have some favorite anecdotes of human errors due to misunderstandings of basic geology. Modern society encourages citizens to have some knowledge about a wide variety of topics, including basic geoscience processes and materials.

Are students taught anything about geoscience as they go through their education? We who spend most of our lives studying these subjects might think so. But experts in any field routinely over-estimate the level of comprehension possessed by others. Most people make their way through our education system with minimal exposure to the geosciences. Even educators who are responsible for public school education are sometimes lacking in a basic geoscience understanding.

Basic science education is struggling in this age of covid. Classroom time has been minimized in the last two years. Teachers are struggling to teach basic aspects of reading, writing, arithmetic, and social behavior norms. This generation of students will be hindered in adult life by a lessened ability to make sound decisions involving natural science. Their quality of their life will be impacted; we all find more joy in time spent in the natural world when we understand the underlying processes, whether we're on a trip to the beach or a visit to a national park.

What can we do? Do you enjoy sharing your love of geology with young people? Please volunteer to help! You can have impact, be appreciated, and enjoy the experience.

Houston Geological Society serves as a resource for geoscientists to reach out to the public through our educational outreach programs. Schools call on us to provide volunteers for presentations in classrooms on

subjects like basic rocks and minerals, fossils, river systems, tectonics, and careers in geoscience. These programs are primarily aimed at students in grades K through 12 and for their teachers. Scout troops and public education events such as open houses at local parks or special STEM events are also targeted for outreach efforts. But we cannot do it without HGS volunteers, and we need more volunteers.

We currently are able to serve only a small portion of the local educational community. HGS has long provided support to four magnet high schools with programs in petroleum technology and geoscience in conjunction with the Independent Petroleum Association of America (IPAA) and private corporations. Support from industry for these schools.... Westside, Milby, Young Women's College Preparatory, and the Energy Institute.... is now much reduced, and other groups ask for and deserve our support, including public and private schools, organized STEM support organizations, even public parks. However, we need more volunteers to reach out and offer assistance.

All of our volunteers agree that the most fun activity is to go to a public school and talk to kids about geology. This can be done in a regular class time or in a special STEM event. The Educational Outreach Committee of HGS maintains a list of volunteers who can attend these events. If you are interested, please consider joining this group. After all, Most HGS members have jobs, so the actual number of available volunteers is often small because of time constraints. The larger our list of available volunteers, the more confident we can be in offering this opportunity to schools.

Volunteers are needed for more than just showing up at an outreach event. We have collections of rocks, minerals, fossils, maps, and posters that need continual curation, and some educators like to have classroom exercises ready for delivery. It takes a surprising amount of backroom time to

Volunteer with HGS Educational Outreach...continued

organize and maintain these materials. It is also important to be prepared for a classroom event. Educators appreciate a volunteer offering to talk to the teacher about what could be presented in their classroom, and if the volunteer is willing to tailor the presentation to the needs of the students.

Educators need assistance in understanding how geoscience education can help their students succeed. Texas has standardized educational objectives, the TEKS standards (Texas Essential Knowledge and Skills). The websites for TEKS show little indication of concern for geosciences. The success of a school and its educators is measured by the rate at which students pass the annual STAAR exams (State of Texas Assessments of Academic Readiness). Educators are sometimes hesitant to ask an HGS volunteer to come speak to their school because they need class time to prepare their students for the STAAR exams. If their students don't pass the STAAR exams, then their school and their own assessments suffer.

The HGS Educational Outreach committee is talking to teachers to better understand what the TEKS and STAAR exam system expects of students so that we can address their specific needs. To assist our educators, we increasingly need to present geoscience as a way for students to learn about the underlying fields of science and technology. If you ask 'do your students need to know about minerals and river processes', a teacher may answer 'no.' But if you ask the same teacher, 'do your students need to know about basic chemistry, physics, and geography', they will answer yes. More volunteers are needed to help lead this discussion.



Teacher education - examining bedding in the point bar trench.

"Do you enjoy sharing your love of geology with young people? Please volunteer to help! You can have impact, be appreciated, and enjoy the experience."



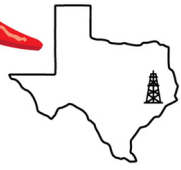
Volunteer Ken Thies with visitors at the 2021 Gem & Mineral Show.

There are other avenues for HGS to pursue in educational outreach if we have volunteers to step pitch in and assist. Sometimes HGS gets requests from educators to recommend a video for their students on a geoscience topic. And they usually want the information right now! There is a huge volume of videos and websites that provide geoscience information for students in K through 12. Some of these videos are great, but others less so. Some university students recently expressed interest in helping curate and maintain a short list of recommended internet resources for K-12 students, and a HGS volunteer could have major impact assisting them.

What local parks have you visited to show your family a little bit of geology and a fun time out? Students and teachers often ask for recommendations of places they can go with their families to find rocks and minerals or fossils or to just to enjoy the natural sciences. Would you like to compile a short catalogue describing local public places of geologic interest that we could readily hand out to students, parents, and educators?

If you have any interest in these activities, or if you have an activity of your own design that could improve public understanding of geoscience, please consider joining our informal committee for Educational Outreach. We have zoom meetings about six times a year, sometimes more frequently in the school term months. We also have a private Facebook group to share information and facilitate discussion. Please reach out to the Educational Outreach committee through Andi Peoples and Alyssa Cushing with HGS if you wish to become involved, or you can contact me directly. You will find outreach work both richly rewarding and highly appreciated.

Steve Johansen
Chair, Educational Outreach Committee, HGS
geosjjohansen@gmail.com



SIPES HOUSTON
ENERGY ENTREPRENEURS

2022 Chili Cookoff

Saturday, April 9
noon to 4pm

Presiding Judges

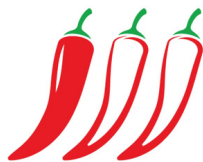


The Honourable Chuck Yates

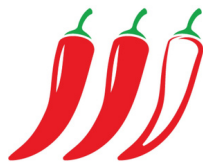


LandmanLife, et al

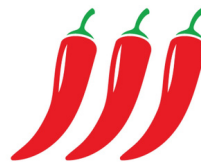
Beans or No Beans? Pick a side!



BRAGGING RIGHTS



CASH PRIZES



LANDMANLIFE
SWAG

Under the Radar Brewing
1506 Truxillo St
Houston, TX 77004



**Houston
Geological
Society**

MEMBERSHIP DUES INCREASE

**EFFECTIVE FOR
2022-2023 DUES**

Active / Associate Members \$36

Emeritus Members \$18

Student Memberships still FREE

Prices effective for all renewals &
applications for the 2022-2023 year.

Thank you for your continued
support and understanding.

Effective for all membership renewals and membership applications moving into the 2022-2023 fiscal year, HGS has slightly increased its membership dues. Moving forward, the new membership fees will be as follows:

- Active / Associate Memberships: **\$36.00**
- Emeritus Memberships: **\$18.00**
- Student Memberships are still **FREE**.

Dues for the upcoming year are not due until June 30, 2022.

The Houston Geological Society is a society with a global view. The HGS includes students, geologists, geophysicists and academic experts. Our objectives are to stimulate interest and promote the advancement of the geosciences, to disseminate and facilitate discussion of geological information, to enhance professional interaction among geoscientists, and to aid and encourage academic training in the geosciences. As an HGS member, you will receive special privileges, discounts, and priority event registration. If you are an active AAPG member, please support this society and become an active HGS member!

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 (effective beginning for all 2022-2023 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). Students will have a 24 month grace period after graduation. After a student graduates and receives a job, he/she must apply for Active membership to HGS.

Emeritus Membership

Members who attain the age of 65 and have been Active members of HGS for a minimum of 10 years may request Emeritus status by contacting the HGS office. Emeritus Members shall also be considered Active Members. Emeritus Members pay \$18.00 in dues (effective beginning for all 2022-2023 dues).

Interested in becoming a member? Be sure to fill out a [Membership Application](#)!

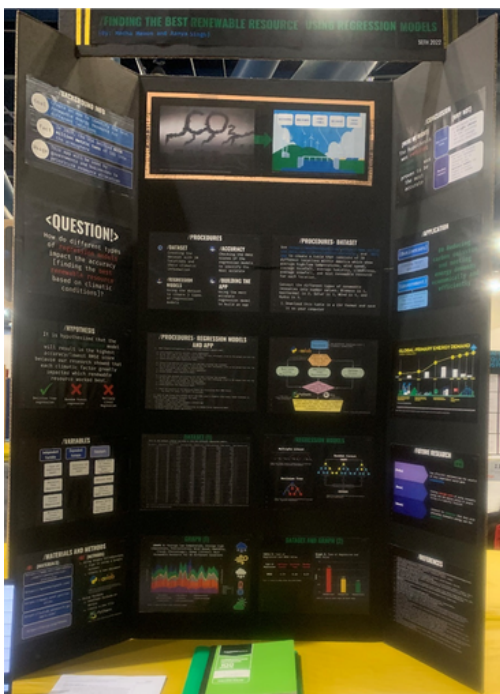
We thank you for your continued support and greatly appreciate your understanding!
2021-2022 HGS Board

HGS Special Awards Science & Engineering Fair of Houston

BY DORENE WEST, HGS SCIENCE FAIR COMMITTEE CHAIR

Saturday February 26, 2022, at the Science and Engineering Fair of Houston (SEFH), a team of HGS Special Award Judges reviewed Earth Sciences-related projects completed by junior and senior high school students (grades 6-12). HGS normally picks a top project in the Junior and Senior divisions to receive a Certificate of Recognition and 3 Senior finalists to receive summer research assistantships at the Houston Museum of Natural Sciences. Eleven Junior and 10 Senior projects were judged. This year we picked a top project and an honorable mention project in the Junior Division. All 3 Junior Division judges, present at the afternoon session, independently ranked the top 3 junior projects the same. The Senior Division judges did not come to an agreement as easily.

The top ranked Junior project was completed by two young ladies from Quail Valley Middle School. Although the project was categorized as Systems Software, it had an Earth Sciences-related theme. These bright students tested different regression models to determine which was most accurate regarding picking the best renewable resource for different climatic conditions; and created an app that takes users' climatic conditions to find the best renewable resource for them to use. Our Junior Division pick for honorable mention was a team of two young men, from Emery Weiner, who tested the effect of acid rain on the most common surface rocks in the US and determined that limestone (the central US and Florida) was most at risk of being compromised.



HGS Special Award for SEFH 2/26/22, 1st Place Junior Division: Finding the Best Renewable Resource using Regression Models.



HGS Special Award for SEFH 2/26/22, Honorable Mention Junior Division: The effect of acid rain on the most common surface rocks in the United States.

The top Senior Division project was by a young man from Dulles High School. His project was categorized as Engineering Mechanics, but it was clearly Earth Sciences-related. He investigated optimizing coastal erosion control based on the effect of five structural parameters (restriction of the wave's vertical oscillations, horizontal length of restrictions, surface area, incident angle, and length of wavefront) on erosion and scouring. A mathematical model for storm surge, developed using data gathered during the experiment, provided additional insight - this young scientist integrated both computational and analog modeling techniques to conduct his experiments and draw conclusions. The guidelines established by his project could accelerate the innovation and capacity to deploy coastal defenses.

The second ranked Senior Division project was completed by a young man from the Academy of Science and Technology. He examined the rate of climate change progression by analyzing temporal variables (mean temperature, high temperatures, low temperatures, extreme temperatures) and autocorrelation. He concluded that the continent on which a location resides is the main factor that determines the rate of climate change in that location.

The third ranked Senior Division project was completed by a female/male team from Eisenhower High School. They tested different sandbag fill (mixtures of clay, sawdust, and sodium polyacrylate) to determine which was the most effective at absorbing flood water and allowing the least amount of water to pass through. The mixture with no clay, and ratio of 2 parts sawdust to 3 parts sodium polyacrylate, performed the best (absorbing mean 99.32% of the water and allowing mean 0.68% water to pass through). Their goal is to maximize sandbag efficiency by absorbing 100% of the flood water.

These are impressive students; the descriptions above are direct quotes or paraphrased from the student abstracts. It was exciting to witness these young researchers begin to make a difference in the study of Earth Sciences. A big thanks goes to our team of Special Award Judges: Martin Cassidy, Mike Erpenbeck, Daniella Easley, David Miller, Alicia Staszyc, Jim Tucker, and Patty Walker.

March 2022

<i>Sunday</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>
		1	2
6	7 HGS Virtual General Dinner "Incorporating Geoscience Uncertainty into Economic Evaluations: Concepts & Examples" Page 12	8 HGS Board Meeting 5 p.m.	9 HGS Virtual E&E Meeting "Case Studies in Applied Engineering Geophysics" Page 13
13	14	15	16
20	21	22 HGS Virtual Short Course "Multiple Dimensions of the Future of the Energy Business" Page 14	23 HGS Virtual General Lunch "K-AR Geochronology & Trace-Element Geochemistry" Page 15
27	28	29 East TX Geological Society Tech & Prospect Expo 2022	30

Cheated, Mistreated, Pushed Around?

Have you been cheated, mistreated or somehow deprived of your share of a deal, working interest or royalty? If so, give me a call. I have thirty years experience as a working interest and royalty owner in the oil and gas business to go along with forty years of court room experience. A trusted team of professionals together with the necessary resources is available to work on your case. You do not pay anything unless we win.

Proven Results





- \$6,000,000 Future payout projected for settlement to widow with ORRI recovered under husband's consulting contract after company contended no payments due after death.
- \$5,800,000 Combined cash settlement for UPRC East Texas and Central Louisiana royalty owner class action cases for underpaid royalties. Court approved fee of 1/3.
- \$4,700,000 Jury verdict, oil company violates geologist non-compete contract. Settled later on confidential terms.
- \$2,000,000 Settlement for downhole failure of casing results in loss of well bore, net to client \$1,372,411.79.
- \$1,175,000 Settlement for geologist and family where oil company drilled too close to geologist property. Case filed 18 years after well drilled. Net to client \$664,822.51.
- \$986,000 Cash settlement, net to clients \$657,207.60, plus future mineral interest valued at \$500,000.00. Dispute over mineral interest ownership from thirty year old contract.

Robert A. Chaffin

THE CHAFFIN LAW FIRM

4265 San Felipe #1020 • Houston, Texas 77027 • (713) 528-1000 • Cell (713) 817-2786 • robert@chaffinlawfirm.com

March 2022

Thursday	Friday	Saturday	
3	4	5 <i>HGS Volunteer Day at YMCA Camp Cullen</i> <i>Archway Gallery: Larry Garnezy Solo Exhibition Opening Reception</i>	<p>Reservations</p> <p>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 email office@hgs.org or call the office at 713-463-9476.</p> <p>Reservations for HGS meetings must be made or cancelled by the date shown on the HGS website calendar, which is normally 24 hours before hand or on the last business day before the event.</p> <p>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, please contact the Webmaster at webmaster@hg.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 still be billed.</p> <p>Pricing</p> <p>In-Person Meetings HGS Members \$35 Non-Members/Walk-Ups \$40 Emeritus/Honorary Life \$15 Students \$5</p> <p>Virtual Meetings HGS Members \$15 Non-Members \$30 Students \$10</p>
10 	11	12	
17	18	19	
24	25	26 <i>Archway Gallery: HGS Social & Closing Party</i>	
31 			

**RENEW YOUR HGS
MEMBERSHIP**
www.hgs.org

26-28 September 2022
Houston, TX & Online

The 21st HGS-PESGB Africa Conference

CALL FOR PAPERS

"The Future of G&G in Africa's E&P: Skills, Transition, & Resources"



PES  **GB**

Submit Abstracts to:
africa2022@hgs.org

Abstract Deadline: July 2022



The HGS/PESGB Africa Conference has built a reputation for hosting high-quality technical talks focused on the geology of the African continent and conjugate margin. In 2022, the conference will focus on how Africa transitions over the next decade. Alongside submissions on petroleum exploration, development, and reservoir management, we also seek submissions on subsurface technologies, skills and the projects supporting Energy Transition in Africa, such as geothermal, carbon storage and rare earth element exploration.

The HGS Africa Technical Committee invites you to submit an abstract for the program. Your research could be featured on the agenda, giving you a platform to reach a global audience. You also have the opportunity to win one of the prestigious awards for technical excellence for the best presentations, including special awards for students and international contributors.



Candidates for the 2022-2023 Executive Board

Houston Geological Society Officer Election

The candidates put forth by the Nominations Committee are:

President-Elect: Paul Britt, Bryan Guzman

Vice President: Ceri Davies

Secretary: Meredith Faber, Amanda Johnston

Treasurer-Elect: Fang Lin, Lauren Robinson

Editor-Elect: Lucia Torrado, Caroline Wachtman

Directors (2 positions): Bill DeMis, Troy Meinen, Kenneth Mohn, Marcus Zinecker

HGS Election Voting Instructions

HGS Members will be able to vote online via the HGS website. You must be logged into your account to cast your vote.

Ballots will be online only - no mailed ballots!

Please check the HGS website in the coming weeks for updates and announcements.

The voting period opens April 10, 2022 and continues to May 10, 2022.

President-Elect (two candidates)



Paul Britt

I am honored to have been asked to run for HGS President-Elect among a talented slate of candidates. The HGS is the premier geological society for the Houston Metro area and Upper Gulf

Coast. Our society serves a diverse interest of geoscientists (petroleum, environmental, mining, resource exploration, professors, K-12 educators, geotechnical, engineering, and others) and my vision for the society is to see growth in membership through an emphasis on this diversity and community outreach.

I moved to Houston to begin my career in 1978 after graduation. I joined the HGS in 1980 when I regularly attended dinner meetings and activities. I have been an active volunteer in HGS committees since 1987, and served on the HGS Executive Board and other professional society offices since 1994. During those times, I worked at several large oil and gas companies before becoming an independent geologist in 1992.

Having previously served as HGS Treasurer and AAPG President and other offices, I understand the complications the HGS is currently facing. As your President, I will endeavor to bring the HGS onto solid business footing, while staying focused on my expressed vision for HGS and on the membership's interests.

EDUCATION & CERTIFICATIONS

Eastern Michigan University, B.S. in Geology, 1977
Texas P.G., #2575 Louisiana P.G., #523
Certified Petroleum Geologist, AAPG #3727
Certified Professional Earth Scientist, SIPES #2249
Chartered Geologist, Geological Society of London

Read more about Paul's professional experience and HGS activities & awards by clicking [HERE](#).



Bryan Guzman

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.

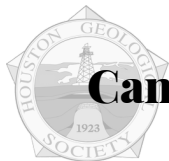
Education:

2008 BS Geology University of Texas at San Antonio
2018 MS Analytics Texas A&M University

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 Oilfield Group
2021 – Present Director Global Business Development & Technology – Premier Oilfield Group

Read more about Bryan's professional affiliations and activities by clicking [HERE](#).



Candidates for the 2022-2023 Executive Board (*continued*)

Vice President (one candidate)



Ceri Davies

I am very appreciative of the nomination to run for Vice President 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 this past November. 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 VP capacity or volunteering when resources are needed.

Education

2001-2005: University of Liverpool, Masters of Geophysics with Geology

2005-2009: University of Liverpool, PhD in Paleomagnetism

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

Secretary (two candidates)



Meredith Faber

Born and raised in Texas, Meredith attended Trinity University in San Antonio where she joined AAPG as a student member in 2003. She graduated with a Bachelor of Arts degree in English

and a Bachelor of Science degree in geosciences in 2005. She went on to attend graduate school at Southern Methodist University in Dallas, Texas, where she split her time between teaching oceanography lab classes, participating in various student organizations (including the SMU AAPG Student Chapter) and earning a doctoral degree in geology with an emphasis in stable isotope geochemistry. She completed her dissertation research on isotopic and ecological investigations of the land snail record and novel data management techniques in 2012.

After graduation, Meredith joined Swift Energy Company in Houston, Texas, to work in exploration in onshore South Texas. Meredith moved to Noble Energy in 2014 where she worked in the Marcellus Business Unit and in Development and Operations in the Permian. She currently works as a freelance editor for the Bureau of Economic Geology at The University of Texas at Austin.

Meredith's most recent volunteer roles include serving as an HGS Delegate to the AAPG House of Delegates and the 2020-2021 President of AAPG's Division of Professional Affairs. Meredith credits her involvement with organizations like AAPG, HGS and SEG with providing the opportunities and resources that resulted in her present career path and considers it a privilege to give back to the Society by standing for the office of HGS Secretary.

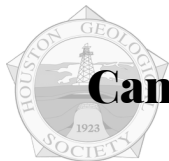


Amanda Johnston

I started my career in the oil and gas industry as many others do, with field experience. I mud logged during the summer of 2017 with Datalog Geological Services and gained additional experience

through several internships with companies including Southwestern Energy (2018), ExxonMobil (2019), and Hess (2019). At the end of 2019, I accepted a full-time position as a Foundation Geologist with Hess Corp. During my time with the company, I've had the great opportunity of completing a rotation in the Guyana Basin learning about offshore operations, and I'm currently in an exciting rotation as an operations geologist working the Williston Basin, North Dakota.

I earned my M.S. in geology from University of Louisiana at Lafayette and my B.S. in geology from Stephen F. Austin State University. While beginning my early career, I Vice-Chaired the newly formed HGS Student Expo Committee in 2021 and will be chairing this committee for HGS in 2022 and 2023. I am truly honored to receive a nomination for the HGS Secretary position. If nominated, I would look forward to learning more about the society and its members, as well as support the growth of its membership as a board member.



Candidates for the 2022-2023 Executive Board (*continued*)

Treasurer-Elect (two candidates)



Fang Lin

It is a privilege and an honor to be nominated as a candidate for Treasurer-Elect on the Board of Houston Geological Society (HGS). I am a mid-career geologist who have worked in the energy industry for sixteen years. My career started as a technical geologist and had increasing responsibilities as a project manager and supervisor. I have not served as a treasurer for any organization before, so I searched online about “What skills do you need to be a treasurer?”, one of the sources ([Characteristics of a Good Treasurer](#) | [DIY Committee Guide](#)) said: “A good treasurer will:

- be capable of handling figures and cash;
- have an orderly mind and methodical way of thinking;
- have experience in dealing with large sums of money and budgets;
- have experience of financial control and budgeting;
- have an eye for detail; be available to be contacted for ad hoc advice;
- have a financial qualification or relevant experience;
- have experience of pension schemes;
- good communication and interpersonal skills;
- ability to ensure decisions are taken and follow-up; and
- show good time-keeping.

I think I have majority of the skills due to my personality and experiences. I am disciplined both with personal finance and organizational spending. I have managed budgeting of large research projects with millions of dollars annual spending. I understand the criticality of accurate book-keeping and the importance of that for an organization. I am willing to learn and do what our organization needs me to do, to continue to serve our members and our community. Thank you for voting for me!

Education

B.S., Geology, Chengdu University of Technology, 1991 - 1995

M.S., Ore Deposit Geology, Chengdu University of Technology, 1995 - 1998

Ph.D., Geosciences, Virginia Tech University, 2000 - 2005

Experience

2020 - present: Chevron Corporation, Chapter Manager, Hydrocarbon Charge & Geochemistry

2000 - 2020: Chevron Corporation, Geochemist, Research Scientist, Team Leader

1998 - 2000: Chengdu University of Technology, Instructor

Professional Activities and Awards

2022 - present HGS Scholarship Night Committee co-Chair

2019 - 2020 Editor of the Houston Geological Society Bulletin

2018 - 2019 Editor-Elect of the Houston Geological Society Bulletin

2009 - 2014 Index Editor for HGS Bulletin

2011 - 2012 Houston Geological Society Editor's Award

Active member of AAPG, HGS and HOGS.

Reviewer of AAPG Bulletin, Marine and Petroleum Geology, Organic Geochemistry etc.



Lauren Robinson

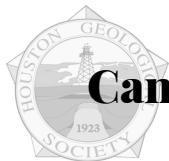
My passion for geology began as an undergraduate student at Smith College, continued throughout my time at Indiana University's Field Camp, as a field assistant in the Books Cliffs and an extended internship at Big Bend National Park, and culminated with graduate work in structural geology at Baylor University. In June it will be 15 years since I have been working in the oil patch.

During my professional career, I have teamed with large, independent operators (e.g. EOG Resources, Marathon Oil and EP Energy) on various unconventional and conventional projects. Most recently, I joined the Miller and Lents team where I am currently pursuing a range of domestic and international upstream projects with numerous clients.

In addition to volunteering with the HGS Social Media committee, I have been an active volunteer with both the SPE-GCS and Chemo Angels.

My husband, Eric, is also a geologist and works in oil and gas. Our son, Nate, is five years old and enjoys “working” with rocks and in the dirt. Shocking!

Thank you!



Candidates for the 2022-2023 Executive Board (*continued*)

Editor-Elect (two candidates)



Lucia Torrado

Lucia Torrado is a geoscientist with AGI Exploration. She received her B.S. degree in geology from the National University of Colombia, and her M.S and Ph.D. from the University of Houston.

She has worked with the Conjugate Basins, Tectonics and Hydrocarbon consortium at the University of Houston, PGS, TGS and interned at Shell and Talisman (now Repsol). She has experience in several Caribbean and Latin American basins. Her graduate work in Brazil was recognized as the best poster presentation at AAPG's Annual Conference and Exhibition in 2017.

Lucia is currently the Translations Committee Chair at SEG, an Imperial Barrel Award industry advisor for AAPG and a member of AAPG, SEG, HGS, GHS and AWG.

Lucia currently serves as Secretary on the HGS Board of Directors.



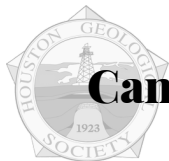
Caroline Wachtman

Caroline has extensive experience managing and executing complex subsurface projects and has explored, developed and produced resources worldwide. She spent 15 years with

ExxonMobil, where she led multiple cross-functional teams identifying and evaluating resources throughout West Africa, the Caribbean and Caspian regions. Recently, she worked US onshore conventional and unconventional mature production assets with Zarvona Energy. Now, she is applying her project management and reservoir characterization expertise as Director of Energy Transition & Capital Projects at Caliche Development Partners, where she is leading a carbon sequestration project.

Caroline has a B.S. in Geology from the College of William & Mary and a M.S. in Geology from the University of Wisconsin-Madison. She has participated in three executive leadership programs, including the Thunderbird School of Global Management. Caroline is published in the Journal of Structural Geology and Tectonophysics. She enjoys sharing her interest in geology with her two young daughters and their Girl Scout troop.

Caroline currently serves as Committee Chair of the HGS Africa Conference.



Candidates for the 2022-2023 Executive Board (*continued*)

Directors (four candidates)



Bill DeMis

I am honored to stand for the position of Director at the HGS. I will bring all of my business experience to the Executive Board to make the HGS economically profitable, scientifically relevant, and fun for our members. I have had executive experience across a broad range of companies that range from small independents to “big oil” to investment banking. I have held the positions of Exploration Manager at Marathon Oil Company (“big oil”), Exploration Vice President at Roxanna Oil Company (local Houston independent), and most recently, as Senior Vice President and Chief Geologist at Goldman Sachs in investment banking here in Houston.

I understand the issue facing all of our independent members as well as those who work for major oil companies. The critical strength I can bring to the HGS is a strong understanding the financial challenges we face as a professional society.

I currently run my own consulting company. I am working on getting funding for two different start-up companies; one company is situation in the US onshore Gulf of Mexico, and other is situated in Bulgaria. I like to look at deals and generate prospects. I still know how to slip well logs. I am also a visiting lecturer at The Jackson School of Geosciences at The University of Texas at Austin.

As a member of HGS, I actively participated in the continuing education committee, by chairing classes, inviting speakers, and I have taught a class. I have given several talks at the HGS on the Haynesville shale play, the Eagle Ford, and on the relationship of the US dollar to Oil Prices and OPEC policy. In 2021, I was awarded the dedicated Service Award from the AAPG. In 2000, I received the Dedicated Service Award from the West Texas Geological Society. In 1996 and 2000, I won the “best paper” at the AAPG National Conventions for my work on the effects of US dollar exchange rates on OPEC price policy. In 1993, I won a “best paper award” from the GCAGS for my work on production-controlling carbonate stratigraphy of the Smackover.

I am a member of HGS, WTGS, RMAG, and SIPES. I am AAPG Charles Taylor Fellow. I am also an AAPG foundation trustee associate. My LinkedIn page has links to some of my talks.

Read more about Bill's professional experience and awards by clicking [HERE](#).



Troy Meinen

I am honored to be invited to stand for election of one of the new Board Directors for HGS. My current positions as treasurer and now co-chair of the Environmental and Engineering committee in HGS have been most rewarding to me and I welcome the opportunity to further serve my fellow Members should I be elected.

We are living in exciting but challenging times when our collective expertise as Geologists is more valuable than ever. Who better than Geologists to help today's leaders understand the complex nature of energy, the carbon cycle, natural disasters, and the impact of each on our world. My hope is that organizations like HGS will bring wisdom and sound scientific reasoning to decision makers in the many public arenas where we serve.

I am a Technical Director and Global Health and Safety Advisor with Environmental Resources Management (ERM) in Houston. Over my 24-year career, I have served as an environmental and health and safety consultant servicing global oil and gas, chemical, manufacturing, and mining companies. I have utilized my geological expertise to assist global oil and gas companies to understand and address contaminated ground water, soil and sediment issues. My background includes managing investigation and remediation of upstream oil and gas sites and assisting with due diligence for large oil and gas acreage position transactions for major oil and gas clients, which includes assessment of water use and protection, property transaction support, environmental impact assessment, environmental permitting and management, and Stakeholder concerns. I currently utilize my field experience to support teams globally in improving health and safety performance primarily within Global oil and gas companies.

In my personal life I have served for more than 20 years as a mentor of students through my church and Scouting. Most recently, I have expanded my leadership experience through my service as the Chairman of a local Houston District of the Boy Scouts of America.

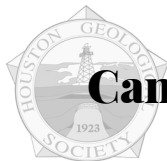
I believe my technical experience in the oil and gas industry combined with my experience and leadership in HGS and other organizations has prepared me to help lead HGS as we continue in challenging times.

Education

- M.S. Geology, Baylor University, 1996
- B.S. Geology, Baylor University, 1993

Professional Affiliations and Registrations

- Registered Professional Geologist in the States of Texas and Tennessee
- Certified Safety Professional (CSP-38937)
- American Society of Safety Professionals
- Houston Geological Society



Candidates for the 2022-2023 Executive Board (*continued*)

Directors (four candidates)



Kenneth Mohn

Professional Experience

Mohn & Associates, LLC – (2018-Present)

Formed to develop new business opportunities in consulting, project development and oil and gas exploration.

Developing exploration projects and seismic surveys both Proprietary and Multi Client.

Geoex/MCG –MCG was purchased by Geoex in 2016. **(2013 - 2018)** Started with MultiClient Geophysical (MCG), based out of Oslo Norway. **Managing Director and Vice President Americas** – Started the group at MCG for the Americas. Developed surveys in Mexico and the Caribbean.

Fugro Multi Client Services, Inc., a division of Fugro N.V. under the Seismic Services Group. **Exploration Vice President (2002- 2013)** Started the Multi Client Group for the Americas in Houston. Group Manager of the Multi Client Group in Houston. We covered all Multi Client business for North, Central and South America. Responsible for all Multi Client Sales, Project Development, Project Management for the Americas. Reported to the Managing Director of Fugro Multi Client Services Worldwide.

TGS-NOPEC Geophysical Company ASA: Specializes in the global acquisition of non-exclusive seismic surveys. **I worked at TGS from 1987 until 2002 in various positions: 1987-2002** Marketing Manager, Africa: 2000-2002
Marketing Manager, Gulf of Mexico 1995-2000
Project Manager, International Division 1989-1995
Geologist and Marketing Representative 1987-1989

Strata Reserves Inc. – Field and Wellsite Geologist for shallow wells in East Texas **1982-1983**

Professional Societies and Affiliations:

American Association of Petroleum Geologists (AAPG)
Houston Geological Society (HGS)
Society of Exploration Geophysicists (SEG)
Geophysical Society of Houston (GSH) Lifetime Member
Texas Board of Professional Geoscientists Licensed Geology, License No. 6766

Activities:

2021-Present AAPG House of Delegates Committee, Delegate, Foreman
2021 AAPG HoD Membership Committee, Committee Member
2019 and 2020– Judge in the AAPG Imperial Barrell Award Student Contest
2018-2019 – 2nd Vice President of the Geophysical Society of Houston
2016-2020 AAPG HoD, Alternate
2015-2016 AAPG HoD, Delegate
2011- 2015 – Chairman of the Geophysical Society of Houston Sporting Clays Tournament
2009 – Chairman of the International Association of Geophysical Contractors (IAGC) Sporting Clays Tournament.
2004-2015 AAPG HoD, Alternate
2001-2004 AAPG HoD, Delegate
2000 – 2001 Charity Selection Committee Member for the Children's Fund Charity.
2000-2001 Chairman of the Houston Geological Society Skeet Shoot Committee.



Marcus Zinecker

Marcus Zinecker received B.Sc. degrees in both geology and geophysics from the University of Houston in 2014, and a Ph.D. in geology from the University of Houston in 2020. He began volunteering for the Houston Geological Society in 2018, shortly after starting grad. school. Marcus volunteered with the exhibits committee, attending industry conferences here in Houston and across the country on behalf of HGS. (Many of you have probably seen him working at the HGS booth at a conference or two!) In 2019, Marcus became the committee chair for HGS Exhibits, coordinating HGS's presence at conferences and manning the booth. He received the HGS Rising Star Award for his efforts and contributions to Exhibits in 2018-2019. Marcus' goal with the Exhibits Committee has been to spread awareness of the programs available to and benefits of HGS membership at as many industry conferences and trade shows as possible, as well as to bring in new members – especially young professionals. Marcus has also volunteered as a session co-chair at the HGS-EAGE Latin America conference and presented at several other HGS conferences.

In his day job, Marcus works at BP as an exploration geologist in their Gulf of Mexico team, where he has had the opportunity to work on various prospect descriptions and sub-regional projects, as well as exploration well planning and drilling operations. In fact, Marcus celebrated his first oil discovery in 2021 with the Puma West discovery.

In his free time, Marcus enjoys cooking, camping, rock climbing, and all kinds of board games. He especially looks forward to taking his 2-year-old son on his first rock collecting trip this summer.

HGS ANNUAL SHRIMP PEEL & CRAWFISH BOIL

JOIN US FOR BOILED SHRIMP, CAJUN
CRAWFISH, CORN & POTATOES, BEER &
BEVERAGES, AND LIVE DJ MUSIC!

APRIL 29, 2022
12:00PM - 6:00PM

\$30

HGS
MEMBERS

\$40

NON-
MEMBERS

\$45

WALK
UPS

BEAR CREEK PIONEERS PARK, PAVILION 6
3535 WAR MEMORIAL ST. HOUSTON, TX 77084

SPONSORSHIPS AVAILABLE!
REGISTER AT WWW.HGS.ORG





HGS ANNUAL SHRIMP PEEL & CRAWFISH BOIL SPONSORSHIP OPPORTUNITIES

SHRIMP SPONSOR \$2,000
6 complimentary tickets

CRAWFISH SPONSOR \$2,000
6 complimentary tickets

BEER & BEVERAGE SPONSOR \$1,000
4 complimentary tickets

MUSIC SPONSOR \$1,000
4 complimentary tickets

PLATINUM CORPORATE SPONSOR \$1,000
4 complimentary tickets

GOLD CORPORATE SPONSOR \$750
2 complimentary tickets

SILVER CORPORATE SPONSOR \$500
1 complimentary ticket

BRONZE CORPORATE SPONSOR \$250

For sponsorships, please call Andrea Peoples at the
HGS Office at 713-463-9476 or email office@hgs.org

REGISTER AT WWW.HGS.ORG

HGS Scholarship Night 2022: New Hires Pass the Baton to Future Hires!

BY DR. CHARLES STERNBACH, HGS SCHOLARSHIP NIGHT COMMITTEE CHAIR
(HGS PAST PRESIDENT 1999-2000)

Great to be back in person. On Monday, February 7, 2022, HGS honored 23 geoscience students with scholarship awards. Nearly one hundred attendees, including students, parents, professors, and generous sponsors convened in an in-person meeting as HGS proudly continued our Scholarship Night tradition of recognizing future leaders.

Kudos to Jeff Lund (Calvert chair), Joe Lynch (Foundation trustees chair), their committees, and the organizing team (see inset boxes below). Historically, Scholarship Night has given out about one million dollars cumulatively through the combined efforts of Calvert Fund and the Foundation Fund. We thank this year's generous sponsors, Chevron, Friends in Memory of Larry Bartell, and many individuals and corporations for taking us to new heights. We raised another \$21,000 (net) for future scholarships.



Figure 1. Welcome to panelists, student scholars, and attendees.

A brief history of HGS Legends Night evolving into Scholarship Night

My three goals as HGS president in 1999-2000 were to 1) pack the house at technical meetings, 2) hold a membership drive (membership grew from 3300 to 4900), and 3) feature a panel of Legendary wildcatters. When 550 attendees packed the first Legends panel in January 2000 to hear George Mitchell (and others), we tapped into something special. Over the next 12 years, HGS organized ten more Legends panels, and I enjoyed organizing many of them. In 2013, as my involvement in AAPG programs grew, I passed the Legends baton to the then-HGS President Dr. John Tubb. John had the brilliant idea to add a Scholarship Night theme. That was a prophetic pivot to the future!

Scholarship Night quickly became an annual HGS highlight. Fundraising soared under John Tubbs's leadership. In 2019 John Tubb passed the baton back to me as the Scholarship night chair 2019-2022. Let's review these past four years as we welcome Dr. Fang Lin as a 2022 co-chair and future chair for this event. The goals remain clear: pack the house, make money for HGS, and leave a legacy.

Building on a firm foundation and taking Scholarship Night to Greater Heights (2019-2022)

In 2019, panelists Bobby Ryan and Cindy Yeilding told stories from great careers at Chevron and BP. Then, as we do every year, we gave AAPG/DPA Heritage books as gifts to students and panelists. This book offers career advice from 100 successful energy professionals and reminds us that many more stories are yet to be told! [Here is the link](#) for a free download.

In 2020, we took Scholarship Night to astronomical heights with geologist Astronaut Jessica Watkins. Jessica will be heading to the International Space Station soon, and we expect her boots to step on the moon or mars soon. A special thank-you to Jeff Lund for his contribution to the success of this program.

In 2021, during Covid-19, we decided to meet virtually via Zoom. Student scholarship winners spoke about their plans and achievements. Their stories inspired us all!

For the 2022 meeting, our committee pondered several options. Two factors stood out. First, HGS President Mike Erpenbeck wrote: "we note that the students seem to relate better to the younger geologists who are closer in age and stage in life." See Mike's November president column.

Second, an AAPG SWS meeting in El Paso 2016 showcased a panel on newly hired professionals sharing advice to job-seeking students. The discussion was engaging! Dr. Claire Bailey was then president of the El Paso Geological Society, and the panel was her idea. The idea resonated with the Sponsorship Night Committee organizers and was also voted as a top choice by our present and past HGS Scholarship awardees. As such, we chose "New Hires- Future Hires, Passing the Baton" for our 2022 topic. We wanted to show a path forward to the energy Industry with exemplary panelists.

Lessons and quotes from the 2022 Panelists and Q&A



Figure 2. 2022 Scholarship Night Panelists; Nathan Tinker, Claire Bailey, Libby Ingram Storer, Luciana Tinker, & Eric Peavey (from left to right).

HGS Scholarship Night 2022: New Hires Pass the Baton to Future Hires! ...continued

Comments, highlights, and advice from our 2022 Panelists

Dr. Claire Bailey

"In school, I worked on understanding sediment budgets within the Atchafalaya River, and there I realized that rivers were my thing. I loved rivers. I wanted to understand the stratigraphy. I wanted to understand how rivers transported sediment. At California State, Northridge, I discovered oil and gas could be a career path for me, and my advisor Dr. Kathleen Marsaglia held the AAPG student expo on our campus. Students were "voluntold" that we had to participate and help with the organizing. That experience guided me in my career path.

Luciana asked me how many wells I've drilled since I have been at XTO and Exxon Mobil. I think I'm up to almost 15 and wells, and I landed a well today."

Eric Peavey

"After finishing the bachelor's, I had many professors and mentors tell me your grades are great, but it was never really told to me how important it was to network with people.

I also learned that there is often leeway if you want to do something and keeping in touch with previous professors can be very important. Staying in touch after you graduate is super important.

I've been very lucky for several reasons- one, I was able to get all my research done in the field before covid happened- number two, Chevron paid for a lot of the geochemical analysis for my project, which was an absolute godsend and then the third part of it was after my fieldwork, a lot of my project was data analytics oriented. Hence, it meant that I could work remotely.

Presenting undergraduate and graduate research prepared me for my career. If you present, it indicates that you're willing to move out of your comfort zone, and it provides a good incentive for you to improve your technical communication skills. It also improves your research quality because you get constructive criticism from people who do this for a living and who have perhaps the job you want or a job that you like to work alongside."

I think domain knowledge is the most important. The tools are secondary so long as you get a good foundation of the geosciences for whatever you want to do. Keeping curious about what you're doing and putting the time commitment into it to build that experience is important. I've met many people who didn't necessarily have the best grades, and they are very good geologists and geophysicists. So, if you don't do great on a test, don't let that hold you back. Just keep pushing.

Every resume you ever write should be tailor-made to the job that you're applying for, and the other big point I would say is to figure out what job you want and the skills that you need to get it before you graduate."

Libby Ingram Storer

"I can't wait to tell you about the failures along the way because they were spectacular." What an opening!

"After my initial industry entry, I wound up in a different place than I thought I would, but I kept learning during a few turbulent years.

I started as a Petroleum Engineer with Conoco and planned to do that forever. However, the Industry downturn in 2016 required that I take a new direction, so I went back to school at U of H and completed a professional master's degree in geophysics. I then took a job in a small 10-person company which was a major change from what I experienced at Conoco, but this opportunity allowed me to develop my geoscience skill sets.

I didn't realize that the operations role that I took as completions engineer at Conoco required spending a lot of time out in North Dakota, understanding the mechanics of how sliding sleeves work, and often how they don't work. I realized that capturing trouble time was not leaning on the geoscience skills that I liked.

I reached out on LinkedIn asking professionals to meet for coffee. I asked to hear about their careers and advice that could help lead me to a job. Sometimes I got a coffee meeting. Sometimes I got ghosted. But that's ok. I kept learning new skills. And then, one of those LinkedIn Messages came in from an old co-worker, which led to a great contracting position that lasted for a few months.

I kept refining my pitch and interned at HESS, but they did not offer a permanent job. I helped make a commercial for the AAPG Prowess committee and met many encouraging, supportive people. And I went to a LOT of conferences to meet people, AAPG, SEG, SPE, all of them! And then, I walked up to a booth at Shell and introduced myself. Suddenly, things started happening! When I got my Shell offer, I made it the brightest shade of green on my job tracking spreadsheet!"

Luciana Tinker

"I am from La Paz Bolivia. I came to the US by myself to study, and it was great to arrive in San Antonio at Trinity University. There I got to learn about geosciences and fell in love with the degree."

The best advice I received was to do undergraduate research. Many people get "A's" but undergraduate research gave me a differentiator that opened the door to many opportunities. I had the chance to do research at the BEG under Scott Hamlin, a wonderful mentor who showed me that you never stop learning as we published a few papers together. The BEG was a great place to see many opportunities to explore geoscience careers. When the sponsors came, there was a lot of enthusiasm for oil and gas, so I said to myself, "I want to do that!" The Gulf Basin Depositional Synthesis project consortium was a great way to interact with industry professionals doing applied research and a gateway to the job I needed.

HGS Scholarship Night 2022: New Hires Pass the Baton to Future Hires! ...continued

I presented my research outside the consortium and met an AAPG convention recruiter! I got a 1-month internship in the GoM. For all the students, there is a big world in geoscience. Not just oil and gas but in many other fields."

Nathan Tinker

"There are a lot of ways into the oil and gas industry. Hard work will get you many places, and a knowledge base and effective teams are critical, especially in this multidisciplinary industry. Networking is important, and luck is an often-overlooked ingredient of success."

I took one intro to geology class and loved it. Great people, working outdoors, amazing data sets quantitative and creative combined, not many other places you can get that. My early research: "fractures do indeed get more intense over early lithified mud mounds."

Big takeaways are dealing with uncertainty, long-term project management, developing career and technical skills, applying for internships, and being involved in professional societies. Hilcorp is a flat organizationally integrative asset team structure, dynamic, entrepreneurial, focused on conventional production and fun.

A moment came at 2:00 AM with the mudlogger on site. Is everything they taught me in school viable with a couple of million dollars riding on this idea? It was wonderful, validating, and important when we logged and tested the well because it confirmed substantial new reserves with a 1,000 BOPD IP.

This process takes us from data to predictive wisdom impactful to our economy. Try and get better every day, learn, and always ask, "why am I in this chair? How am I adding value to this company?"

"You've got to say 'yes' to challenging growth opportunities. Relationships matter a lot, it's what you know and who you know. Great results come from high functioning teamwork. And you have got to give back and get involved. I think that is why we are all here, to keep the next generation coming."



Figure 3. Calvert Fund Student scholars & HGS volunteer committee chaired by Jeff Lund.



Figure 4. HGS Calvert Fund Chair, Jeff Lund, and Calvert scholarship recipient, Allison Barbato.



Figure 5. HGS Foundation Student Scholars & HGS volunteer committee, chaired by Joe Lynch

More Baton Passing

We congratulate Dr. Fang Lin for being a co-chair for the 2022 Scholarship Night. Please join me in supporting her in the future and sharing input and suggestions at fanglinvt@yahoo.com. Another baton passes! I will be assuming other duties as the General Chair of the GeoGulf April 23-25, 2023, Houston convention, and chair of the HGS 100Th Anniversary Committee along with Linda Sternbach. Linda deserves a special thank-you for creating the HGS GeoEducation YouTube channel and being my companion in all that we do.

That baton gets passed around a lot at HGS! Congratulations to the Scholarship Night committee, the Board of Directors, officer candidates, students, headquarters staff, panel members, and attendees. We are grateful to all who pick up the baton. Reach out! Grab it! Then pass it on! You will be glad you did.



Figure 6. Scholarship Night Chairs passing the baton as HGS Past President John Tubb receives his award.

HGS Scholarship Night 2022: New Hires Pass the Baton to Future Hires! ...continued

Video Link. If you want to see the 2022 program again, share it with a friend, or see what you missed, a video recording is available to watch and share on the HGS YouTube channel HGS GeoEducation. Be sure to subscribe!! Full video presentations of the 2019-2022 Scholarship Nights, Legends Nights, and other valuable legacy resources await you at the link: https://lnkd.in/gRF2_Fs7

Special thanks to event coordinators: Linda Sternbach, Dianna Phu, HGS Director Andrea Peoples, and Alyssa Cushing. We are grateful for the support to the HGS executive committee, particularly Mike Erpenbeck, Patty Walker, and Walter Light, who also played important roles in the program's success. Thank you also to Anna Krylova for an outstanding job as a roving photographer!



Figure 8. Special thank you to the Chevron Sponsorship Team.

Calvert Memorial Scholarship Committee:

Jeff Lund; Chair, Richard Bishop, Judy Schulenberg, Nicole Villarreal, Walter Light (President-Elect 2021-2022)

CALVERT MEMORIAL SCHOLARSHIP RECIPIENTS

Allison Barbato, Louisiana State University, Edgar Contreras, University of Houston, Mary Campos, Stephen F. Austin University, Sydney Dangtran, Texas A&M University, Nicholas Dusak, Texas A&M University, Leah Evans, Texas A&M University, Molly McCreary, Texas A&M University, Syed Moosavi, Rice University, Lynn Nguyen, University of Houston, Eric Peavey, Texas A&M University, Richard Robinet, Louisiana State University, Leiser Silva, Colorado School of Mines, Jamie Singer, Stephen F. Austin University, Haley Thorson, Colorado School of Mines, Ryker Tracy, Texas Tech University, Alex Washburn, Texas Tech University, Jenelle Wempner, Texas A&M University

Foundation Current Trustees:

Joe Lynch (Chair), Shannon Lemke (Secretary), Angela Hammond (Treasurer), Paul Hoffman, Scott Krueger, Jacob Umbriaco, Kristin Burns

HGS FOUNDATION, BASINSKI, & MABY SCHOLARSHIP RECIPIENTS

Ashlynn Bush, Lamar University, Anjali Khisty, Sam Houston State University, Brennen Leidy, Stephen F. Austin University, Stella Potemkin, Rice University, Steven Ramirez, University of Houston, Constantine Stoilis, Texas A&M University

Thank you, Sponsors!

THUNDER EXPLORATION, INC.

the human energy company

tNavigator®
Rock Flow Dynamics

WALTER OIL & GAS CORPORATION

GILLIS & COOK

Individual Sponsors:

Jeff & Marti Lund

Letha Slagle & Grant Gist

Richard & Edie Bishop

John & Sherry Adamick

Shannon & Seth Lemke

Stark Creek Energy Company

PAH Energy Company

Michael Puzio

Andrew Hampf

Robert L. Zinn

Padgett Exploration

SARK Exploration LLC

Houston Energy

In Memory of Larry Bartell

Figure 7. Thank you, generous sponsors!

You need to be in attendance because:

The Prospect Expo

The Best Properties and Prospects in the Ark-La-Tex.

The 2022 Tech & Prospect Expo

The Latest Service Company Technologies.
ETGS

Icebreaker: 5:00 pm

When: March 28, 2022

Texas Music City

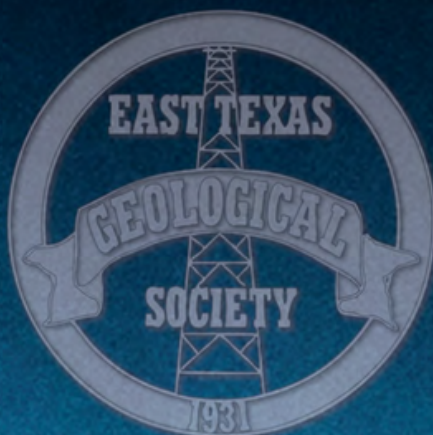


East Texas Geological Society
102 North College, #1200
Tyler, Texas 75702

EAST TEXAS GEOLOGICAL SOCIETY TECH AND PROSPECT EXPO 2022

MARCH 29, 2022

Set Up Day: March 28, 2022



VENDOR/EXHIBITORS: \$350 per Booth
PROSPECTS: \$250 per Booth

As a vendor/exhibitor your company will receive two complimentary entrance passes per booth ordered (these passes are not eligible for door prizes). Your company may also purchase additional entrance passes for \$40.00 each (Eligible for the door prizes) to hand out to encourage clients and friends to visit your booth. Price includes lunch, drinks and refreshments for morning and afternoon Sessions.

For questions, registration materials or other information please contact
Barbara Cade: 903-593-3071 • bacade@suddenlinkmail.com

Don't Delay – Registration Deadline is March 11, 2022!

www.easttexasgeo.com

MARCH 2022

MARK YOUR CALENDARS!

2022 TECH & Prospect Expo

March 29, 2022

Rose Convention Center, 2000 W. Front St., Tyler, Texas

Morning Speakers: 10:00 am

Lunch: 11:30 am-1:00 pm

Afternoon Speaker: 1:30 pm

Door Prize Drawing: 3:00 pm

Set up will be after 2:00 pm on March 28, 2022.

Because ETGS' Tech / Expo theme has grown in size and scope since the beginning, the event will showcase your company to the oil and gas community of the entire ARK-LA-TEX region. We are anticipating over 500 attendees. There will be a drawing for door prizes in the afternoon at 3:00 pm (Must be present to win.) Each Registrant will receive one chance for door prize with paid admission. Additional chances will be offered at sign-in at \$10.00 each. The cost to attendees will be \$40.00 (\$50.00 at the door).

Proceeds from the Expo will be used to fund the ETGS Scholarship Fund for Geology majors in Texas.

EVENT SPEAKERS

10:00 am Speakers:

Dr. Lorena Moscardelli

Research Scientist

"State of Texas Advanced Resource Recovery Program – Overview and Future Directions"

Dr. Lorena Moscardelli is a Research Scientist and leader of the State of Texas Advanced Resource Recovery (STARR) program at BEG. Her expertise is in seismic geomorphology and interpretation, sedimentology and stratigraphy and geoscience data integration. She received a degree in Geological Engineering from Central University of Venezuela (2000) and a PhD in Geological Sciences from The University of Texas at Austin (2007).

She specializes in the study of deep-water deposits with emphasis on subaqueous landslides, deep-water mixed siliciclastic-carbonate systems and planetary geology.

Most recently, Dr. Moscardelli has taken a strong interest in understanding the role of geoscience research as part of the ongoing energy transition while contributing to STARR's main mission of conducting geologic research resulting in the increase of production and profitability of energy resources in the State of Texas.

10:00 am Speaker:

Dr. Ian Duncan

Dr. Ian Duncan, along with potentially other members, will discuss new refrac and secondary recovery research.

1:30 pm Speaker:

Karr Ingham

Executive VP / Petroleum Economist

Karr Ingham is a professional economist who lives and works in Amarillo, Texas. He is the owner of Ingham Economic Reporting, an economic analysis and research firm that specializes in the indexing and tracking of regional and metro area economies.

Ingham has a career history in agriculture broadcasting, public affairs and politics. He served as District Director and Legislative Aide to then U.S. Congressman Beau Boulter, and was the Congressman's principal liaison to the Panhandle and West Texas agriculture community. He also performed agriculture budget policy analysis for the Congressman, then a member of the House Budget Committee.

The regional metro analysis concept has been expanded to include regional energy production economies with the establishment of the Texas Permian Basin Petroleum Index, the Texas PetroIndex, a statewide index-based analysis of the state's energy production economy produced monthly for the Texas Alliance of Energy Producers. In addition, he also consults on economic and analytical policy matters and conducts various industry-related economic impact studies in Texas.

Ingham is member of the US Association for Energy Economics (USAEE), and holds his affiliation with the Houston chapter of that organization. He also serves on the natural gas supply and demand panel for the Independent Petroleum Association of America (IPAA), and is a frequent commentator in various local and statewide media outlets with regard to oil & gas prices and markets.

Attendee pre-registration fee @ \$40.00 / \$50.00 at door
Pre-registration deadline March 11, 2022

PRE-REGISTER & PREPAY ONLINE: www.easttexasgeo.com



FOURTH EAGE/HGS CONFERENCE ON LATIN AMERICA

14-16 SEPTEMBER 2022 • CARTAGENA, COLOMBIA

CALL FOR ABSTRACTS OPEN!

Welcome to the Fourth EAGE/HGS Conference on Latin America: “Exploring Latin America’s role in the Future Energy Mix”

On this occasion, the EAGE/HGS will bring this event to Cartagena, Colombia aiming for the first fully in person conference since the first event. Considering recent developments taking place in the world since 2019, the aim of the Technical Committee is to deliver to the audience, an integrated and exceptionally enriched conference on Latin America, offering a forum to explore relevant topics affecting the future of energy supply and the key role Latin America can play in the future energy mix to tackle energy poverty.

Since the last two decades, the Latin American region has faced continuous development in energy resources, which has opened to increased investment. The conference will provide a forum to explore the wide variation in geological settings as well as the latest geological insights from Mexico to Tierra del Fuego, including the most recent views from the conjugate margin and global analogues. Sessions covering advances in seismic imaging and non-seismic methods as well as machine learning and digitalization, are expected to present ways to achieve a more efficient exploitation of these resources.

In recent years, the oil and gas industry has significantly increased exploration and production activities in the southern Caribbean margin, the Andean foreland, Guyana-Suriname offshore, deep-water Brazil and unconventional exploration in Argentina and Colombia. Recent significant hydrocarbon discoveries in deeper water have indicated great rewards in frontier exploration but there is also a strong move towards Infrastructure Led Exploration (ILX) or Advantaged Hydrocarbons and this is expected to be a key topic in the conference.

Sessions with invited speakers are planned to cover above ground and energy transition related issues. These will provide an opportunity to interact and hold more open discussions.

Topics

The Technical Committee invite practitioners, innovators and industry experts to contribute to this workshop and share their achievements and challenges, lay out big innovative ideas and seek new alliances to jointly develop a road for the future.

Contributors are welcome to submit abstracts of 2-4 pages in length. Submission for posters & oral presentations is welcome on all topics. Professionals, Bachelor, Master or PhD students are invited to share their work. Abstracts should be submitted via the EAGE website using the downloadable template.

The papers must follow the Abstracts Submission Instructions

The deadline for abstract submission is 25 June 2022.

Please submit abstracts on the following topics:

- The Geology of Latin America
- Seismic Imaging in E&P
- Applications of non-seismic Geophysical Methods
- Petroleum Geoscience for Conventional and Unconventional E&P
- Machine learning present and future role in exploration through to exploitation in Latin America
- Commercial/Above Ground
- Special Session: Energy Transition

DOMESTIC &
INTERNATIONAL



BIOSTRATIGRAPHY

**ANYTIME.
ANYWHERE.
ANY FOSSIL.**

Complete paleo services

*Largest single-source GoM
database*

Custom projects & mapping

Multiple fossil disciplines



**P A L E O
D A T A**

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

NEW ORLEANS, LA



THUNDER EXPLORATION, INC.

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

Frio	San Miguel	Edwards
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



RAPTOR
CONSULTING, INC.

**Maximizing production
while minimizing cost**

Raptor Consulting can help you improve
efficiency on your next drilling project!



- Well Site Geology
- Geochemical Analysis
- Geosteering
- Performance Analytics



RaptorConsulting.com

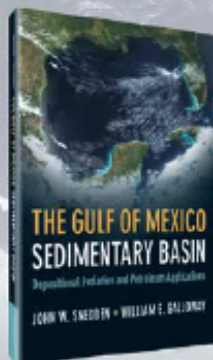
THE GULF OF MEXICO SEDIMENTARY BASIN

Depositional Evolution and Petroleum Applications

JOHN W. SNEDDEN

WILLIAM E. GALLOWAY

HARDBACK \$94.99 \$75.99*
ISBN: 9781108619024



A comprehensive and richly illustrated overview of the Gulf of Mexico Basin, including its reservoirs, source rocks, tectonics and evolution.

***20% DISCOUNT FOR HGS MEMBERS**

USE CODE SNEDDENHGS AT CHECKOUT ON WWW.CAMBRIDGE.ORG



**CAMBRIDGE
UNIVERSITY PRESS**

Remembrance

DAVID MYRON COLE
1953-2022



David Myron Cole was born to Floyd Cranska Cole and Jean Michele Gardner in Springfield, Massachusetts on June 17, 1953. David passed away on January 31, 2022 in Katy, Texas in Harris County at the age of sixty-eight.

David's formative years were in the Massachusetts area. He went to Leominster High School onto Worcester Polytechnic Institute and then pursued a Bachelor of Science in Geology at Northeastern University. This is where he met the love of his life, Lamora Bies. He then went on to achieve a Master's degree at the Colorado School of Mines. David was a diligent professional and started working during his college tenure. He obtained a coveted Geologist position as his very first position at Texaco. He had a prominent career in the Oil and Gas industry beginning with Texaco, Inc. in Denver, Colorado and concluded his illustrious vocation at the esteemed Black Falcon Energy in Houston, Texas. He was a certified Petroleum Geologist with the state of Texas and had an expertise in Permian, Gulf Coast, Mid-Continent, Latin American, and U.S. Unconventional Basins. During his career, he was a mentor to many geologists and engineers at Amoco Production, Oil Technology Services, British Petroleum, Layline Petroleum and finally Black Falcon Energy.

David had many interests in life, and he loved his Triumph cars. He was also an good marksman and enjoyed bird hunting which he shared with family and friends. He had a great love for his flat-coated retriever. His favorite dog was the lovable Cassi, which he trained himself. He looked forward to the large family reunion every year on the 4th of July in Connecticut which was Floyd Cranska Cole birthday (Poppa's Birthday), the patriarch of the family.

He is survived by his lovely wife Lamora Bies Cole; beloved son Alexander B. Cole; and brother Blair Cole and wife Karen; brother Craig Cole and wife Anne; sister Judy Rondeau and husband David; and his cherished mother Jean Michelle Gardner Cole. There are also many nieces, nephews, extended family and friends that will miss David. David is preceded in death by his father, Floyd Cranska Cole and brother, Ross Cole.

David was a member of HGS since 1990.

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 can 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 Black & White Prices Shown – Color add 30% to prices below					Specific Page Color Ad Placement					
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	
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. 	



The Houston
Geological
Society

Renew your membership

OR BECOME AN HGS
MEMBER TODAY!



Renew or join by scanning the QR code above!

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

VISIT OUR WEBSITE AT WWW.HGS.ORG



APPLICATION TO BECOME A MEMBER OF THE HOUSTON GEOLOGICAL SOCIETY

Qualifications for Active Membership

- 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 or earth science for at least five (5) years.

Qualifications for Associate Membership (including students)

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

Apply online at www.hgs.org and click "Join HGS". Annual dues expire each June 30.

Annual dues are \$36; Emeritus members pay \$18; Students are free.

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

Full Name _____ Membership Type (choose one): Active Associate Student

Current Email (for digital Bulletin & email newsletter) _____

Phone _____

Preferred Address for HGS mail _____

Employer (required) _____ Job Title (**required**) _____

Will you volunteer? (Y/N) _____ Committee choice: _____

Active & Associate membership for one year (July 1st - June 30th) \$36.00 _____

Student membership \$0.00 _____

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

Total Remittance _____

Payment

Check # _____

Credit Card: V MC AE Discover Credit Card #: _____

CVC Code (**required**) _____ Expiration (mm/yy) _____

Signature: _____ Date: _____

Company _____ Company Street Address _____

City _____ State _____ Postal Code _____

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 _____ HGS Sponsor's Name _____

Signature: _____ Date: _____

Professional Directory

<p>Consulting, Evaluate Prospects: USA and International Seeking Prospects: Texas</p> <p>Victor H. Abadie III Consulting Geologist</p> <p>650.201.0528 • vic@montara.com Post Office Box 81, Montara CA 94037-0081 AAPG/DPA, SIPES, Calif. Reg. Geologist, Tex. Reg. Geologist</p>	 <p>Paul W. Britt Geologist, P.G., C.P.G.</p> <hr/> <p>Houston, Texas</p> <p>Geological & Geophysical Consulting <i>Petra Consulting and Training</i> <i>Kingdom Seismic Interpretation</i></p> <p>713-651-0004 pbritt@texlore.com www.petrauser.com www.texlore.com</p>
 <p>Integrated Prospect Generation, Regional Mapping, Sequence Stratigraphy, Property Evaluations US Onshore and Gulf of Mexico</p> <p>Tim Powell Timp854@gmail.com 832-217-5650</p> <p>3429 Tahoma Trail College Station, Tx 77845</p>	 <p>THUNDER EXPLORATION, INC.</p> <p>WALTER S. LIGHT, JR. PRESIDENT PETROLEUM GEOLOGIST</p> <p>P.O. BOX 541674 US MOBILE: +713 823 8288 HOUSTON, TEXAS UK MOBILE: +44 (0)794 755 1693 77254-1674 EMAIL: wthunderx@aol.com</p>
 <p>METAROCK LABORATORIES</p> <p>2703 Highway 6 S, Suite 280A Houston, TX 77082 Tel 713-664-7916 Cell 832-287-8320 Fax 832-415-0358 zach@metarocklab.com www.metarocklab.com</p> <p>Zach Arasteh Business Manager</p>	<p>Website • Brochure Ad • Logo • Catalog Newsletter Design</p>  <p>Lisa Krueger Design <i>Design and Art Direction for Print and Web</i> LisaKruegerDesign.com 713.664.7267</p>

Advertise your Business Card!
\$175 per 10 Issues

Contact:
713-463-9476 or office@hgs.org

HGS WELCOMES NEW MEMBERS



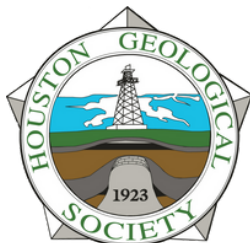
New Members Effective February 2022

Robert Horner

James S Haselman

John Mark Brown

Abdulmutalib Aminu





Houston Geological Society

14811 ST. MARY'S LANE, SUITE 250
HOUSTON, TX 77079

Contact Us
713.463.9476
office@hgs.org