HOUSTON GEOLOGICAL SOCIETY

Volume 68
Number 6

Bulletin

2 2026

WWW.HGS.ORG

Board of Directors 2025–2026

President (P)	Patty Walker		832-444-0900	pattywalker1@icloud.com
President-Elect (PE)	Bryan Guzman	Premier Corex	832-503-4645	bryan.guzman85@gmail.com
Vice President (VP)	Caroline Wachtman	Oxy	281-825-9627	carolinewachtman@gmail.com
Secretary (S)	Bryan Bottoms	Detring Energy Advisors	405-623-4533	geobottoms@gmail.com
Treasurer (T)	Angela Hammond	Shell	713-805-4858	almatels@yahoo.com
Treasurer Elect (TE)	Andrea Reynolds		832-875-5178	geoandie@gmail.com
Editor (E)	Lucia Torrado	AGI Exploration, LLC	832-360-3930	lucia.torrado@gmail.com
Editor-Elect (EE)	Sharma Dronmaraju	AKD Professional Solutions Inc.	713-503-5011	personal.sharma@gmail.com
Director 25-27 (D1)	Bill DeMis	Rochelle Court, LLC	713-402-8629	Billdemis@aol.com
Director 24-26 (D2)	Catherine Cox Strong	Red Willow Production Co.	713-299-5934	catherine.c.strong1958@gmail.com
Director 24-26 (D3)	Lauren Seidman Robinson	Miller and Lents	317-402-6482	lseidman5.robinson@gmail.com
Director 25-27 (D4)	Amanda Johnston	TotalEnergies	832-331-5876	johnstonama@gmail.com

HGS Scholarship Committees	Chairperson	Phone	Email	Board Rep.
W. L. Calvert Memorial Scholarship Fund	Jeff Lund	713-832-7481	jeff.lund@corridoroilandgas.com	PE
HGS Undergraduate Foundation Fund	Joe Lynch	346-333-9872	Joe.Lynch@rfdyn.com	PE

Committee	Chairperson	Phone	Email	Board Rep.
Academic Liaison	Paul Mann	713-743-3646	pmann@uh.edu	D2
Advertising	HGS Office Staff	713-463-9476	office@hgs.org	EE
Africa Conference	Gbenga Olumurewa	832-416-4127	Gbenga.olumurewa@amni.com	PE
Awards and Nominations	Paul Britt	281-494-3155	pbritt@texplore.com	P
	Penny Patterson	713-553-8779	pennyp70@att.net	
Ballot & Elections	John Jordan	832-883-1068	john.jordan.062255@gmail.com	S
Continuing Education	Angel Callejon	281-810-8795	callejon@yet2find.com	D4
	Thom Tucker	281-413-0133	century@flash.net	
Communications	Dianna Phu	281-236-3131	hgs.socialmedia@gmail.com	P
	Rosemary Laidacker	713-805-9672	rmlgeo@gmail.com	
Earth Science Week	Barbara Hill	315-706-4709	bhill13090@gmail.com	D4
Educational Outreach	Chuck Caughey	832-696-1807	pak.chuck@gmail.com	D4
Environmental & Engineering Geology	Matthew Cowan	713-777-0534	mrcowan1@hal-pc.org	VP
	Troy Meinen	713-962-5495	troy.meinen@erm.com	
Exhibits	Troy Meinen	713-962-5495	troy.meinen@erm.com	D4
	Magly Cabrera	786-224-9989	magly.cabrera@gmail.com	
Field Trips	Barbara Hill	315-706-4709	bhill13090@gmail.com	D4
	Jennifer Wadsworth	713-969-7442	jennifer.wadsworth@me.com	
Finance & Investment Fund Oversight	Angela Hammond	713-805-4858	almatels@yahoo.com	T
	Penny Patterson	713-553-8779	pennyp70@att.net	
	Patty Walker	832-444-0900	pattywalker1@icloud.com	
	Walter Light, Jr.	713-594-5648	wthunderx@aol.com	
	Paul Britt	281-494-3155	pbritt@texplore.com	
GCAGS Liaison	Patty Walker	713-553-8779	pattywalker1@icloud.com	P
General Meetings	Caroline Wachtman	281-825-9627	carolinewachtman@gmail.com	VP
Golf Tournament	Daniel Baker	281-757-0565	dbaker@edgelog.com	D1
	Seth Johnson		sjohnson@edgelog.com	
Government Affairs and Texas Geoscience Council	Henry Wise	281-242-7190	hmwise@yahoo.com	E
Grand Canyon Field Trip	Robert Killian	713-299-3924	mavrah@yahoo.com	D1
GSH/HGS Case Study Academy	HGS – Linda Sternbach	832-567-7337	linda.sternbach@gmail.com	D2
	GSH – Katya Casey	832-867-6703	katya@u3explore.com	D2
Guest Night	OPEN			D3
International Explorationist	John Bishop	713-819-0891	johnwbishop@outlook.com	VP
Latin American Conference	OPEN			P
Membership New Growth	Oyie Ekeng	713-594-5648	oekeng@icloud.com	S
Museum of Natural Science	Inda Immega	713-661-3494	immega@swbell.net	D2
	Janet Combes	281-463-1564	jmcombes@msn.com	
NeoGeos	Austin Bruner	630-335-7849	austinbruner6797@gmail.com	D3
	Alexandra Bruner	678-591-9535	amstaub97@gmail.com	
New Energies Group	Bryan Guzman	832-503-4645	bryanguzman85@gmail.com	VP
Private Equity	Mark Hamzat Erogbogbo	832-540-3216	mark@texasstaralliance.com	VP
Office Management	Paul Britt	832-372-5725	pbritt@texplore.com	P
Scholarship Night	Allison Barbato	225-678-0490	Allison.Barbato@gmail.com	P
Science and Engineering Fair of Houston	Dorene West	281-568-2465	dbwesthou@earthlink.net	D2
Shrimp & Crawfish Boil	Michael Salazar	713-410-4391	michael.salazar@pofg.com	D1
Sponsorship	Jeff Lund	713-832-7481	jeff.lund@corridoroilandgas.com	TE
Sporting Clays Shoot	David Perez	713-825-0952	dperez0952@outlook.com	D1
	Bob Burnett		bobbichuck@gmail.com	
Social Media	Dianna Phu	281-236-3131	hgs.socialmedia@gmail.com	D1
	Lauren Robinson	317-402-6482	lseidman5.robinson@gmail.com	
Student Expo	Andrew Stearns	281-635-1438	Andrew.Stearns@TGS.com	D3
	Julian Chenin		j.chenin@roggii.com	D3
Technology Spotlight	HGS Office Staff	713-463-9476	office@hgs.org	TE
Tennis Tournament	Gavin Russell	254-289-9923	gavin.russell@impacxs.com	D1
Video	Linda Sternbach	832-567-7337	linda.sternbach@gmail.com	VP
Web Management	Andrea Peoples	713-463-9476	andrea@hgs.org	D2
HGS Executive Office Director	Andrea Peoples	713-463-9476	andrea@hgs.org	P

Related Society Liaisons	Contact	Phone	Email	Board Rep.
AAPG House of Delegates	Bill DeMis	713-405-8629	billdemis@aol.com	P
Engineering Council of Houston (ECH) Liaison	Sue Pritchett	281-451-6522	pritchett.sue@gmail.com	D2

The Bulletin
Houston Geological Society

Volume 68, Number 6 February 2026

In Every Issue

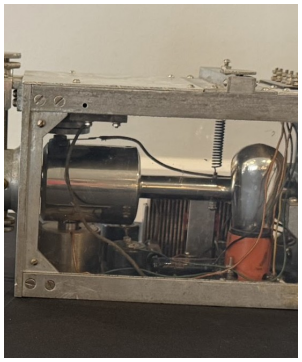
The Houston Geological Society Bulletin (ISSN-018-6686) is published monthly except for July and August by the Houston Geological Society, 14811 St. Mary's Lane, Suite 250, Houston, Texas 77079-2916. Phone: 713-463-9476.
Editorial correspondence and material submitted for publication should be addressed to the Editor, Houston Geological Society Bulletin, 14811 St. Mary's Lane, Suite 250, Houston, Texas 77079-2916 or to office@hgs.org.
Subscriptions: Subscription to a digital version of this publication is included in the membership dues ($30.00 annually). The subscription price for non-members is $160.00.

CONNECT WITH US ON SOCIAL MEDIA

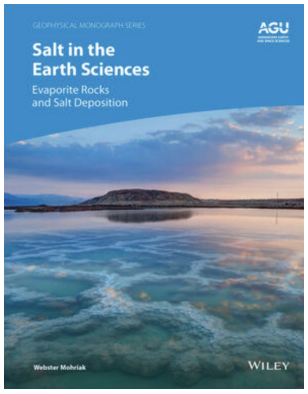
About the Cover: *An oil rig silhouetted at sunset in the North Sea Basin, one of the geologic provinces explored during Case Studies Seminar II. Photo by Randgruppe (Pixabay).*

Technical Meetings

Features



page 10



page 23

page 26

page 32

2025 Houston Geological Society Sponsors

The Houston Geological Society would like to thank and recognize sponsors and contributors for their generous and continuing support of HGS.

Gold
($10,000+)

Silver
($5,000+)

Thunder Exploration, Walter Light, Jr
ROGII
Diamondback Energy
SLB
TGS

Bronze
($2,500+)

Murphy Oil Corp.
TotalEnergies
Continental Resources
Expand Energy Corp
Revochem
Silverthorn Seismic
Matador Resources
BP
Devon Energy
EOG Resources
ExxonMobil
Ovintiv
Oxy
Sm Energy
Tri-Star Group
Charity Golf Int'l
Apache
Arena Energy
Continential Labs
CoreGeo
Datalog + GeoVision
Dawson Geophysical Company
EDGE
Geophysical Pursuit, Inc.
Hilcorp Energy
Permian Resources
Viridien Group

Founders
($1,000+)

Mewbourne Oil Co.
One Geo
GeoMark Research
Patterson Geoscience Group
Dormie Network Foundation
Gverse GeoGraphix
Petrophysical Solutions, Inc.
Rhomtek
Steve Brachman

Benefactors
($500+)

Petricore
Richard Hoeksema *
StratoChem
Microseismic
bhl Consulting
Impac
Sabata Energy Consultants
Startum Reservoir
Stratagraph Energy Group
Ubiterra / Zone Vu

President's Club
($100+)

GeoThermal Rising
Gerald Gill *
Bryan Guzman
Charles Sternbach
Craig Dingler
Gary Coburn
Ikon Science
James (Jim) Tucker
Jeff Lund
John Tubb, Jr.
Linda Sternbach
Lonestar Production
Patty Walker
Paul Britt
Richard Bishop
Stephen Schutter *

In-Kind Donations

Big Guys Ammo
Cherami
Core Laboratories
Tim Holt
Vantage Geophysical
Zterra

** All or part of sponsorship for HGS Scholarship Foundations*
Sponsors and Donations through Nov 18, 2025

Patty walker, HGS President 2025-26
pattywalker1@icloud.com

Building Impact Through Partnerships, Students and Community Engagement

DEAR HGS MEMBERS,

One of the greatest strengths of our organization is the way collaboration allows us to extend our reach and deepen our impact. This month, I would like to highlight how **partnerships and collaboration, student engagement, and community outreach and public engagement** work together to advance our mission.

PARTNERSHIPS AND COLLABORATION

Our partnerships with the Geophysical Society of Houston (GSH), AAPG, GCAGS and the University of Houston are central to the success of our technical, educational, and outreach efforts. Through joint programming and shared initiatives, these collaborations enable us to deliver meaningful opportunities for professionals, students, and the broader community. Co-hosted technical talks, educational programs, and networking events strengthen our professional community while reinforcing the value of working together across organizations.

Engaging the next generation remains a cornerstone of our mission and a direct investment in the future of our profession

A recent example is the highly successful **Case Studies Seminar II**, co-hosted with GSH. This event reflected a truly collaborative effort, supported by a fully engaged, cross-society organizing committee. The technical program reinforced the value of integration across the geoscience disciplines and of openly sharing experiences-both positive and negative. One speaker captured this sentiment perfectly when he described the beauty and value of the geoscience mindset as the ability to ***connect the unconnected***. HGS looks forward to continuing and expanding these collaborations efforts.

STUDENT ENGAGEMENT

Engaging the next generation remains a cornerstone of our mission and a direct investment in the future of our profession. HGS's annual **Scholarship Night on February 9th** is always a highlight, as we celebrate student achievement and recognize academic excellence. The event also provides valuable opportunities for students to connect with professionals who can offer guidance, encouragement, and mentorship.

Our continued involvement with the **Science and Engineering Fair of Houston on February 14th** further reflects our commitment to inspiring curiosity and supporting students as they explore science and engineering pathways. These interactions not only support students but also energize our membership by fostering connections across generations.

COMMUNITY OUTREACH AND PUBLIC ENGAGEMENT

Our commitment to community outreach extends well beyond our membership. Hands-on activities such as the **rock salt giveaway at the Houston Gem & Mineral Show** provide a fun and approachable way to introduce geoscience concepts to the public. Educational outreach through **K–12 Science in Schools programs with local Houston schools** allows us to engage directly with students and teachers, helping build early interest in science and engineering.

In addition, our social events—including the **Crawfish Boil, Golf Tournament**, and **Clay Shoot**—continue to be well attended and play an important role in strengthening relationships, welcoming new members, and fostering a sense of community within HGS.

LOOKING AHEAD: NEW YEAR, NEW WEBSITE

Looking ahead, several joint programs and outreach activities are planned in collaboration with our partners, and I encourage you to participate—whether by attending an event, mentoring a student, serving as a judge or volunteer, or supporting one of our outreach initiatives. Together, these efforts reflect who we are: a collaborative, engaged, and forward-looking organization.

I am also pleased to share that this month we will be deploying an updated HGS website. This refreshed platform is designed to better serve our members, improve access to programs and resources, and make it easier for potential members to explore what HGS has to offer. The new site reflects our commitment to accessibility, engagement, and continued growth as a professional community.

Thank you for your continued involvement and support. I look forward to seeing many of you at our upcoming programs. ■

Lucia Torrado, HGS editor 2025-26
editor@hgs.org

Beyond the Data: Lessons from Case Study Seminar II

In a field that is constantly evolving, it's easy to get caught up in the day-to-day details: data, models, reports, and deadlines. But every once in a while, we're reminded that some of the most valuable lessons come from stepping back and looking at the bigger picture.

That reminder came clearly at the recent Case Study Seminar II, which I had the opportunity to attend for a second time. Beyond gaining insight into the geology of the basins discussed -from water-escape pipes in the Zama Field reservoir, to specialized core analysis applied to legacy datasets, and multi-attribute analysis in the Strawn Sands of the Hardeman Basin-, the strength of the seminar was not only the depth of the geology, but how each case study illustrated the way teams evaluated uncertainty, learned from outcomes, and connected technical understanding to long-term objectives.

some of the most valuable lessons come from stepping back and looking at the bigger picture

Throughout the day, speakers shared real-world challenges and decisions that shaped outcomes, both good and bad. One of the common themes that speakers emphasized was the importance of strategic thinking alongside technical excellence. Strategic thinking is about stepping back to understand complex situations, recognizing opportunity, and making decisions that support long-term goals. It requires looking beyond the immediate challenge to envision what comes next and how to get there.

Rather than reacting, strategic thinking is about deliberately shaping the path forward and having a clear plan for achieving meaningful, sustainable success. It was a strong reminder that our work is shaped not only by what we know, but by how we connect knowledge to real-world challenges.

IN THE SEMINAR, A FEW THEMES STOOD OUT:

• Curiosity and open-mindedness

Many of the best outcomes came from teams that were willing to question assumptions and explore new possibilities, even when the data didn't immediately support them.

• Communication and collaboration

The seminar reinforced that strong science is only as good as the conversations around it. When teams communicate clearly and challenge each other respectfully, decisions improve.

• Resilience and adaptability

Exploration and project development rarely go exactly as planned. The most successful teams were those that could adjust, learn, and move forward without losing momentum.

• Strategic thinking

The best-case studies were not only technically strong, but also connected to broader objectives: risk management, long-term planning, and value creation.

These shared themes underscore the importance of forums like the Case Study Seminar II, where technical excellence, open dialogue, and strategic perspective come together. I would like to extend a special thank you to our sponsors and contributors: their support makes high-quality, technically rigorous events like this possible and helps keep our community connected. I also encourage past and current Case Study Seminar speakers, as well as members of the HGS, to contribute papers and share their insights in future *Bulletin* issues.

IN THIS ISSUE OF THE BULLETIN

• Case Study Seminar II Spotlight

The feature article provides an overview of the Case Study Seminar, summarizing the format, scope, and key reflections from the day, plus a fun word puzzle to keep things light.

• Seminar Abstracts: From Vintage Data to Frontier Basins

This issue features abstracts from the Case Study Seminar on unconventional plays, revisited prospects, and the re-evaluation of vintage data to unlock value, with highlights from Mauritania and Suriname, new perspectives on the Central Graben, and lessons from the Zama Field.

• Geo-Picks: Salt in the Earth Sciences

A special thank you to Dr. Rasoul Sorkhabi (University of Utah), who once again contributes a thoughtful book review and continues to be a valued supporter of the *Bulletin*. In this edition, he reviews two volumes of Salt in the Earth Sciences (Wiley/AGU), offering insights that will benefit readers across the geoscience community. ■

HGS Scholarship Dinner

Celebrating Students
AND HGS SCHOLARSHIP AWARDEES

Chasing the Fusselman:

A personal reflection on the Journey from oilfield mystery to unraveling the sequence stratigraphy of a giant Silurian reservoir

Date	Time	Place
Feb 9th 2026	5:30 to 9:30 PM	Norris Center West Houston

Purchase Tickets at www.HGS.org

With
Guest Speaker
Andrew Roark

Chevron

HGS General Lunch

Monetary Pivot Points in the History of the US Dollar, Their Effects on Oil Prices, and the Current Monetary Pivot

This presentation reframes the drivers of global oil prices, arguing that after supply and demand, the value of the US dollar - not geopolitics - is the most powerful influence. This presentation explores why a major revaluation of oil prices may be inevitable once supply tightens or monetary stress intensifies, and what this means for producers, consumers, and the global economy.

February 18, 2026
11:30am - 1:00pm
Total Energies, 1201 Louisiana St.
Houston, TX 77002

Members: $30
Non-Members: $35
Students: $25

REGISTER NOW

Bill DeMis

CALL FOR PAPERS

HGS MONTHLY BULLETIN

Would you like to share your groundbreaking research and insights with the Houston area geoscience community?

If so, submit your article to the HGS Bulletin, a high-quality journal published monthly by the Houston Geological Society.

- **Featured Articles**
- **Technical Articles**
- **Extended Abstracts**

Submit your article >>>> **editor@hgs.org**

Case Study Seminar II: Technical Insights, Honest Reflections, and Learned Lessons

By Lucia Torrado

The second Case Study Seminar delivered a full day of technical depth, thoughtful discussion, and strong engagement across generations of geoscientists. Reinforcing the value of learning not only from success stories, but also from near misses, reinterpretations, and hard-earned lessons. Building on the momentum of the inaugural 2024 event, the seminar once again brought together the Houston geoscience community for an honest, experience-driven exploration of how decisions are made -and remade- in subsurface work. From the opening remarks to the final happy hour, the event highlighted not only subsurface interpretation and exploration thinking, but also the strength of collaboration within the Houston geoscience community.

"Your greatest value is not what you produce, but how you think about it -"

Scot Fraser

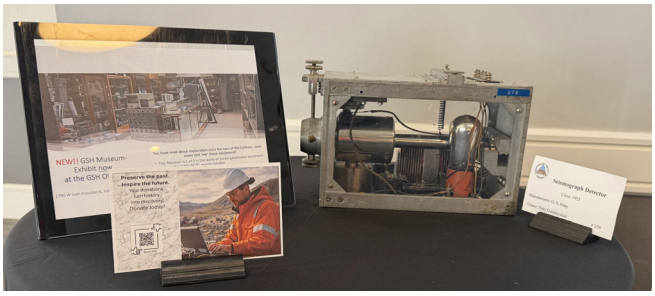
SEMINAR OVERVIEW

The seminar opened with welcoming remarks from Patty Walker (President of the Houston Geological Society and Rene (President of the Geophysical Society of Houston), who set the tone for a day centered on learning, networking, and open exchange of ideas. Their messages underscored the value of case studies as tools for sharing lessons learned -both successes and reinterpretations- and reinforced the importance of engaging students and early-career professionals alongside experienced practitioners. Closing remarks later in the day echoed those same themes, bringing the seminar full circle and emphasizing continued collaboration between the societies.

An early highlight of the program was the introduction of select items from the Geophysical Society of Houston's museum. Many attendees were surprised to learn of the museum's existence, and the artifacts provided a tangible connection to the history and evolution of geophysics, serving as a reminder of how foundational tools and ideas continue to inform modern exploration workflows.

The seminar welcomed a group of 12 sponsored graduate students from the University of Houston, reinforcing the joint societies' commitment to supporting early-career geoscientists. Students were encouraged throughout the day to engage with speakers, and they did so enthusiastically, asking thoughtful questions during sessions and contributing meaningfully to panel discussions. Their involvement added energy to the room and highlighted the importance of creating inclusive spaces where emerging geoscientists feel welcome to engage directly with industry professionals.

Opening remarks by Patty Walker (HGS President)



Seismogram detector, part of the Geophysical Society of Houston's museum

Case Study Seminar II: Technical Insights, Honest Reflections,

Charles Sternbach and Linda Sternbach (Star Creek Energy LLC) and Bill Fairhurst (Riverford LLC) supported University of Houston student participation through sponsorship. Also pictured is Rene Mott (GSH President, far right).

TECHNICAL PROGRAM HIGHLIGHTS

The technical program itself spanned a wide range of exploration and development case studies, unified by a common theme: understanding why outcomes unfolded as they did, and the importance of critical thinking, reflecting both the diversity of experience among the speakers and the breadth of challenges facing the industry.

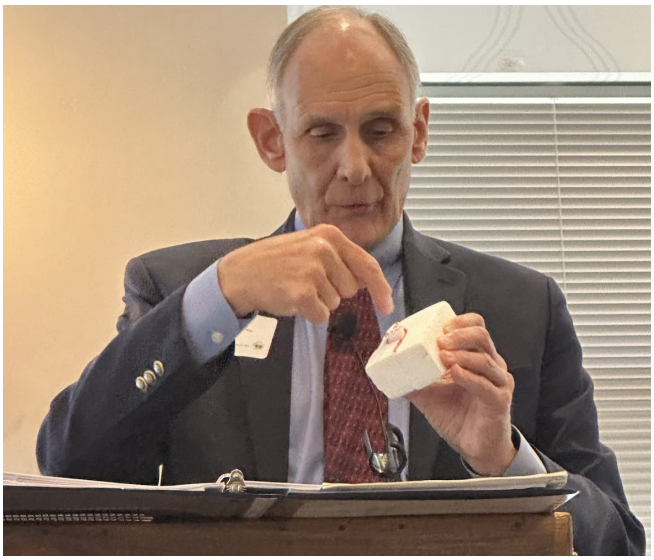
Bill Fairhurst

Speakers represented a mix of long-tenured professionals who spent decades within major and independent companies, as well as independent consultants and entrepreneurs actively shaping projects today. This blend of perspectives -corporate, independent, global, and basin-specific- resulted in a rich and varied set of talks that emphasized lessons learned, reinterpretation, and the value of revisiting assumptions.

Across sessions, presenters shared insights from global basins, unconventional and conventional plays, frontier exploration, portfolio integration, and redevelopment of mature field redevelopment. Talks emphasized the importance of data quality, structural and stratigraphic understanding, integration across disciplines, and the willingness to revisit assumptions. Several speakers covered systematic exploration approaches, risking and decision-making, and highlighted how reinterpretation -often prompted by new data, alternative thinking, or collaboration- led to improved understanding and, in some cases, renewed value.

Brian Frost

One highlight noted by attendees was Rich Sears' use of block diagrams to walk the audience through evolving interpretations of structural styles in the Central Graben in the central North Sea, Norway. His clear, visual approach underscored how conceptual models can be powerful tools for communicating complex ideas and challenging long-held assumptions.



Rich Sears

Case Study Seminar II: Technical Insights, Honest Reflections,

Luncheon presentation by Scot Fraser

Midday programming included a luncheon presentation by the seminar's featured speaker, Scot Fraser, who examined how deep technical expertise and strategic thinking go hand by hand. His talk connected technical excellence with broader professional development, highlighting resilience as a defining quality of successful explorationists. Attendees were encouraged to step back from individual case studies and consider long-term career adaptability and value creation. As Scot noted, "People in this room went into geoscience because they are curious."

Matt Flannery

The afternoon sessions continued the theme of integration, highlighting how geology, geophysics, data analytics, and experience-driven judgment come together in real-world decision-making. As in the morning, speakers openly discussed uncertainty, limitations, and lessons learned -reinforcing the seminar's core objective of sharing *how* decisions evolve, not just their outcomes. This year, the program also introduced a new format: a podcast moderated by Daniel Minisini, which extended the discussion by addressing key questions from the second half of the seminar.

Morning speakers during the panel discussion. From left to right: Bill Fairhurst, Julie Garvin, Rich Sears, and Steve Cossey.

Each technical session concluded with lively panel discussions, moderated to encourage open conversation rather than scripted responses. These panels proved to be among the most engaging portions of the day, allowing speakers to compare experiences, expand on lessons learned, and address questions from the audience. Importantly, graduate students were actively encouraged to participate, and they did -asking thoughtful questions that furthered the discussion and underscored the seminar's educational mission.

The seminar concluded with wrap-up remarks from the HGS and GSH Presidents, followed by a well-attended networking reception and happy hour. The informal setting allowed conversations

Afternoon speakers and moderators during the panel discussion. From left to right: Scot Fraser, Deborah Sacrey, Rene Mott, Matt Flannery, Fernando Sanchez, Brian Frost, Katya Casey, Daniel Minisini and Jeff Lund.

Seminar speakers, attendees, and students connecting and networking during the happy hour.

Office managers Andrea Peoples (HGS) and Kathy Sanvido (GSH)

that began in the lecture hall to continue over refreshments, as attendees, speakers, and students connected, exchanged ideas, and built new professional relationships.

CLOSING AND ACKNOWLEDGMENTS

The HGS extend their sincere thanks to the seminar sponsors Houston Energy, Mike Forrest, Thunder Exploration, Inc., Katya Casey (U3 Explore), Chevron, Star Creek Energy, Riverford Exploration, LLC., Rene Mott (Empress Exploration), Jeff Lund (Portfolio Exploration), Devon, Deborah Sacrey, Rich Sears, Brian Frost and Bill Fairhurst, for their generous support, including sponsorship that made student participation possible.

Special recognition is also due to the Case Study Seminar organizing committee, whose time, coordination, and dedication were essential to the success of the event. Their efforts ensured a well-run program that balanced technical depth, discussion, and community engagement throughout the day.

With strong attendance, thoughtful discussion, and enthusiastic participation throughout the day, the Case Study Seminar continues to grow as a valued forum for sharing real-world lessons and diverse perspectives. Members and prospective speakers alike are encouraged to mark their calendars for next year's Case Study Seminar and take part in the ongoing conversation around creativity, critical thinking, reinterpretation, and innovation.

Thanks to the HGS/GSH organizing committee members. Left to right: Kurang Mehta, Jeff Lund (Sponsorship), Catherine Strong (HGS Director), Patty Walker (HGS President), Rene Mott (GSH President), Katya Casey (Committee Co-chair), Linda Sternbach (Committee Co-Chair), and Charles Sternbach (HGS Advisor).

A Case Study Seminar II Word Search

O W V P A S P D C N I T Z H I
H E U J E A T X U X G P A K G
C N W B M R L R Z C P U M X M
Y E L S D A M S G I M F A V Z
Z V N X V T U I G Q Q C F A J
P A S T E O Q R A I E S I Z F
O C U W R G J F I N K O E K H
K A R O H A X T N T B G L G M
L M I L D C L D L C A A D O F
A U N F Y H S G E J C N S C L
H E A C W A Y R R A I R I I A
O R M A W L U U N A Y P C A N
M T E M V K V H J R B D T U M
A A K P Z O P E V Q E E I K Y
J Z F U K E P C I N J V N S R

SARATOGA CHALK
CENTRAL GRABEN
PERMIAN BASIN
MAURITANIA
VACA MUERTA
ZAMA FIELD
SURINAME
OKLAHOMA
WOLFCAMP

HGS ENVIRONMENTAL & ENGINEERING DINNER MEETING

PFAS Methods Overview for Environmental Professionals

PFAS are a group of substances that stick around in the environment because of the incredibly strong bonds that hold them together. As concern, litigation, and regulation about PFAS grows, so does the need to understand what they are, where they show up, and how we can measure them accurately.
In this presentation, we'll break down the basics of PFAS chemistry, and the methods used to detect PFAS in water, soil, and other matrices. We'll also cover topics such as PFAS precursors and total organic fluorine.

February 11, 2026

Los Tios Restaurant (9527 Westheimer RD)
Social 5:30 p.m.
Dinner 6:30 p.m.
Presentation 7:30- 9:00pm

Cost

$35 Pre-registered members
$40 Non-members & Walk-ups

REGISTER NOW


Brittany Neff

SCIENCE AND ENGINEERING FAIR OF HOUSTON: JOIN US IN MAKING A DIFFERENCE IN 2026!

Saturday, February 14, 2026
Fort Bend Epicenter
28505 Southwest Fwy., Rosenberg, TX 77471

Share your love of geology by joining the
HGS Special Awards Agency (SAA) team of volunteer judges at the
annual *Science and Engineering Fair of Houston (SEFH)*

HGS Special Awards

The HGS team reviews Earth science related projects in the Junior and Senior Divisions at the SEFH. Phase II and SAA Judging is from 1:15 – 4:15 PM Saturday afternoon. This is speed judging; other judges need to review the projects. Results must be tallied/turned in and award certificates labeled/framed and presented to winners by 6:00 PM. HGS gives two types of awards: rank and internships. HGS Special Awards are meant to encourage students to pursue Earth science related careers.

Rank Awards

A top project is picked for each division; 2 nd and 3 rd place projects are picked for the Senior Division. HGS presents these winners with a certificate after judging ends and congratulation letters are sent to parents and teachers. Winners are recognized at Guest Night (if held in June).

Internships

Through our membership in The Engineering, Science, and Technology Council of Houston (ECH), HGS funds three summer interns at the Houston Museum of Natural Sciences (HMNS). These Finalist HMNS Summer Intern Awards are nominated by HGS but awarded to three Senior Division finalists by ECH. Students must meet work requirements (so are not necessarily the top ranked project winners). The awardees are invited to an ECH awards banquet (or Zoom meeting), where the students showcase their projects.

To volunteer as a Place Award Judge (in any category) use the link on the SEFH 2026 website to register yourself: https://sefhouston.org/for-judges/#Signup.

HGS members can volunteer to be an HGS Special Awards judge on Saturday afternoon, please email Dorene West (dbwesthou@earthlink.net; *please put 'SEFH Special Awards judging' in the subject line*).

For additional info click:
https://sefhouston.org/general-information/ or https://sefhouston.org/for-volunteers/.

REAL ENERGY. REAL DEALS.

THE #1 MARKETPLACE FOR ENERGY DEALS & REAL MARKET INSIGHTS

NAPE

REGISTER BY FEB. 13 & SAVE $100!

NEW! TWO-PART TECHNICAL WORKSHOPS: LEAVE WITH OPERATIONAL "HOW-TO" GUIDANCE

- AI & MACHINE LEARNING IN THE ENERGY INDUSTRY PART 1 & 2
- INTERNATIONAL EXPLORATION & OFFSHORE VENTURES PART 1 & 2

SPECIALIZED NAPE HUBS: WHERE SECTORS CONNECT

NEW! DATA CENTER HUB • NEW! OFFSHORE HUB • NEW! CRITICAL MINERALS HUB • PROSPECT HUB • MINERALS & NONOP HUB • BITCOIN MINING HUB • RENEWABLE ENERGY HUB

From Vintage Data to Frontier Basins: Technical Notes: *A Collection of Abstracts from the Case Studies Seminar*

THE SEDIMENTOLOGY, DEPOSITIONAL HISTORY AND RESERVOIR MODELING OF ZAMA FIELD, OFFSHORE MEXICO

Speaker: Steve Cossey, Cossey and Associates Inc.; Co-Authors: Pasley, James, Murphy Oil; White, Howard J., Howard White Sedimentology LLC

The Zama Field was discovered by Talos Energy in 2017 in Block 7 of the Salina de Istmo Basin, offshore Mexico. The reservoirs are deep-water turbidite sandstone of Tortonian (Late Miocene) age (Ciummelli et al., 2019), containing oil with a gravity between 19° and 29.5o° API. The main trapping mechanism is structural (three-way dip against a fault on the east side) with regional dip to the west, northwest, and southwest. Two wells were cored: 1) Zama-2DEL ST01 was cored between 3121.20m and 3338.70m MD with a 98% recovery, resulting in 208.60m of core, 2) Zama-3DEL is 4.5 km south of the Zama-2DEL ST01 well and cored a total of 218.50m, including a long section below the oil/water contact. Reservoir Zone MS400 was not cored in the Zama-3DEL well.

Cores from wells Zama-2DEL ST01 and Zama-3DEL were examined in order to develop a depositional model for the field and to aid in the construction of a reservoir model. The overall depositional environment for the reservoir zones is interpreted as a confined lobe setting.

The presence of many "linked debrites" and "sandwich beds" in the cores indicate the proximity of a confining slope on the eastern margin of the field during deposition of the reservoirs. This suggests that the reservoir zones will probably thin, pinch out, and decrease in net/gross towards the eastern crest of the field.

Other important features observed in all the reservoir zones are water escape pipes, injection features, and flames that were formed during rapid deposition and sedimentary remobilization. These features, together with intense burrowing, could offer tortuous vertical pathways for fluids to move between reservoir zones. The individual reservoir zones are interpreted to have been deposited in accommodation space created by the pulsed rising of the Zama structural high during deposition. As each zone was deposited, the accommodation filled until the next pulse of uplift was initiated. The lower reservoir zones (MS600 - MS700) appear more confined than the upper zones (MS300 - MS500).

Finally, during deposition of Zone MS300, the feeder channel for the lobes prograded across the top of the reservoir interval and began feeding sediment into the next downslope mini-basin to the north. Static reservoir models were constructed using the core interpretation, worldwide analogs, and DST flow radius results. ■

SYSTEMATIC EXPLORATION, GEOLOGIC INSIGHT, PROFESSIONAL NETWORKS, AND BUSINESS ACTIONS LEADING TO THE DISCOVERY OF UNCONVENTIONAL RESOURCES IN THE PERMIAN BASIN WOLFCAMP FORMATION

Speaker: William (Bill) Fairhurst, Riverford LLC

The Wolfcamp Formation unconventional plays and potential resource volume in the Midland and Delaware Basins were a surprising positive development for the industry, national, and global economy. They were the result of a systematic evolution over many years and multiple efforts, from geologic and engineering concepts to drilling and evaluation advances. Revisions of programs and business strategies for the independent oil and gas professionals were critical to these discoveries and early development.

This contribution reviews the individual insights, professional networks, and the business actions of individuals and small groups in the development of the United States' most important energy resource, the Wolfcamp Formation unconventional plays. The Wolfcamp Formation's unconventional production volume and future reserves have become and continue to be the most significant influence on global oil prices during the first quarter of the twenty-first century. The potential outcomes for geoscientists include an understanding of the role of knowledge, critical and creative thinking, and networks. The knowledge required for successful exploration is foundational, broad and complete, combined with industry knowledge. Key professional networks and their complementary resources were essential in this successful exploration story. The capabilities for strategic flexibility, business acumen, and action were also critical elements employed by the exploration team. ■

From Vintage Data to Frontier Basins: Technical Notes

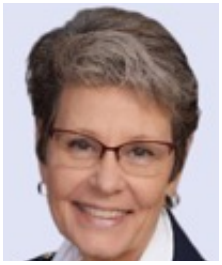
THE OPENING UP OF MAURITANIA OFFSHORE: THE PROMISE, A DISCOVERY, THE DISAPPOINTMENT, A SECOND WAVE, AND WHAT WAS NEVER TESTED

Speaker: Brian Frost, Consultant, Retired from Anadarko

British Borneo and Woodside farmed into Hardman's offshore Mauritania concession acreage in late 1998. Mauritania's offshore areas had initially been evaluated during exploration efforts by Shell, Amoco, and Exxon. Hardman was trying to secure partners in exploring a Jurassic shelf carbonate play. These prospects were based on 2D seismic data provided by the Mauritanian government. The seismic data covered the offshore shelf and extended into the deeper water areas out to approximately 2,000 meter water depths. ExxonMobil and Amoco were focused on shelf plays; however, Shell drilled a well in the deeper water area (~1,000 meters). The shelf area wells were unsuccessful, but the deep-water well recovered some oil from thin clastic sediments on the slope. Observations from seismic indicate some potential DHIs (Direct Hydrocarbon Indicators) associated with Cenozoic clastic channels which traverse the shelf edge into deepwater. The seismic also reveals mobilized salt features in the basin.

After farming into the block, British Borneo and Woodside acquired a 3D seismic survey and additional 2D seismic data. Two exploration wells were subsequently drilled, the Chinguetti Field discovery and the V-2 Prospect dry hole. To date, this Tertiary channel play has proven to be only marginally economic. Exploration efforts by a new group of operators focused on the deeper water areas, resulting in some success finding gas in Cretaceous channels. These resources may be developed by floating LNG (Liquified Natural Gas) facilities. The original Jurassic shelf carbonate play developed and promoted by Hardman has yet to be evaluated. This play was tested unsuccessfully in Senegal to the south; however, Senegal's shelf edge clastic play found significant resources. Does that mean Hardman's Jurassic carbonate play won't work in Mauritania, or is it a matter of looking for petroleum where you want it and not where it is? ■

FORENSIC SCIENCE IN GEOPHYSICS: UNLOCKING THE VALUE OF VINTAGE SUBSURFACE DATA



Speaker: Rene Mott, Empress Exploration

Forensic science, traditionally associated with criminal investigations, has a similar logic and workflow applicable to geoscience projects. In the context of subsurface characterization, an explorer can apply forensic principles to condition and reinterpret vintage datasets, many of which lack complete documentation or backup records. These datasets, often considered obsolete, can be revitalized using forensic geophysical techniques to extract meaningful insights and support decision-making.

By employing post-stack conditioning and analytical methods, one can enhance the quality and interpretability of legacy data. This approach enables the creation of predictive maps through a combination of data analysis, modeling, conditioning, and cross-referencing. Each analytical step is grounded in fundamental geophysical theory, ensuring that even complex interpretations remain scientifically sound.

Moreover, when foundational results are well-established, artificial intelligence (AI) and machine learning techniques can be scaled to larger datasets, amplifying the value of forensic conditioning. These methods have been successfully applied to other subsurface data types — thin sections, core samples, cuttings, scanned seismic records, well logs, and FMI (Formation Microimager) image logs.

In environments where new data acquisition is limited or impossible, vintage data remains a critical resource. Through forensic geophysical analysis, these datasets can be transformed into reliable inputs for exploration and development, reaffirming that in the absence of new data, old data -when properly treated- is far from useless. ■

From Vintage Data to Frontier Basins: Technical Notes

LESSONS FROM UNDERSTANDING STRUCTURAL STYLES OF THE CENTRAL GRABEN IN THE UK AND NORWAY

Speaker: Richard Sears, Gamechanger At Leading Energy Now (retired Shell)

Early studies of the North Sea Basin in the 1970s and 1980s generally described the Central Graben as a rift basin dominated by normal faulting and salt diapirism. In the 1990s, the first generation of 3D seismic data led to a reinterpretation of the Central North Sea, resulting in a model of a more complex structural history.

Regional mapping based on 3D data identified basement faults defined by roughly NW-SE and WNW-ESE trending lineaments, which were then reactivated during later extension. This later extension, however, was not purely orthogonal to the pre-existing fault pattern and resulted in an oblique-slip component of deformation along many of the fault trends. Shear zones that developed along the pre-existing faults were often 'dogleg' shaped or consisted of smaller en echelon faults, resulting in structures forming along and between shear zones as a result of local transpression and transtension. Seismic examples illustrate these alternative interpretations, which were then confirmed through exploration drilling.

This work was presented in a series of papers at the 4th Conference on the Petroleum Geology of Northwest Europe in April 1992 and subsequently published in the conference proceedings in 1993. While not in keeping with the stated objective of highlighting previously unpublished work, it does serve as an illustration of how better and more modern data results in a more complete understanding of the subsurface and of hydrocarbon prospectivity. ■

RISKING EXPLORATION PROSPECTS: LESSONS FROM THE DARK SIDE IN LEADERSHIP AND PRACTICE

Speaker: Mark Shann, CTO, Westlawn Americas Offshore

Exploration prospect volumes can be relatively easily quantified based on seismic mapping, well control, petrophysical parameters, etc. Exploration risking, however, is more qualitative and often consensus-based with three biases to be aware of: (1) Direct Hydrocarbon Indicators (DHIs) in space – an over-reliance on seismic attributes with less emphasis on geology; (2) a tendency to undershoot on volumes – risking the Minimum Case; and (3) a lack of ownership due to over-assurance.

The contribution discusses team leadership ingredients and styles that promote exploration success. It examines these biases from an explorer's personal perspective based on a 35-year exploration journey across the world in both International Oil Company (IOC) and private equity companies. The author shares his "war stories" from the Gulf of America (GoA), Mexico, Egypt, and West Africa, discussing what worked, what did not, and why.

Two additional aspects not classically covered in the exploration risk method - shot point risk and portfolio risk - are also considered. The author concludes by suggesting some simple work practices and tools to help deliver exploration success. ■

HGS GENERAL DINNER

Sedimentology, Stratigraphy, and Paleogeographic Reconstruction of the Beaumont Formation, Late Pleistocene, Buffalo Bayou, Houston, Texas

Take a virtual kayaking journey down Buffalo Bayou and explore Houston's hidden geology without getting wet. Discover rare outcrops of the Late Pleistocene Beaumont Formation and learn how these under-studied sediments record shifting deltaic and coastal environments over the last 130,000 years. Through field-based observations, this talk reveals the sedimentology, stratigraphy, and evolving paleogeography of one of Houston's most fascinating geologic stories.

Monday March 2, 2026 | 5:30 – 7:30 pm

Spaghetti Western, 1608 Shepherd Drive, Houston, TX 77007

Cost: $45 Members, $55 Non-members, $40 Students

Includes buffet dinner and two drink tickets

CLICK HERE

Penny Patterson

Jerry Kendall

Houston Geological Society www.hgs.org

Volunteer with HGS

Annual Events

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

These include events such as:

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

Committees

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

Interested in Volunteering?

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

A Book Review of *Salt in the Earth Sciences*

By Raoul Sorkhabi, Ph.D., University of Utah, Salt Lake City

A CENTURY OF WRITING ON SALT AND SALT TECTONICS

Publications about salt and related topics span more than a century. In his bestseller Salt: A World History, Mark Kurlansky discusses how salt has historically been essential and valuable to human food, health, trade, and culture. Unsurprisingly, many places -from Salt Lake City in the USA (where I live) to Salzburg in Austria (where Mozart lived; no comparison is implied)- have long been centers of salt mining and trade.

The first major publication on salt tectonics, titled Geology of Salt Dome Oil Fields was published in 1926 by the American Association of Petroleum Geologists (AAPG). This publication, now 100 years old, was followed by two other AAPG publications: Salt Domes: Gulf Region, United States and Mexico (AAPG Memoir 8, 1969) and Salt Tectonics: A Global Perspective (AAPG Memoir 65, 1995 released a special publication titled Salt Tectonics, Sediments and Prospectivity. In 2017, Martin Jackson and Michael Hudec published their landmark textbook Salt Tectonics: Principles and Practice (Cambridge University Press).

Now, two impressive volumes published by the American Geophysical Union (AGU) and Wiley discuss how salt is a core topic in various areas of geoscience, supported by an extensive list of references.

ABOUT THE AUTHOR

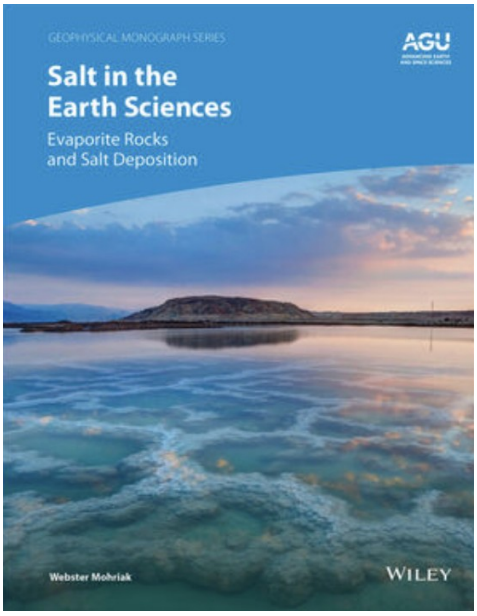
The author of these two volumes, Webster Mohriak, is a professor at Rio de Janeiro State University in Brazil. These AGU/Wiley volumes offer the most comprehensive coverage of evaporite geology available to researchers and professional geologists. Writing two such extensive volumes is a monumental task and a testament to Mohriak's long-term dedication to the geosciences, and a reflection of over three decades of research and experience in the oil and gas industry.

VOLUME 1: EVAPORITE ROCKS AND SALT DEPOSITION

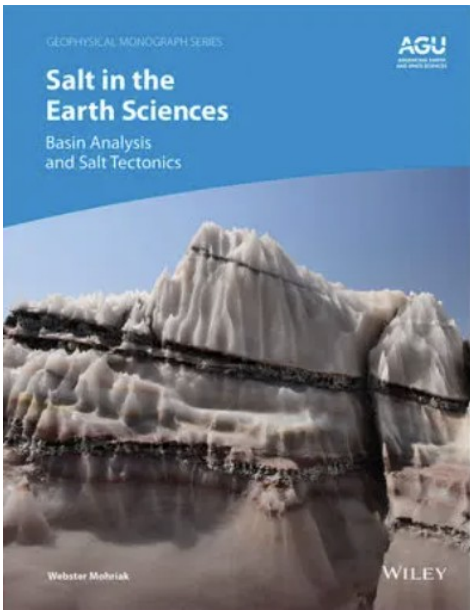
The first volume, *Evaporite Rocks and Salt Deposition* (AGU Monograph 286), consists of 12 chapters divided into two parts. The first part addresses the chemical and physical properties of evaporite rocks, including halite, anhydrite, gypsum, calcite, magnesite, and sylvite. The second part discusses salt depositional processes and environments, along with major outcrops and subsurface depositions in major sedimentary basins.

VOLUME 2: BASIN ANALYSIS AND SALT TECTONICS

The second volume, *Basin Analysis and Salt Tectonics* (AGU Monograph 287), comprises nine chapters that are also divided into two parts. The first part provides a comprehensive analysis of giant salt basins, while the second part discusses various mechanisms of salt tectonics in extensional rift and passive margins (like the Red Sea and South Atlantic margin basins) and in compressional orogenic belts (such as the Zagros basin).



Salt in Earth Science: Evaporite Rocks and Salt Deposition
by Webster Mohriak, AGU and Wiley, 2025, 550 pp.,
Print ISBN:9781119405214. Online ISBN:9781119405245.
DOI:10.1002/9781119405245. US $225.



Salt in Earth Science: Basin Analysis and Salt Tectonics
by Webster Mohriak, AGU and Wiley, 2025, 530 pp.,
Print ISBN:9781394307036. Online ISBN:9781394307067.
DOI:10.1002/9781394307067. US $225.

A Book Review of Salt in the Earth Sciences

INTERESTING FACTS FROM THE BOOKS

Here are a few noteworthy takeaways I learned from these volumes:

• Nearly 54 percent of world's lakes are freshwater
The Caspian Sea is the world's largest saline lake, but its salinity (~12%) is low compared to much smaller, extremely saline lakes such as Don Juan Pond and Lake Vanda in Antarctica, and Lake Retba and Lake Assal in Africa, which reach salinities of 300–400%.

• The oldest evaporite sediments are about 2 billion years old
Salt deposits, including some drilled in the Baltic Shield, occur in every geological period, from Neoproterozoic deposits in Australia, Africa, and the Middle East to Neogene deposits in North Africa, the Red Sea, the Dead Sea, the Mediterranean, Anatolia, and Central Europe.

• Evaporites form in both marine and arid environments
Including tidal and sabkha environments such as the Persian Gulf, as well as eolian or arid environments, including salt flats, shallow brine lakes, and playa (seasonal) lakes between sand dunes like those found in the North African Sahara.

• The first description of a salt structure was made in 1856 in the Atlas Mountains
Salt domes were first recognized along the U.S. Gulf Coast in the 1860s, and their role as hydrocarbon traps soon made their mapping and seismic imaging a major focus in petroleum geology.

• Sub-salt oil discoveries in the 2000s
In the 2000s, discovery of sub-salt oil fields in the Gulf of Mexico and in the Santos basin offshore Brazil amplified the importance of salt bodies in sedimentary basins. ■

GeoPicks features recommendations from fellow geoscientists like resources, experiences, or tools. Do you have a favorite you'd like to share? Send it to us at editor@hgs.org.

WORD BRECCIA – A GEOLOGY WORD JUMBLE

Unscramble the words below and rearrange the circled letters to find the answer to the clue.

RMEMREBE ○ _ ○ _ ○○ _ _

DTNDRSAEUN _ ○ _ _ _ ○○ _ _ _

PPLAY ○ _ _ _ ○

NLYAAZE _ _ ○ _ _ _ ○

UAVELEAT ○ _ _ ○ _ _ ○ _

HINT: In the Case Study Seminar II, Bill Fairhurst referenced _ _ OO _ ' _ _ _XO _O _ _, where C _ _ _ _ _ sits at the highest level.

Unscrambled Word Breccia (January issue):
Brays, Buffalo, White Oak, Sims, Greens and The Bayou City

HGS GENERAL DINNER

Reservoir Dynamics of Large-Scale Injection: Lessons from the Permian Basin

This lecture draws on integrated data and models spanning surface to basement, to examine how large-scale injection drives changes in pressure and stress, resulting in geomechanical challenges. We will explore the geologic controls on injection-induced hazards, highlight the importance of monitoring and data integration, and offer lessons for safely managing large-scale injections in other basins globally.

Monday April 13, 2026 | 5:30 – 7:30 pm

Guadalajara Hacienda, 9799 Katy Fwy, Houston, TX 77024

Cost: $65 Members, $75 Non-members, $40 Students

Includes dinner and two drink tickets

Sponsored by: The University of Texas at Austin Jackson School of Geosciences

CLICK HERE

ROCK SOLID GUESS!

HINT: This body cuts across expectations and, in several basins featured in Case Studies Seminar II, also proves to be an effective reservoir. What is it? Photo by Frode Karlsen.

HINT: A satellite image that contains one of the most prolific hydrocarbon basins discussed in the Case Study Seminar II. Which basin is it? Photo taken from NASA's website.

Rock-Solid Answers (January issue):

1. Mouth-plate fossil:

The picture shows a complete, mouth-plate from a type of durophagous (crush-eating), ray-finned fish of likely Cretaceous age, possibly Anomoeodus.

2. "Silver Brown Wave" (trade name)

The lobby of the Bank of America Tower in downtown Houston features a banded metamorphic gneiss, commercially known as Silver Brown Wave. Its flowing "wave" pattern come from light-and-dark layers of quartz, feldspar, and biotite, mainly quarried in China, Pakistan and India.

HGS Night with

Mercury Chamber Orchestra

Discounted VIP Tickets to
Beethoven's Symphony
No. 6 "Pastoral"

Wortham Center
February 14, 2026
8:00 PM

Click the button for more information

CLICK HERE

Monday, February 9, 2026

5:30 – 8:30 p.m.

HGS Members/Emeritus/Honorary Life $65
Students $25 • Non-Members & Walkups $75
Norris Conference Center, Citycentre
816 Town and Country Blvd #210 • Houston, TX 77024
https://www.hgs.org/civicrm/event/info?id=2677

Andrew P. Roark
Development Geologist,
Chevron, Houston

HGS Scholarship Night

Chasing the Fusselman: A Personal Reflection on the Journey from Oilfield Mystery to Unraveling the Sequence Stratigraphy of a Giant Silurian Reservoir

In this age of cheap information, accurate knowledge of earth history remains costly. Last April, I fell off a cliff in southern New Mexico and nearly died while studying the Silurian Fusselman Formation. The fall capped a years-long pursuit of an explanation for anomalous well performance in the Permian Basin. Now, I have some answers. In this talk I discuss what we have learned. I show how detailed outcrop measurements intended to investigate unusual well log behavior have revealed a previously-hidden record of Silurian glacioeustasy in homogeneous, highly altered carbonate rocks. This work for the first time enables a confident, high-resolution stratigraphic framework for the Fusselman Formation and may facilitate future mapping of individual depositional sequences in the subsurface. The story's arc - from oilfield questions to scientific knowledge - illustrates the value of oil and gas data in furthering humanity's understanding of deep time and our own origins.

However, I have more to share than technical learnings; I also have an improbable survival story. I review how I fell off a cliff alone, how I woke up after hours of unconsciousness to call for help, and how I was ultimately rescued in an Army Blackhawk.

BIOGRAPHICAL SKETCH

Andrew Roark is currently a development geologist focused on the northern Delaware Basin. He has worked a variety of roles in multiple basins since starting with Chevron in 2015 and has been based in both Midland and Houston. He earned a B.S. in Geology from the University of Alabama and a M.S. in Geology from Texas A&M University. He leads multiple recurring field trips for Chevron and for West Texas Geological Society covering the Permian Basin and surrounding areas. He spends most of his vacation time studying the Silurian section in west Texas and southeast New Mexico.

Wednesday, February 11, 2026

5:30 – 9:00 p.m.

HGS Members/Emeritus/Honorary Life $35
Non-Members & Walkups $40
Los Tios Restaurant
9527 Westheimer RD, Houston
https://www.hgs.org/civicrm/event/info%3Fid%3D2689%26reset%3D1

Brittany Neff
Technical Specialist, Pace® Analytical Services

PFAS Methods Overview for Environmental Professionals

PFAS are a group of substances that stick around in the environment because of the incredibly strong bonds that hold them together. As concern, litigation, and regulation about PFAS grows, so does the need to understand what they are, where they show up, and how we can measure them accurately.

In this presentation, we'll break down the basics of PFAS chemistry, and the methods used to detect PFAS in water, soil, and other matrices. We'll also cover topics such as PFAS precursors and total organic fluorine.

Another big piece of the puzzle is sampling. PFAS sampling guidelines are infamously strict because of concerns about accidental contamination. But are those worries always justified? We'll walk through recent findings from a study that examined how often cross-contamination happened in the field.

By the end, you'll have a clearer understanding of today's PFAS testing methods, the science behind them, and how environmental professionals choose the right approach in a world where PFAS guidance and regulations keep changing. ■

BIOGRAPHICAL SKETCH

Brittany Neff is a PFAS Technical Specialist with Pace® Analytical. With a strong foundation in analytical chemistry, Brittany spent 8 years in the pharmaceutical industry before transitioning into the environmental sector, where she worked directly with PFAS as an analytical chemist . Her experience includes PFAS sample preparation, LC-MS/MS workflows, and reviewing PFAS data for accuracy and quality. She later worked as a project manager, helping connect sampling needs, method requirements, and reporting expectations. In her current role at Pace®, Brittany focuses on helping clients understand PFAS testing processes, laboratory capabilities, and regulatory expectations. In her free time, she enjoys golfing, camping, relaxing at the beach, listening to live music, and doting on her two rescue pups, Maui and Freya.

Wednesday, February 18, 2026

11:30 a.m. – 1:00 p.m.

HGS Members/Emeritus/Honorary Life $30
Students $25 • Non-Members & Walkups $35
Total Energies (1201 Louisiana St, Houston, TX 77002)
Directions: Security pre-registration is required - attendees will receive a link to security video one day in advance. Street parking, paid garage parking, and valet are available.
https://www.hgs.org/civicrm/event/info?id=2678
Event Contact: Andrea Peoples

HGS General Luncheon Meeting

William D. DeMis
President
Rochelle Court, LLC
Cypress, Texas

Monetary Pivot Points in the History of the US Dollar, Their Effects on Oil Prices, and the Current Monetary Pivot

After supply and demand, the single most important control on global oil prices is the value of the US dollar (e.g., DeMis, 1996, 2000, 2021). When oil price behavior, and the desires of the people who set the price of oil, are viewed through an historical retrospective that focuses on monetary pivot points, "geopolitical events" play a surprisingly insignificant role and there is no evidence that oil price rises cause inflation.

Three major pivot points in the value of the US dollar have affected oil prices. These pivot points occurred in 1944, 1971, and 1985. Today's unsustainable monetary and fiscal excesses of the US government show the US is now in a monetary pivot at least as profound as the collapse of the Bretton Woods Accord.

The Bretton Woods Accord in 1944 was the major monetary pivot point of the 20th century. The agreement pegged the US dollar to gold and made the US dollar exchangeable for gold for foreign central banks. The Bretton Woods Accord made the US dollar the reserve currency of the world.

The second monetary pivot point was the abandonment of the Bretton Woods Accord on August 15, 1971. Bretton Woods demise was caused by the US Federal Reserve printing too many greenbacks to fund the war in Vietnam and President Johnson's Great Society programs. Quitting Bretton Woods led to a 21% devaluation in the dollar in 18 months (DeMis, 2000). Oil supply and demand were tight, therefore international oil producers made up for the cumulative effects of 8 years of inflation and back-to-back dollar devaluations by increasing nominal oil prices four-fold in four years starting in 1973 (ibid, 2021).

The "oil prices shocks" of the 1970s were completely foreseeable as an adjustment to depreciations in the dollar after the collapse of Bretton Woods. But oil price rises could only occur after three conditions were met: 1) the price of gold rose three-fold to $100/oz; 2) there was orgy of Federal Reserve money-printing and government deficit spending; 3) oil supply became tight (DeMis, 2021).

The third pivot point was the Plaza Accord in 1985 where the signature countries agreed to devalue the dollar to cure trade imbalances (DeMis, 2019). The greenback fell 35% in seven years. International oil producers took extreme cuts in purchasing power but could not offset losses by increasing their nominal prices because of over-supply from the North Slope and North Sea (DeMis, 2016).

By the early 2000s, supply and demand came back into balance. Major producers were able to raise oil prices to regain purchasing power lost from the third pivot point. Nominal oil prices increased fourfold in four years (2004-2008). Tellingly, the only news headline about surging oil prices and inflation were to ask, "Where is the inflation?" Certainly by 2008 the US had de-industrialized its economy and was consuming less oil per unit of Gross Domestic Product. But not even this change explains the lack of inflation in the face of a four-fold rise in oil prices. The dominant explanation is that the money supply was not growing faster than the economy (DeMis, 2021).

The shale revolution brought on the equivalent of a "Saudia Arabia" of oil production and a "Saudi Arabia" of gas production in the US. Changes in value of the US dollar have been essentially meaningless to OPEC (DeMis, 2023).

Today, US debt to GDP is 120%, as high as at the end of World War II. The US recovered financially after WW II by growing GDP and inflating the debt away (DeMis, 2023). By 1962, the economy grew by 75% in real terms (meaning corrected for inflation) and cumulatively inflation was by 45% by 1957. Today, the US has both a massive trade deficit and an aging population which makes it impossible to grow the US GDP like after WW II.

Another monetary pivot point is now upon us. Interest payments on the US debt are $1.1 trillion per year, greater than the entire US miliary budget. More ominously, two-thirds of US debt is short-term and it will need be re-financed within the next two to four years, most likely at higher rates. Meantime, the US continues to deficit spend at an annual rate of $1.8 trillion per year, thereby further increasing the debt load and the interest payments. The only condition left is for supply-demand to become tight before oil prices surge like they did in the 1970s.

Financial pundits are speculating about a hypothetical "Mar-a-Lago Accord" wherein the US will swap US treasury and bond debt for a new, no-yield, ultra-long-term bond. This is a sovereign default in all but name. Other pundits suggest a major devaluation of the dollar. Whatever the solution to the current deficit and monetary crisis, changes will have to be dramatic and will not be pleasant.

Today, cumulative inflationary pressures suggest oil prices need to be about $250/bbl for international producers to regain their purchasing power parity - if they continue to use the US dollars. Oil's revaluation to a higher price will probably occur when supply becomes tight, but might be precipitated solely by the current monetary pivot point if this pivot becomes extreme enough. ■

BIOGRAPHICAL SKETCH

William DeMis runs an oil-and-gas consultancy. He is an angel investor in a major domestic start-up company that is drilling some deep and potentially significant wildcats for natural gas in the onshore gulf coast. Bill likes to look at outside prospects and he generates his own prospects for fun and, rarely, for profit.

Mr. DeMis has been employed as a work-a-day prospecting geologist for most of his 35 years, but he has also held management positions including: Exploration Manager at Marathon Oil, Exploration Vice President at Roxanna Oil, and Senior Vice President and Chief Geologist at Goldman Sachs.

Bill has received two Best Paper Awards from the AAPG for his analysis of the effects of US dollar exchange-rate variations on the value of oil on global markets, in 1996 and 2000. This talk on Monetary Pivot Points is an outgrowth of that work from the 1990s. Mr. DeMis has also won also "best paper" awards from Rocky Mountain Associations of Geologists and from the GCAGS.

Mr. DeMis is an associate trustee of the AAPG foundation. He currently serves as the Foreman of the AAPG House of Delegates and is on the Board of Directors of the Houston Geological Society.

REFERENCES

DeMis, W. D., 1996, History of US dollar exchange rates and the real value of oil: American Association of Petroleum Geologists Bulletin, v. 80, p. A35–A36; AAPG Search and Discovery Article #91019

DeMis, W. D., 2000, Historical analysis of real global price of oil: Implications for future prices: American Association of Petroleum Geologists; AAPG Search and Discovery Articles #90914 and #70037.

DeMis, W.D., 2016, Real Global Price of oil in the unconventional era: American Association of Petroleum Geologists Search and Discovery Article #90266, AAPG Pacific Section and Rocky Mountain Section Joint Meeting, Las Vegas, Nevada, October 2-5, 2016

DeMis, W. D., 2019, Historical analysis of the real global price of oil: Houston Geological Society Bulletin, v. 61, no. 7, pg. 51–63.

DeMis, W. D., 2021, History suggests nominal oil prices could rise to $200 a barrel in near future: American Association of Petroleum Geologists/Society of Economic Geophysicists IMAGE Convention Abstract (Author's note: AAPG has not yet posted this abstract to its Search and Discovery website, making proper citation impossible at present.)

DeMis, W., 2023, The Coming Commodity Super Cycle: GeoGulf Transactions, v. 72, p. 37–79, AAPG Search and Discovery Article #11375

Monday, March 2, 2026

5:30 – 7:30 p.m.

HGS Members/Emeritus/Honorary Life $45
Students $40 • Non-Members & Walkups $55
Location: Spaghetti Western, 1608 Shepherd Drive, Houston, TX 77007
Directions: Park in lot behind restaurant
https://www.hgs.org/civicrm/event/info?id=2679

HGS General and North American Dinner Meeting

Penny Patterson and Jerry Kendall

Sedimentology, Stratigraphy, and Paleogeographic Reconstruction of the Beaumont Formation, Late Pleistocene, Buffalo Bayou, Houston, Texas

Pine Hill Tidal Mudstone

Woodway Sandstone

We invite you to take a virtual kayaking trip down Buffalo Bayou, Houston, Texas, to see the amazing outcrops of the Beaumont Formation and learn about its fascinating geology, all while sitting at the Spaghetti Western Restaurant enjoying a fine meal and beverage.

Sedimentology, Stratigraphy, and Paleogeographic Reconstruction

The Beaumont Formation (Late Pleistocene) is exposed along the embankments of Buffalo Bayou that transects the greater Houston area. These outcrops have been under-studied, in part, because of dense vegetation, wildlife, and treacherously steep embankments that limit their access from the surface. However, with the use of kayaks, Beaumont strata can be observed during very low-water stages of the Buffalo Bayou.

We will present our observations and interpretations regarding the sedimentology, stratigraphy, and paleogeographic reconstruction of the depositional environments from selected outcrops of the Beaumont Formation. Although the Beaumont Formation is commonly regarded as a homogeneous mud-dominated interval, it contains a wealth of information regarding depositional environments, sediment transport, stratal architecture, pedogenic and diagenetic alterations, and shifts in depositional environments over the last 130,000 years.

Based on observations of the ~14 vertical meters of Beaumont section outcropping along the ~80 km length of Buffalo Bayou, and 18 measured sections, we interpret that these strata accumulated in marginal marine deltaic and delta-plain environments. The lower stratigraphic interval is composed of several coarsening-upward stratal packages of laminated-to-massive mudstone that grade upward to laminated and low-relief curvilinear laminated sandstone. These stratal packages are interpreted to have been deposited as bayhead deltas within a shallow marginal marine bay. Bayhead deltaic packages stack progradationally, such that successive overlying stratal packages are thicker and possess sandstone bed geometries indicative of increasing depositional flows. Bayhead deltaic strata are overlain by channel sandstone and floodplain mudstone interpreted to have accumulated in a delta-plain environment.

We compiled our temporal and spatial interpretation of the Beaumont Formation and developed five paleogeographic maps depicting the shifts in depositional environments with fluctuations of sea level during the last 130,000 years.

Special thanks to other contributors of this study: Angela Schwartz, Joshua Novello, Will Gaston, Richard Lang, Dorene West, Justin Gosses, and Caroline Wachtman.

BIOGRAPHICAL SKETCHES

Penny Patterson received her BA, MS, and PhD degrees in geology from the University of Colorado. Her first foray into her career as a geologist began during her undergraduate studies working as a Field Assistant for the USGS, Denver, mapping Mississippian carbonates in the mountains of Idaho. During her MS and PhD studies, she worked as a consultant for oil and gas exploration in the Rocky Mountain region. Upon completion of her PhD, she began her 28-year career with Exxon Production Research Company. Penny remained on the technical career path and retired from ExxonMobil as a Senior Technical Advisor for conventional and unconventional resource assets. In 2018, Penny was invited to develop a petroleum geology curriculum and teach the classes at the University of Colorado Boulder. Penny currently is President of Patterson Geoscience Group, LLC an independent geoscience consulting company that focuses on petroleum-systems and CCUS assessments.

Jerry Kendall is a global expert on the processes of mountain building. He has a B.S. from the University of Wisconsin and a M.S. from the University of Southern California. He has 49 years' experience as a field geologist, ExxonMobil structural geologist, and instructor. He currently is adjunct faculty at the University of New Mexico and leads field experiences for Philmont Scout Ranch and NMGS. Living directly on Buffalo Bayou he has watched it flow, surge, and evolve over the last 20 years. Jerry has been working with local artists who are documenting the impact of hurricanes on Houston (FlowArchieve.com). Jerry got involved in trying to understand the existence of hammer-ringing outcrops in recent sediments in his own back yard. He is interested in how the natural processes of Buffalo Bayou have interacted with the anthropogenic efforts to shape our city.

WELCOME TO NEW MEMBERS, EFFECTIVE JANUARY 2026

STUDENT MEMBER

Jadelyn Bryan

Monday, April 13, 2026

5:30 –8:30 p.m.

HGS Members/Emeritus/Honorary Life $65
Students $40 • Non-Members & Walkups $75
Location: Guadalajara Hacienda, 9799 Katy Fwy, Houston, TX 77024
https://www.hgs.org/civicrm/event/info?id=2681

HGS General and North American Dinner Meeting

Katie Smye

Reservoir Dynamics of Large-Scale Injection: Lessons from the Permian Basin

Over the past decade, the Permian Basin region has served as a natural laboratory for understanding the reservoir dynamics and impacts of fluid injection at the basin scale. The ongoing need to dispose of tens of millions of barrels of produced water daily in the region has driven the evolution of injection practices across a range of geologic and operational settings. Injection in the Permian Basin occurs across distinct geologic systems: in shallow and deep reservoirs in the Midland and Delaware Basins, and in the Central Basin Platform. Deep injection targeting carbonate units overlying crystalline basement is comparable to injection settings in the Fort Worth Basin and midcontinent regions such as Oklahoma and Kansas, and is associated with historically high rates of seismicity on faults extending from basement into the injection strata. Operational changes including reductions in deep injection volumes have coincided with a ~50% decrease in $M \geq 3.0$ earthquakes over the past year. Shallow injection is associated with seismicity to a lesser degree, but increasing reliance on these strata is causing surface uplift, up to tens of centimeters in places, well control issues in overpressured intervals, and localized surface flows from legacy vertical wellbores.

This lecture draws on integrated data and models spanning surface to basement, to examine how large-scale injection drives changes in pressure and stress, resulting in geomechanical challenges. We will explore the geologic controls on injection-induced hazards, highlight the importance of monitoring and data integration, and offer lessons for safely managing large-scale injections in other basins globally. ■

BIOGRAPHICAL SKETCH

Katie Smye is a Research Associate Professor at The University of Texas at Austin and Principal Investigator of the Center for Injection and Seismicity Research (CISR), an industry-funded research consortium focused on water injection capacity and seismic hazard mitigation, particularly in the Permian Basin. Dr. Smye is known for leading multidisciplinary efforts integrating geologic, geophysical, and reservoir engineering data and models to assess the response of subsurface systems to large-scale fluid injection.

She holds a PhD in Earth Sciences from the University of Cambridge, where she was a Gates Cambridge Scholar, and dual bachelor's degrees in Geology and Chemistry from the University of Oklahoma. Dr. Smye has authored or co-authored over 30 peer-reviewed publications and serves as an Associate Editor for the *AAPG Bulletin*. She is an active contributor to technical conferences as a session convener and speaker, and frequently communicates scientific findings to public and media audiences on topics related to induced seismicity and sustainable reservoir management.

SPONSORED BY

The University of Texas at Austin
Jackson School of Geosciences

HGS IS GETTING A NEW WEBSITE

HGS's NEW Website:

- Fresh new webpage format
- More intuitive, user-friendly design
- Easy access to HGS member sites
- Improved navigation to HGS and external links
- New access for event registration

Regards,
Penny Patterson
HGS President 2024-2025

Patty Walker
HGS President 2025-2026

NEW WEBSITE SPONSORSHIP OPPORTUNITIES

Dear HGS Supporters,

HGS is excited to announce that we are developing a NEW WEBSITE for our members!

We invite you to be a sponsor for HGS's new website and expand your network!

See three sponsorship levels below:

GOLD LEVEL $3,000

- Company Logo on HGS website front page with link to 1-page space for advertisement.
- Sponsorship level active for 2 years

SILVER LEVEL $2,000

- Company Logo on HGS website front page with link to 1/2 page space for advertisement.
- Sponsorship level active for 1 year

BRONZE LEVEL $1,000

- Company Logo on HGS website front page with link to 1/4 page space for advertisement.
- Sponsorship level active for 1/2 year

Please see accompanying payment form.
Or contact HGS office: (713) 463-9476
email: andrea@hgs.org

HGS IS GETTING A NEW WEBSITE

GOLD LEVEL $3,000

- Company Logo on HGS website front page with link to 1-page space for advertisement.
- Sponsorship level active for 2 years

SILVER LEVEL $2,000

- Company Logo on HGS website front page with link to a 1/2 page for advertisement.
- Sponsorship level active for 1 year

BRONZE LEVEL $1,000

- Company Logo on HGS website front page with link to a 1/4 page for advertisement.
- Sponsorship level active for 1/2 year

Company Name: _____

Sponsorship Level: _____ Amount Enclosed: _____

Contact Name: _____

Street Adress: _____

City: _____ State: _____ Zip Code: _____

Phone: _____ Fax: _____

Email: _____

Please submit your company logo with the form and payment. Please email form to office@hgs.org
Payment by credit card or check. Please make checks payable to: **Houston Geological Society**.

Name of Card Holder: _____ Card Type: _____

Card Number: _____ Expiration Date: _____ CVC: _____

HOUSTON GEOLOGICAL SOCIETY | 713-463-9476
14811 ST. MARY'S LANE, SUITE 250, HOUSTON, TX 77079

FEBRUARY 2026

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3	4	5	6	7 Make your reservations online at hgs.org
8	9 **HGS General Dinner Meeting** *HGS Scholarship Night* *Page 28*	10	11 **HGS E&E Dinner Meeting** *PFAS Methods Overview for Environmental Professionals* *Page 29*	12	13	14 **HGS Night with Mercury Chamber Orchestra**
15	16	17	18 **HGS General Luncheon Meeting** *Page 30* **2026 NAPE Summit** *Page 17*	19	20	21
22	23	24	25	26 **HGS NeoGeos Happy Hour**	27	28

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

INSTRUCTIONS TO AUTHORS

Materials are due by the first of the month for consideration to appear in the next month's publication. Submissions should be emailed to editor@hgs.org. The Editor reserves the right to reject submissions or defer submissions for future editions.

Text should be submitted as a Word file. Figures or photos may be embedded in the document or submitted separately. The following image formats are accepted: tif, .jpg, .png, .psd, .pdf.

Feature submissions, e.g., GeoPicks, should be approximately 600 words. Technical papers should be approximately 2000 words or less (excluding references).

Gain Visibility, Advertise With Us

HGS MONTHLY BULLETIN

Expand your company's reach, attract new costumers and promote your unique personal brand.

Reach out to the largest geoscience community in the Houston area by advertising in our monthly Bulletin!

We Offer

Full-page, 1/2-page, 1/4-page and 1/8-page ad spaces

Your Business Card in 10 issues of the Bulletin

Interested?

ads@hgs.org

Advertise with HGS

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

Vendor Corner

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

HGS Bulletin

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

HGS Event Sponsorship

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

Website Sponsor

Support the HGS by advertising on our website. Sponsors have the opportunity for their ad to appear in high-visibility areas of our site. Calendar ads are displayed on the left navigation of the Calendar page as well as on the Home page, while a limited number of banner ad spaces are available on the large banner at the top of the Home page.

HGS Weekly Newsletter

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

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

HGS Legends Night 2026

KEYS TO A SUCCESSFUL CAREER IN OIL AND GAS EXPLORATION: OPPORTUNISM, PERSEVERANCE AND RELATIONSHIPS (AND SOME LUCK!)

Richard Stoneburner shared insights from a 48+ year career in oil and gas exploration to a packed crowd of over 60 guests at Perry's Steakhouse on Monday, January 13. Stoneburner, who served in executive leadership roles for Petrohawk Energy Corporation, BHP Billiton, and Tamboran Resources, shared stories of key career accomplishments and challenges. Stoneburner described how being in the right place at the right time, while cultivating strong business friendships, have been instrumental in funding prospects and in finding new career opportunities.

First held in 2000, Legends Night has brought nearly 40 expert explorationists to share their technical and business insights with the HGS community.

Special thanks to Magly Cabrera (Ubiterra) for assistance with event logistics, and to Walter Light (Thunder Exploration) for being a sponsor of this event.

January General Lunch

UNRAVELING THE STRATIGRAPHIC COMPLEXITY OF THE UPPER MIOCENE SLOPE-CHANNEL SYSTEMS AT MP313, GULF OF MEXICO SHELF: LEVERAGING REPROCESSED SEISMIC TO ESTABLISH A NEW TREND WITHIN A MATURE FIELD

The January general lunch was held at Murphy Oil Corporation's office in Houston's Energy Corridor. Nearly 50 attendees filled the room to hear from two Cantium Resources geoscientists. Stefanie Frelinger and Luke Pierce shared their journey of identifying and testing a stratigraphic play in a mature offshore shelf field. Using reprocessed seismic data, they demonstrated derisking a prospect and ultimately finding a highly profitable discovery.

Thanks to Magly Cabrera (Ubiterra) and Tim Campell (GeoLog) for assisting with logistics for the event.

We Are The HGS

Magly Cabrera, HGS member since April 2023

Magly Cabrera is originally from Venezuela and has lived in the United States for over 20 years. Growing up in an energy-rich country shaped her worldview, instilling resilience, adaptability, and a strong appreciation for education and community. She notes that, "conversations around oil, geology, and opportunity were always part of everyday life," and that moving countries early in her career "pushed me outside my comfort zone" in ways that strengthened her curiosity and work ethic.

the HGS represents technical excellence, community, and knowledge sharing

Professionally, Magly is drawn to connecting technical teams with the tools and communication needed to translate complex data into actionable decisions. With a technical background in business development and marketing, she thrives on solving real problems through strategy, execution, and clear storytelling, helping businesses understand the value behind their subsurface datasets. She initially entered the oil and gas industry in service and technology roles supporting geoscience and drilling workflows, and she remains engaged by the technical complexity of the challenges, where "good data truly matters," Magly notes. She enjoys contributing to an industry that is constantly evolving, whether through digital transformation, geothermal development, or carbon-related initiatives.

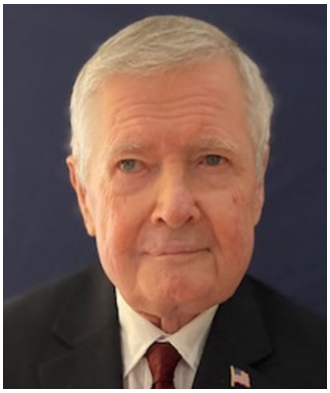
Outside of work, Magly recharges by spending time with her boys, her dogs, and her bearded dragon, Godzilla. She enjoys outdoor activities like biking, kiteboarding, hiking, and walking, and is passionate about mentorship and education, especially for students and early-career professionals. Magly's inspiring commitment to the geoscience community is reflected in her involvement with HGS, which she describes as representing "technical excellence, community, and knowledge sharing." Through her engagement, she hopes to continue learning, contributing, and strengthening connections across industry and academia. ■

We Are The HGS *is a series that highlights the careers and contributions of HGS members with the intention of building community. Would you like to be featured in We Are The HGS? Send a note to editor@hgs.org.*

Remembrance

Mike Graul

October 16, 1934 – January 5, 2026



A Catholic, husband, father, grandfather, great grandfather, uncle, geophysicist, coach, teacher, president, business owner, entrepreneur, PA announcer, member of the Knights of Columbus, Lifetime member of the Society of Exploration Geophysicists (SEG), member of Delta Tau Delta, and many other service organizations like the Geophysical Society of Houston (GSH) and activities where he made immediate and long-lasting contributions.

Mike Graul was born in New York City (Manhattan) and grew up in upstate New York. Growing up he valued the outdoors, summer camps, and water related activities. Mike attended Rensselaer Polytechnic Institute (RPI) where he earned a BS in geology with a geophysics option; he chose the geophysics option because he preferred differential equations over micropaleontology.

Mike's career spanned more than four decades and touched nearly every facet of geophysics. After graduating from Rensselaer Polytechnic Institute, he joined Chevron Corporation, where he worked for 23 years in acquisition, processing, interpretation, research, and project management. In parallel with his industry work, Mike demonstrated an enduring passion for education—founding Exploration Education Consultants in 1980 and later co-founding TexSeis, Inc., a seismic data processing company recognized for its technical rigor and practical innovation.

Above all, Mike was a teacher. His rare ability to explain complex concepts with clarity and humility left a lasting imprint on generations of practitioners.

He instructed thousands of geophysicists across more than 20 countries, teaching courses for SEG, AAPG, taught public and private classes for many companies and organizations, enlightening thousands of students in both professional and academic settings. Mike taught graduate courses at the University of Houston and Rice University and lectured or presented short courses at many other universities. He served on the faculties of both the University of Texas and the University of Houston, and developed courses in AVO, Deconvolution, and Static Corrections for the SEG Continuing Education Program, some of which are still being taught after many years. Mike authored a monthly technical article for the GSH Journal. These articles have also been published in two volumes Tutorial Nuggets: The Book and Tutorial Nuggets: Book II. These articles have a profoundly unique style that highlight Mike's ability to explain complex subjects with a penchant for humor that makes learning very entertaining.

Those who knew Mike also remember his subtle humor, carefully chosen words, and deep generosity of spirit. As Allen Bertagne, longtime friend and recent SEG Council Chair and Board Member, noted, "Behind Mike's technical rigor was a mischievous wit and a genuine kindness that made working with him a joy."

The HGS offers its deepest condolences to Mike's family, friends, and colleagues. His impact lives on in the countless professionals he guided, mentored, and inspired throughout his career.

HGS Membership Application

Houston Geological Society
14811 St Mary's Lane Suite 250 Houston
TX 77079
Phone: (713) 463-9476
Email: office@hgs.org

Active Membership

In order to qualify for Active Membership you must have a degree in geology or an allied geoscience from an accredited college or university or, have a degree in science or engineering from an accredited college or university and have been engaged in the professional study or practice of earth science for at least 5 years. Active Members shall be entitled to vote, stand for election, and serve as an officer in the Society. Active Members pay $40.00 in dues.

Associate Membership

Associate Members do not have a degree in geology or allied geoscience, but are engaged in the application of the earth sciences. Associate Members are not entitled to vote, stand for elections or serve as an officer in the Society. Associate Members pay $40.00 in dues.

Student Membership

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

Membership Benefits

Digital HGS Bulletin

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

Discount prices for meetings and short courses

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

Networking

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

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

Full Name _____ Type *(Choose one)*: Active Associate Student

Current Email *(for digital Bulletin & email newsletter)*_____

Phone _____

Preferred Address for HGS mail_____

This is my home address _____ business address _____

Employer *(required)*_____ Job Title *(required)*_____ Will you volunteer? ____ (Y/N) Committee choice: _____

Annual dues Active & Assoc. for the one year *(July 1st-June 30th)* **$40.00**_____

Student **$0.00**_____

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

Total remittance_____

Payment:

Check #_____

Credit card: V MC AE Discover

Credit Card#_____

CVV code (req'd): _____ Expiration: _____ (mm/yy)

Signature: _____ Date: _____

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

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

Company Address _____

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

School *(required)*_____

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

Year Graduated _____

School *(optional)*_____

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

Year Graduated _____

Years Work Experience *(required)*_____

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

AAPG Member Number _____ OR

HGS Sponsor's Name _____

Signature: _____ **Date:**_____

Professional Directory

Consulting, Evaluate Prospects:
USA and International

Seeking Prospects: Coastal Texas

Victor H. Abadie III
Consulting Geologist

650.201.0528 • vic@montara.com
Post Office Box 81, Montara CA 94037-0081
AAPG/DPA, SIPES, Calif. Reg. Geologist, Tex. Reg. Geologist

Paul W. Britt, CPG, P.G. (TX, LA, AL)
Geological / Geophysical Consulting

Houston & Nassau Bay, Texas

PROSPECTING - GULF COAST - WEST TEXAS
PETRA - CONSULTING - TRAINING
KINGDOM - INTERPRETATION

713-651-0004 pbritt@texplore.com
281-494-3155 linkedin.com/in/pwbritt

COWBOY
EXPLORATION

Utilizing 3-D seismic technology to identify, assemble, and drill conventional exploration prospects throughout the Texas Gulf Coast

Cameron Goodwin - Head of Development

office: 512-717-4491 | cameron@cowboyexploration.com
cell: 361-834-8519 | www.cowboyexploration.com

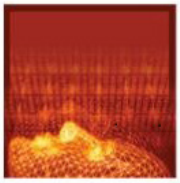
3800 N. Lamar Blvd, Suite 200, Austin, Texas 78756

THUNDER EXPLORATION, INC.

WALTER S. LIGHT, JR.
PRESIDENT
PETROLEUM GEOLOGIST

US MOBILE: +713 823 8288
EMAIL: wthunderx@aol.com

P.O. BOX 541674
HOUSTON, TEXAS 77254-1674



AKD Professional Solutions Inc.
Delivering digital geoscience world-wide

- Reservoir modeling for E&P & EOR
- Field evaluations and redevelopment
- Prospect screening and field appraisal
- Equity re-determination
- World-wide geoscience expertise

Sharma Dronamraju, MS, MBA
Director
5554 South Peek Rd, Box#53
Katy, Tx, 77450

Phone: 713 503 5011
Sharma@akdpsi.com
www.akdpsi.com

ROCK HILL RESOURCES
SUBSURFACE CONSULTING

Dr. Thomas P. Buerkert, P.G.
Founder | Principal

+1 713-305-2091

tom.buerkert@rockhillresources.com

1950 Hughes Landing
Suite 743
The Woodlands, TX 77380

Nelson B. Yoder
(President)

(713) 553-4065
nbyoder@comcast.net

Bio-lithostratigraphic Analysis of Core & Well Cutting Samples

INTEGRATED EXPLORATION SERVICES, INC.

15 Greenway Plaza 11G Houston, TX 77046

CERTIFIED PETROLEUM *GEOLOGIST*

EXPLORATION AND DEVELOPMENT
PROSPECT EVALUATION
ECONOMIC MINERAL EVALUATION

GOLDENRULE EXPL, INC.

ANDREW W. HAMPF
CAROL L. HAMPF

7121 QUAIL FIELD DRIVE
HOUSTON, TEXAS 77095

CELL (832) 236-3464

EMAIL: hampf.aw@sbcglobal.net

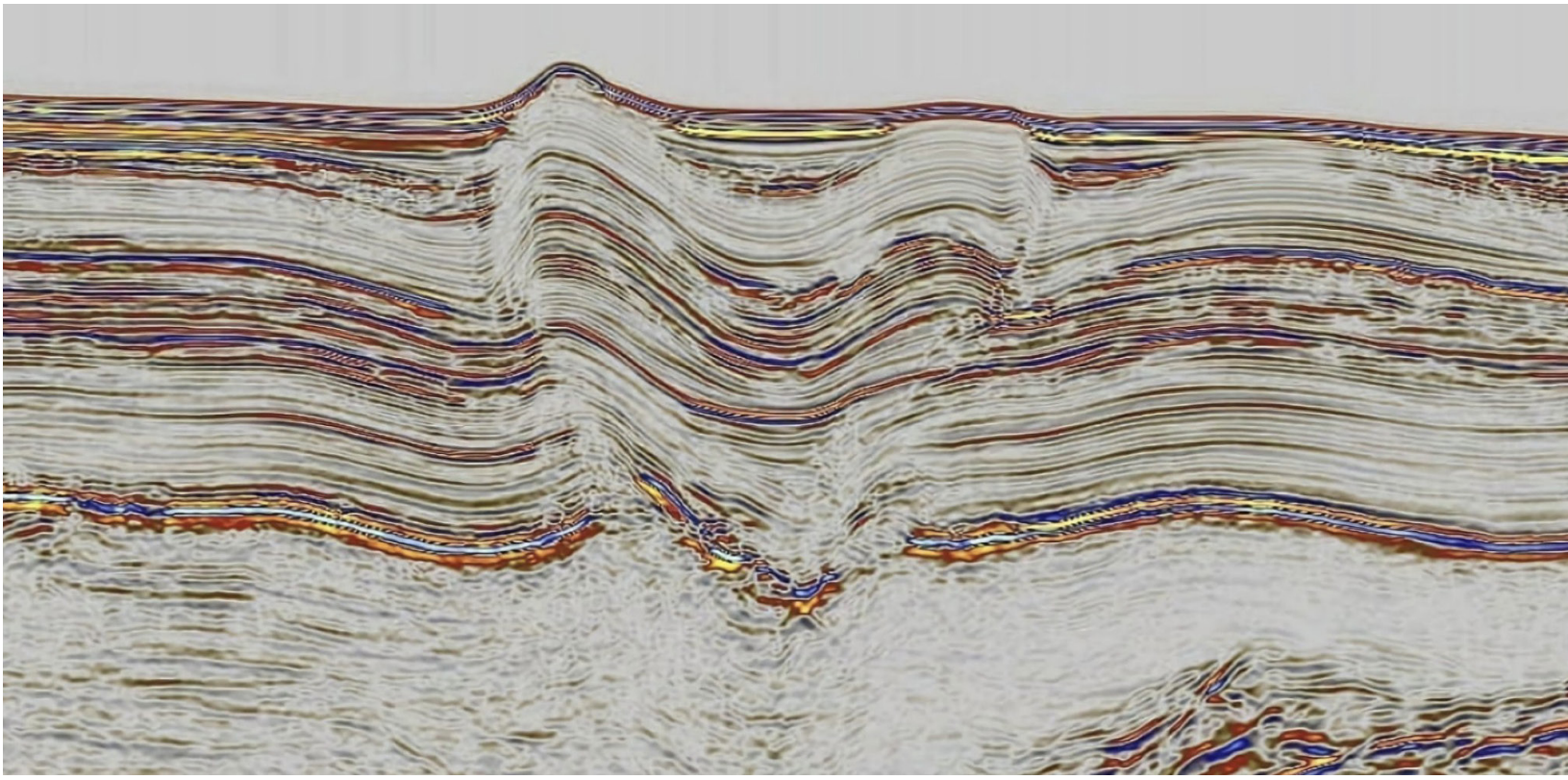
Mohn & Associates, LLC

Kenneth Mohn

10802 Oak Creek St.
Houston, Texas 77024

p. **+1 713 485-9696**
f. +1 713 465-7868
kwmohn123@gmail.com

Where is your Business Card?
$175/card for 10 Issues
713-463-9476



This seismic section features a striking heart-shaped structure—a fitting visual for HGS's Mercury Orchestra Night on Valentine's Day.
The author interprets it as two anticline-like highs separated by a narrow synclinal trough, primarily controlled by faulting. A transparent, chaotic zone at the base is interpreted as a salt layer that may act as a detachment above. These normal faults were later reactivated as thrusts during inversion, producing the heart-shaped geometry. Alternative interpretations suggest a single structure, viewed obliquely or near along the strike of the main deformation trend.
The image has circulated widely online, and its origin remains unknown. We encourage readers to share their own interpretations and contribute to the discussion.
Photo courtesy of Manel Grau Ramos.