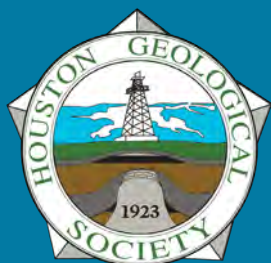


★100th Anniversary 1923-2023★



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Bulletin

Volume 66, Special Issue – August 2023

Houston Geological Society



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Special
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Edited by Charles Sternbach, Linda Sternbach, and Craig Dingler

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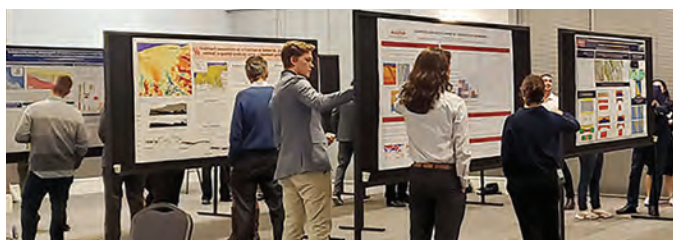
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ABOUT THE COVER: (clockwise from upper left) Charles Sternbach and Michel T. Halbouty, Sept 13, 2000, at the first-ever NeoGeos Dinner meeting, discussing Legends programs, mentoring, and themes for the 2002 AAPG Convention hosted by HGS.

Geoscientists on a field trip study a core of the Frio Formation in the Nueces Bay Area, at GCAGS 2016.

Students take a close look at rocks with hand lenses at one of HGS's many outreach programs.

Steven Getz and Walter Light interpret seismic exercises at a Continuing Education Short Course on Gulf Coast Geoscience at GeoGulf23, April 24, 2023.

A group of past HGS presidents gathered for lunch on August 8, 2023, at the Petroleum Club of Houston, to celebrate the 100th Anniversary of the HGS founding on August 8, 1923. The "100 Years, 100 President" mural backdrop created a feeling of all the presidents coming together in one place and at one time.

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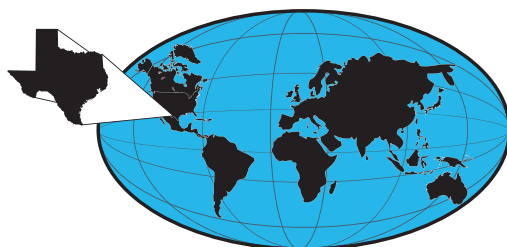
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Welcome to the HGS 100th Anniversary Special Issue

By Charles Sternbach, Linda Sternbach, and Craig Dingler

MISSION FOCUS

Many HGS members will recall the 75th Anniversary Gala and the special issue of the *HGS Bulletin* in 1998. But what has HGS been doing to fulfill its mission in the last 25 years leading up to the 100th Anniversary in 2023? Read on, and you will see the answer to that question is a lot! This special issue showcases just a few of the many programs helping HGS fulfill its objectives, which are:

1. To stimulate interest and promote advancement in geology for the Houston area. (***Geoscience***)
2. To disseminate and facilitate discussion of geological information, relationships among geologists in the area (***Professionalism***)
3. To aid and encourage academic training in the science of geology (***Education and Outreach***)

We organized the Table of Contents to this special issue along these HGS mission guidelines. The Society strives to achieve these goals through regularly scheduled technical meetings, the publication of a monthly *Bulletin*, web communication, a continuing education program, field trips, timely books, and two student scholarship funds.

As you unfold the pages of this HGS Special Issue, you will read how the last 25 years have been highly productive in HGS's history—flourishing in all regards.

We also remember in this publication 100 HGS Historical Past Presidents, each with a connection to many geoscientists and HGS members. The mural, *100 Years, 100 Presidents*, presents a vertical stratigraphic column. This issue continues the presidential traditions; updating the timeline started in the 75th Special Issue. We also recognize many awardees who have contributed to HGS success. In particular, we celebrate Gerald A. Cooley and 15 Cooley Award winners in the past 25 years.

We expect that HGS will continue its proud tradition of Leadership, Technology, Discovery and Education long into the future.

JANUS

As we reflect on this historical moment, we recall Janus, the ancient Roman god with two faces—one looking forward and another backward. Some of the last Century's notable technical turning points included: salt domes, deltas, shallow water deposits, onshore exploration, 3D seismic, computers, the internet, GPS, stratigraphic traps, and the dawn of unconventional. We look to our next Century for, among other things, improved integration, augmented intelligence through ever greater computing power, enhanced seismic imaging (subsalt AVO), improved completion techniques (especially in tight reservoirs), the discovery of more stratigraphic traps, production in deep and ultra-deep water, high delivery wells, lower carbon, better communications, LNG exports, and a global gas market.

HOUSTON DEMOGRAPHICS

Houston demographics—global offshore technology, global corporate headquarters, a vital service sector, refineries, universities, and space exploration (that strengthens technological capability)—foretell that HGS will play a continued strategic role in the future of human prosperity. We expect that HGS will continue its proud tradition of *Leadership, Technology, Discovery and Education* long into the future. ■

EDITORS NOTE: *We include many photos of smiling people. Better than words alone, these pictures show the huge impact of HGS. We are grateful to many sources for these images.*

President's Letter

The More Things Change, the More They Stay the Same.

On August 8, 1923, 74 geologists got together and founded the Houston Geological Society as an avenue for geologists in Houston to gather, meet, and communicate their discoveries and share gained knowledge

EARLY DAYS

On August 8, 1923, 74 geologists got together and founded the Houston Geological Society as an avenue for geologists in Houston to gather, meet, and communicate their discoveries and share gained knowledge. This society came from the previous two decades of an oil boom in Houston. First Spindletop in 1901, setting off an oil boom of activity in Houston and southeast Texas. Houston was surrounded by salt domes like Sour Lake, Hull, Boling, Pierce Junction, Goose Creek, and many more. As wells were drilled deeper for oil, the geologist became an integral cog in the oil machine. The science of geology was getting traction in the growing oil industry, and scientific organizations began to form to share newfound knowledge.

Since its inception, the HGS has grown to almost 5,000 members in the 1980s and 1990s, with members on nearly every continent. Major oil company exploration managers, recognizing the value of industry networking, encouraged their geologists to join HGS and attend luncheons and dinners for technical talks. While the HGS' primary focus was and is petroleum geology, it has also fostered other geological disciplines. Some of those disciplines include environmental geologists, groundwater, surface faulting, geothermal, uranium mining, underground storage and disposal, and academic and government scientists. The future for geologists in the HGS includes carbon sequestration and storage and hydrogen and helium exploration.

HGS LEADS THE WAY

Though no hard numbers are available, Houston likely has the world's largest per capita population of geologists. The oil booms and busts have impacted many HGS members over the years, and the membership has waxed and waned along with oil prices. The perfect storm of price, technology, and available capital came together around 2008, when the unconventional shale plays came into their own, further affecting the way petroleum was explored for and produced, further impacting geological workforce needs.

A victim of their own success, the unconventional plays in North America put more oil and gas into the market, changing the distribution of worldwide supply and then falling to another price collapse beginning in 2014 when oil was over \$100 per barrel. Oil finally dropped to around \$26 per barrel in January 2016. And again in 2020, when oil prices on the NYMEX again dropped to \$26 per barrel during the beginning of the global pandemic.



In 2020, a worldwide pandemic changed how the world interacts by closing businesses and limiting or canceling in-person gatherings worldwide. Virtual meetings, already used moderately for business, became the norm even for personal interactions, and in person events became rare. The impact on professional organizations was debilitating. Costs rose, making electronic delivery of periodicals, including the HGS *Bulletin*, necessary. Companies again had wholesale personnel reductions, and those layoffs affected the latest generation of geoscientists, mirroring 1973, 1986, and later. The more things change, the more they stay the same.

BUILDING BACK STRONGER

That was then, and this is now, where we are climbing out of the post-pandemic and momentarily, at least, stabilizing petroleum prices. The Houston Geological Society is recovering from the last few years, as reflected in last year's President, Walter Light's column. (page 89) He reflects on the financial leveling of HGS' finances and, hopefully, stabilizing and increasing membership. The HGS is still dedicated to its mission to support the geological community via monthly technical meetings, social events, continuing education, academic events, and all the things that the HGS previously provided to its members and non-members alike.

It is truly an honor to have been elected to serve as your President during the Centennial Anniversary of the Houston Geological Society. Thank you for trusting me with this position, but the entire Board, the committee Chairs, and the members drive this society to make it what it is and can be. Thanks to Craig Dingler, and to Charles and Linda Sternbach, co-chairs of the 100th Anniversary Committee, for this special Commemorative Edition of the HGS *Bulletin* and everyone involved in the Centennial Gala and events planned to celebrate this special 100th year of the Houston Geological Society ■.



Paul Britt, HGS President

100th Anniversary Committee

Looking Ahead to A New Century with Elevated Vision

By Charles Sternbach and Linda Sternbach, co-chairs of the HGS 100th Anniversary Committee



Geoscientists of today and tomorrow (foreground) build on our proud heritage (background). (Image of Texas Geologists meeting in the 1920s, artistic design by Matt Randolph, AAPG).

A PERSONAL STORY

We joined HGS shortly after arriving in Houston as new-hire geologists in 1984. As typical young professionals, we didn't know anyone. HGS changed all that. Over the next nearly 40 years, we met thousands of fellow geoscientists by attending and organizing hundreds of technical talks for HGS. We benefitted immensely from learning about exciting discoveries, plays, and technology from those who made them happen. We even befriended a few legends along the journey. We are grateful for the friendships that arose while serving HGS behind the scenes and in leadership roles. We are honored to be HGS members, co-chairs of the HGS 100th Anniversary Committee, and to summarize Centennial Year celebrations.

The HGS Star burns brightly in the GCAGS constellation of Affiliated Societies

LONG-TERM PLANNING

The HGS 100th Anniversary Committee has been planning for the Anniversary year (1923 to 2023) for more than ten years. Initially, the efforts included steering committee events, like positioning the 2023 GCAGS GeoGulf Convention in Houston. After many years in the planning stages, these efforts resulted in a coordinated series of celebratory events in 2023 that include:

- **GeoGulf 2023**, Saturday to Tuesday, April 22-25, 2023, at the Norris Conference Center (see separate article.)
- **HGS Bulletin Special Issue** (Editorial team led by HGS Past President Craig Dingler)
- **HGS Past Presidents Luncheon**, Tuesday, August 8, 2023, at Petroleum Club of Houston (HGS founded on this date, 1923).
- **HGS Gala**, Saturday, October 7, 2023, at the Petroleum Club of Houston

ELEVATING OUR VIEW

The image below shows the Houston Geological Society (HGS) 100th Anniversary logo unified with the 13 stars of the GCAGS constellation of affiliated Gulf Coast societies. The HGS is one of the bright stars in this constellation, radiating creative energy for 100 years.

Look carefully at the center of the HGS logo. For HGS's first century, the view from the San Jacinto Monument to offshore Galveston Bay prevailed. The expansion from onshore to offshore was a giant leap in technology and abilities that continues into ever-deepening waters.

The view from above elevates our view for the next century. From this view, the Gulf Coast curves into a global community where we exchange people, ideas, prosperity, and resources.

The Gulf Coast is well-positioned. Its infrastructure unifies corporate headquarters, independents, a vital service sector, and universities where new ideas, whole cycle thinking, and energy resources flourish. NASA will continue to explore our planet (and beyond) above Gulf Coast facilities.

The Sun shines brightly on the Gulf Coast. Natural energy from above and below ground makes life more habitable through the energy that Gulf Coast geoscientists work diligently to provide. ■






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Special Interest Groups

Expanding Meeting Topics and New Leadership 1998-2023

History of the International Explorationists Group, North American Group, E&E, and the Northsiders Group

By Linda Sternbach

THE EARLY DAYS

For its early history, HGS only had two monthly meetings: a monthly dinner, and a luncheon meeting. Usually, both meetings were devoted to topics important to the plays of the Gulf of Mexico. As Houston became the center of international and regional domestic oil and gas plays in the late 1990s, Clint Moore championed the development of Special Interest Groups to help HGS become more relevant to specialized communities within the HGS.



Clint Moore

THE RISE OF SPECIAL INTEREST GROUPS

As “the Energy Center of the World,” the HGS needed to expand and address members who wanted special interest groups devoted to world plays, environmental issues, and US plays outside the Gulf of Mexico. The special interest groups thrived because

- Their committees had chairs and co-chairs, including a treasurer and a budget,
- They had the autonomy to experiment with programs using HGS support and advertising,
- The programs attracted excellent leaders, many of whom progressed to the top of HGS leadership and continued in HGS leadership for decades.



(left to right) HGS Africa Conference chairman Al Danforth with speaker Dr. Arnold Bouma (Texas A&M), and PESGB chairman Ray Bate



INTERNATIONAL EXPLORATIONISTS GROUP

The granddaddy of the special interest groups is the International Explorationists Group, created in 1982 under HGS's first woman President, Peggy Rice. I call the International Explorationists the granddaddy, not just in terms of time, but the number of effective programs, the number of people on its committee, and high attendance at nearly every International Group monthly meeting. Most HGS members know that the International Explorationists group created the Africa Conference, with the British Society PESGB, jointly hosting a two-day meeting in the US, or in London, every year for decades.

To focus on the last 25 years, the International Explorationists committee included a team from 2000–2005 that worked incredibly well together: Al Danforth, the Africa and Brazil margin expert, retired from Texaco; Scott Thornton, international expert; Steve Henry, consultant with a company called GeoLearn; George D. Klein, and UK natives Ian Poyntz and Ray Bate. Al Danforth, Steve Henry, and Scott Thornton were high-powered international consultants on “conjugate margins” of the US and South American pre-Atlantic rift geology linked to West Africa geology and oil discoveries. They were responsible for the seismic interpretation of TGS and ION regional seismic lines. International topics included Africa, all parts of South America, Mexico, Europe, Indonesia, and even hard-to-get talks like the 2013 talk on the geology of Iraq. New leaders came on board around 2007, including Tarek Ghazi, who worked for Saudi Aramco; in 2018, Steve Getz and Donna Davis were co-chairs, later including Ryan Yarrington.



Steve Getz and Kurt Rudolph



Gary Coburn and Dave Tonner

NORTH AMERICAN EXPLORATIONISTS GROUP

The North American Explorationists Group also dates back to 1990-92 and has had a smaller but dedicated committee. This group's focus encompasses plays in North America, including Canada and Mexico, but particularly the Permian Basin, which has had HGS members from Shell, Conoco, and Amoco, who wanted to network on conventional oil plays in the Midland and Delaware basins. Founding chairs of this group include HGS Past Presidents Charles Sternbach and Steve Levine.



Steve Levine



Steve Earle

Since 2000, Committee Chairs include Stephanie Matthews and Steve Earle (2000-2004), followed by Mike Jones in 2007. Steve Getz became chair of the North American group in 2008 and co-chaired the group with Donna Davis till 2011. The most recent chairs of the North American group include Ceri Davies of CGG and John Bishop. Mark Hamzat Erogbogbo organized a new program called "The State of Private Equity" for North America in 2020, 2021 and 2022. The Private Equity talks included Wall Street investors discussing future funding of oil and gas deals post-shale plays.



Ceri Davies



Mark Hamzat Erogbogbo

NORTHSIDERS GROUP

The Northsiders Group was formed around 2002 to serve members living in Houston's Greenspoint and Woodlands area. Ray Sorenson (and others) championed a new group based in the northern Houston



Frank Walles

community. These members felt they could not attend regular HGS dinners in West Houston and drive back home at night. This group has been unique as the committee leaders came from Devon Energy and Weatherford Labs and scheduled talks on any topic that interested them, not staying inside a geographic theme. Frank Walles, who worked at Devon and later at Anadarko in the Woodlands, and Gary Coburn of Murphy Oil turned the Northsiders into a place to learn about the shale play, and many committee members also volunteered at the annual Applied Geomechanics Conference that became known as the Mudrocks Conference 2004-2009. The committee chairs for 2010-2021 have included Tony D'Agostino, David Tonner, Michael Salazar, Sydney Michelle Weitkunat, Ian McGlynn, and Jeremy Andrews of XTO Energy. HGS Past President Clint Moore championed the creation of the Northsiders Group and we need to acknowledge Clint as the leadership supporter of all the HGS Special Interest Groups.

E&E, THE ENVIRONMENTAL AND ENGINEERING GROUP

The Environmental & Engineering Geologists group, while smaller than some of the other HGS committees, has a dedicated membership that is very active in the Society's affairs. It has firmly established itself as one of the mainstays of HGS technical offerings.

The committee is currently co-chaired by Matthew Cowen and Troy Meinen. Glenn Lowenstein adopted the chairmanship in the late 1990s from Craig Dingler and helped shepherd the organization for 10 years. Monthly dinner meetings were held at Charlie's Hamburgers and have moved around to various local eateries (Jalapenos, Rudi Lechner's) and was at the Black Labrador from 2007 to 2020. The meetings have been at Craft Republic Houston for the last few years.



Craig Dingler



Troy Meinen



Glenn Lowenstein



Matthew Cohen



Richard Howe

During the early 1990s, the E&EG group was instrumental in introducing legislation for the licensing of geologists who practice before the public in realms that dealt with the public's health, safety, and welfare in Texas. Their hard work paid off when licensing was passed in 2001 and became effective in 2003. During this time members such as Richard Howe, Glenn Lowenstein, and Michael Campbell were very helpful in this endeavor.

Today the committee's focus is still on the environmental and engineering sectors of geology as well as keeping tabs on licensure. The E&EG group still provides important networking opportunities for the unemployed and those who still wish to transition to different career paths within geology.

EMERGING TECHNOLOGY AND TECHNOFEST COMMITTEE

Emerging Technology was a dinner meeting championed by Ron Nelson, who wanted to schedule talks on logging tools, core analysis, fractures, and rock topics not covered by the HGS dinner meetings. Tom Tucker helped lay the early groundwork. Clint Moore asked Charles Sternbach to chair the group, and Charles formed a talented and dynamic committee including Shawn Porche, Rosemary Mullin, Frank Rabbio, and Dan Morris. In their first year, they showcased five talks, each with more than 100 attendees. The group quickly gained critical mass.

The committee developed creative ideas, including Technofest, an all-day event championed by Shawn Porche. Jim Doyle and Mike Allison were chairs (2002-2004). And software vendors rented



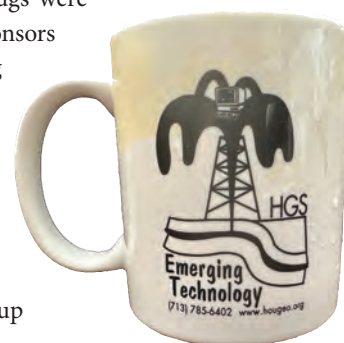
Shawn Porche, Jennifer Burton, and Linda Sternbach at Technofest



Donna Davis, Laura Kamrath, and Linda Sternbach wearing HGS themed shirts and holding mugs and mousepads

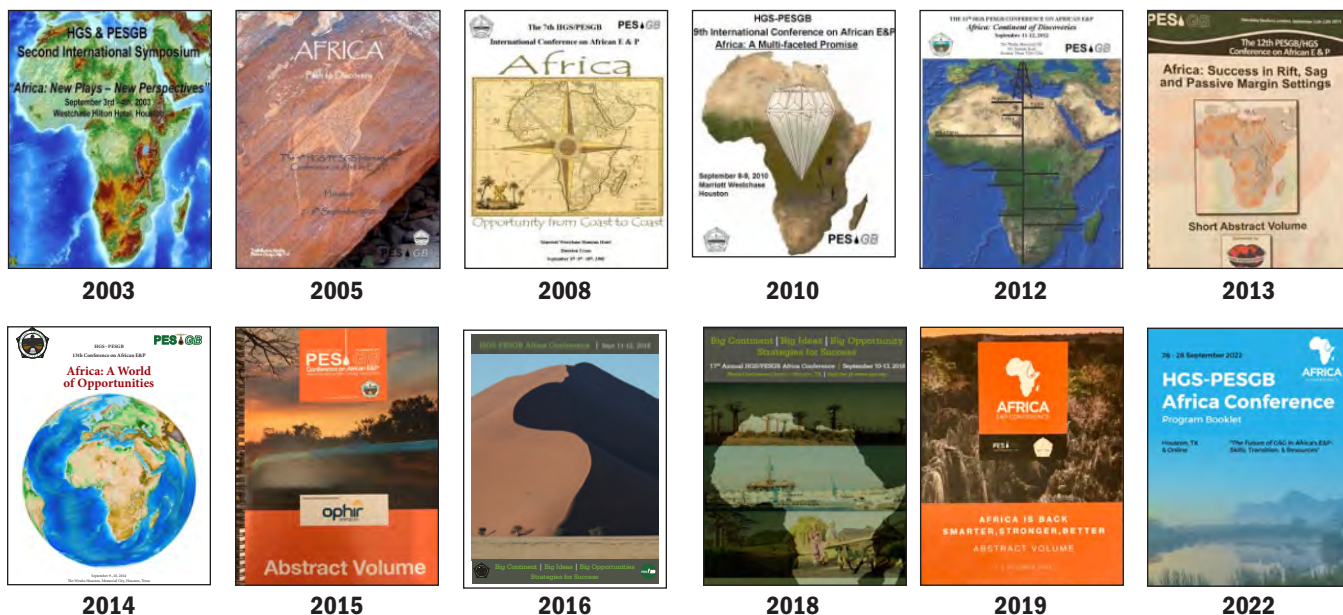
booths to meet attendees and network on new products. Deborah Sacrey did a great job on Techofest and Techno-Conference in 2008, making significant profits for HGS.

Buoyed by this success and enthusiastic team spirit, the group created 100 coffee mugs labeled "Emerging Technology" out of a small portion of revenue surplus generated by meetings that packed the house. These mugs were greatly appreciated by the sponsors and participants, popularizing the committee's team spirit. Mugs were sold at meetings, recouping much more than the mugs originally cost, making everyone happy. It's time to bring back the Emerging Technology Group with new chairs! ■



Africa Conference

By Caroline Wachtman, Kevin Dale, Al Danforth, Brian Horn, and Duncan MacGregor



IT STARTED IN A PUB IN 2001

Like many great ideas, the idea for the Africa Conference started with a small group of colleagues chatting after work in a pub. That initial pub conversation was held in 2001, and it sparked a collaboration extending more than 22 years between the Houston Geological Society (HGS) and the Geoscience Energy Society of Great Britain (GESGP; formerly the Petroleum Society of Great Britain, PESGB). During that time, the Africa Conference hosted hundreds of presentations from majors, independents, consultants, academics, and government ministries. The format and content of the Africa Conference have evolved, but the Conference has continued to mirror the interest and enthusiasm of geologists exploring and developing energy resources in Africa.

THE EARLY DAYS

During the late 1990s, the PESGB Special Interest Group on Africa periodically held symposiums organized by Nick Cameron, Val Clure, and Ray Bate. In late 2001, Al Danforth from the HGS and Ray Bate from the PESGB discussed the challenges encountered by small professional societies when organizing conferences. They conceived the idea of jointly organizing and marketing a conference on Africa. The PESGB and HGS planned to alternate as hosts; each society would assume the risk and keep the financial benefit of being the host. Although there was no formal agreement, the partnership has proven successful for more than 22 years.

HIGHLIGHTS BY THE NUMBERS

- 650 delegates attended the 2013 Conference, the largest number of attendees
- 80 presentations at the 2017 Conference, the largest number of oral presentations to date
- 21 annual conferences held since 2002
- 3 years that the Conference was held virtually
- 2019, the year that TV documentary geologist, Professor Iain Stewart, handed out the awards for best papers

The inaugural 2002 conference was hosted by PESGB in London and chaired by Ray Bate with support from Duncan MacGregor. Over 250 delegates attended and presented talks on “Africa: The

Success will Continue.” HGS hosted the 2nd Africa conference in Houston in 2003 with the theme “Africa: New Plays – New Perspectives.” The HGS introduced posters and vendor booths to the Conference that year. PESGB hosted the 2004 conference, “The Continent of Challenge and Opportunity,” followed by “Africa: Path to Discovery,” hosted by HGS in 2005. More than 150 papers were presented during the 2006 conference, themed “The Elephants

of the Future.” In these years, most of the papers focused on exploration in West and North Africa, although East Africa was a key focus in 2003.

CONFERENCE EVOLUTION

Attracting African contributors has historically been a challenge, and the HGS and PESGB tried to attract more local contributions by moving the 2007 conference to Cape Town. Attendance was overall low, and the Conference was returned to Houston in 2008. In 2019, PESGB worked closely with seismic vendors to increase the number of African delegates and to support local content development. The model successfully increased African participation, but it was not sustainable with the shift to a virtual format in 2020. Approximately 10% of the delegates to the 2022 virtual conference were in Africa, whereas nearly 70% of delegates attended from Houston or London.

The role of seismic data in exploration has historically been a theme of the Conference. A seismic workshop was added to the program for the 12th Conference held in 2013 in London. Including seismic was further expanded in 2015 and 2016 to include seismic vendors showcasing the latest products and services. In 2018, attendees discussed and interpreted seismic lines that extended the length of a hotel. Seismic vendors composed fewer delegates to the 2022 conference but remained integral to the Conference's success, with Shearwater as the headline sponsor that year.

Although the Africa Conference is focused on hydrocarbon exploration, development, and production, the Conference has continued to evolve with the energy industry. In 2021, the first Energy Transition session was included. It featured talks on the CO₂ storage potential and geothermal exploration potential of Africa. This theme was continued and expanded in 2022, with talks on hydrogen and helium exploration, machine learning workflows applied to CO₂ storage and net-zero goals.

GOING VIRTUAL...AND BACK

The Africa conference went virtual in 2020 when the COVID-19 global pandemic resulted in travel restrictions and reduced corporate budgets. In 2020, the HGS held the 19th Conference as an online series featuring different African areas each Thursday over a month. The 20th and 21st annual conferences were held as two half-day virtual technical sessions as the global pandemic continued to limit travel and cause logistical uncertainties. In addition to the virtual components, an in-person dinner and social hour were held in Houston in 2022.

The Africa Conference participants realized key benefits of virtual conferences, such as engaging a worldwide and diverse audience, allowing attendees the flexibility to manage their schedules, and reducing costs. However, participants also missed face-to-face networking opportunities. Participant feedback on the virtual v. in-person format following the 2022 conference was evenly split, with half of the participants strongly in favor of continuing virtually and an equal number preferring a return to an in-person format. The 22nd Annual Conference will be held in London and will be a welcome return to in-person presentations, posters, and exhibitors. The 2023 event aims to showcase how the subsurface of Africa has the potential to power the world's future and drive its own energy development.

22ND CONFERENCE

The 2022 Conference had three goals: to be inclusive, be accretive to the discussion on African geology, and foster engagement among the community of scientists and businesspeople working in Africa. To achieve these goals, the Conference included 28 virtual presentations, a pre-conference in-person dinner, and a post-conference in-person social in Houston. Nearly 200 people participated in one or more of the events, and many attendees were outside Houston. Approximately one-third of participants worked for Exploration & Production companies, one-third worked as consultants, and vendors or those in academia comprised the final third. ■

DATE	LOCATION	TITLE	CHAIR*
2023	London	Unlocking African Energy to Power the Future	Gavin Elliott
2022	Houston	The Future of G&G in Africa: Skills, Transition, and Resources	Caroline Wachtman
2021	London	Africa Conference on E&P	Kevin Dale
2020	Houston	Africa and its Conjugate Margins – New Ideas, Play and Innovation	Brian Horn
2019	London	Africa is Back: Smarter, Stronger, Better	Kevin Dale
2018	Houston	Big Continent, Big Ideas, Big Opportunity, Strategies for Success	Brian Horn
2017	London	New Thinking, New Technology, New Hydrocarbons	Kevin Dale
2016	Houston	Africa: What's Next?	John Jordan
2015	London	Always Something New Coming Out of Africa	Ray Bate
2014	Houston	Africa: A World of Opportunities	Martin Cassidy
2013	London	Africa: Success in Rift, Sag, and Passive Margin Settings	Ray Bate
2012	Houston	Africa: Continent of Discoveries	Al Danforth
2011	London	Africa: A Legacy of Exploration and Discovery	Ray Bate
2010	Houston	Africa: A Multi-faceted Promise	Al Danforth
2009	London	Africa: New Concepts for the Oldest Continent	Ray Bate
2008	Houston	Africa - Opportunity from Coast to Coast	Al Danforth
2007	Cape Town	Africa's Petroleum Systems: From Outcrop to Deepwater	Ray Bate
2006	London	Africa: The Elephants of the Future	Ray Bate
2005	Houston	Africa: Path to Discovery	Al Danforth
2004	London	Africa: The Continent of Challenge and Opportunity	Ray Bate
2003	Houston	Africa: New Plays – New Perspectives	Al Danforth
2002	London	Africa: The Success Will Continue	Ray Bate

**Although only the Chair is listed here, the Africa Conference would not be possible without the dedicated support of dozens of volunteers and staff from HGS and PESGB.*

Mudrocks Conference 2007-2018

By Frank Walles, Linda Sternbach



Frank Walles gives opening remarks, first Mudrocks Conference 2007

ORIGIN OF A FRANCHISE

Long-term successful HGS programs like Legends, Scholarship Night, Africa Conference, Guest Night, Sheriff Lecture, NeoGeos, and others anticipate a trend and fulfill a need. The Applied Geoscience “Mudrock” Conference belongs to this pantheon. As George Mitchell foretold in his Legends appearance in 2000, the power of combining geoscience and engineering in well-completion techniques would change the Petroleum Industry profoundly. An age of experimentation followed, driven by a rapid proliferation of horizontal drilling and hydraulic fracturing. Science evolved rapidly to meet the needs of Industry, and the HGS Applied Geoscience Mudrocks Conference provided a forum for collaboration precisely at the right time and place.

Members of the HGS Northsiders Group and AAPG Energy Minerals Group put their stamp on the 2000s era at HGS by creating a “Mudrocks” Conference from idea to reality. During

the AAPG ACE in Long Beach, California, Spring of 2007, Frank Walles discussed the conference idea with Charles Sternbach, who advised: “Why not bring this conference to HGS?”

The first HGS Mudrocks Conference was proposed in Fall 2007 by Frank Walles (Devon) and Paul Basinski (ConocoPhillips) to then-President Linda Sternbach as a one-day program to gather top experts in the unconventional field. Walles said he didn’t want to do another Barnett Shale program then because he saw the Mudrocks expanding to the Eagle Ford Shale and Austin Chalk. Paul Basinski had already contacted many key people in the shale-gas/unconventional-reservoir topic area. Key volunteers from the HGS Northsiders’ Group included Committee co-chair David Tonner (International Logging), Bruce Martin (Devon), and Kirk Barrell (Wave Exploration).

GREENLIGHTING A WELL-ORGANIZED TEAM WITH A VISION

To the HGS Board’s credit, they approved the “Mudrocks” idea as a new conference along the lines of the existing “Africa Conference.” The first ever “Applied Geoscience Conference: U.S. Gulf Region Mudstones as Unconventional Shale Gas/Oil Reservoirs, Fractured, and Non-Fractured,” was held at the downtown Houston Doubletree Hotel, October 1 and 2, 2007. The first conference attracted about 180 people, but the second conference in 2009 sold out. HGS Board members knew there was an industry demand for conferences combining geology, petrophysics, reservoir engineers, and drilling of unconventional shale plays.

Walles and Basinski also coordinated an AAPG Energy Minerals sub-website with industry papers and key information available only to AAPG EMD members. HGS benefited because the now yearly “Mudrocks Conference” was an early conduit for



Matt Boyd, David Tonner, Frank Walles, Paul Basinski, Kirk Barrell, Tony D'Agostino

The Mudrocks Conference is one of the finest examples of a well-organized team collaboratively addressing scientific challenges to drive Industry success.

accessing unconventional shale research and abstracts beyond the AAPG EMD members-only website. Many people joined AAPG, HGS, and the Energy Minerals Division just to be able to read cutting-edge research from companies like Devon, Baker, Southwestern Energy, and CoreLab. AAPG started organizing its own Unconventional Shale Conferences, and eventually, the EMD membership became free and open to all AAPG members.

MULTI-DISCIPLINES AND EXPANDING VENUES

Mudrocks Conferences were held for one year at the Hilton North Hotel at Greenspoint (Feb 8-9, 2010). This conference was highly geologically focused on Gulf Coast shales and the Louisiana Haynesville featuring well-known researchers Kevin Bohacs (ExxonMobil), Kitty Milliken (BEG), Ursula Hammes, and Scott Hamlin (Haynesville, BEG), and Randy Miller of CoreLab. Industry experts in Houston-based companies included Dan Jarvie, Phil Martin (New Century), Mike Cameron (Newfield), and Bruce Martin (Southwest Energy).

The Westin Hotel, a bigger venue on I-10 and Beltway 8, became the Mudrocks meeting spot for several years, 2011-2018. The Mudrocks conference added core workshops and exhibits. It expanded the unconventional plays to include the Midland Basin (Cline Shale), Permian Basin (Wolfbone), Midcontinent Niobrara Plays, and Canadian plays in Newfoundland. The Mudrocks Committee included 47 people in its heyday. The biggest audience attendance was in 2015, with 250 attendees. The HGS committee included Frank Walles, Michael Van Horn, and Mike Cameron (Newfield), Bruce Martin (UCK Consulting), Kathy McDonald (Southwestern Energy), Dave Tonner (Weatherford), James Schulke (Devon), and Randy Lafollette (Baker Hughes). Sponsoring companies include Newfield, Talisman, Shell, ConocoPhillips, Anadarko, Statoil, Weatherford, and CoreLab.

The setback of the petroleum industry with low oil prices affected the last Mudrocks Conferences 2016-2018—the topics diversified into hybrid petroleum systems, completion technology, and geo-mechanics of rocks. The 2018 Mudrocks Conference was held at the Anadarko Tower, with 180 people attending. In 2019, the conference became the HGS “Subsurface Intelligence and Analytics Conference” about digital workflows in the geoscience disciplines and the latest advancements in utilizing new digital technologies hosting 170 attendees.

IS IT THE ROCK OR THE FRAC?

During the tenure of the Mudrock Conference, many fundamental scientific issues were yet to be settled. Creative debates flourished. These included optimizing the hydraulic fracturing variables and understanding fundamental geology, rock properties, and mechanics. Debates also included whether or not gas AND oil would flow. How fluids flow from nanopores in various unconventional plays was hotly debated. New science was being created, and the Mudrocks Conference was the crucible for testing and discussing new ideas.

LEGACY OF DISCOVERY

During its decade-plus of annual conferences, the Mudrocks Conference produced an incredible legacy of papers and speaking engagements for leading scientists of the Gulf Coast, Permian Basin, and shale plays all over the country and the world. HGS benefited financially from this volunteer-led program, growing the Society to nearly 3500 members. Total net revenue to HGS from many profitable conferences exceeded \$1 million. The Mudrocks Conference is one of the finest examples of a well-organized team collaboratively addressing scientific challenges to drive Industry success. How wonderful that HGS provided the platform for such a conference to flourish! ■



Dr. Arnold Bouma looks at cores.

Continuing Education

The Mission of Timely Education

By Cheryl Desforges

The first mention of a continuing education committee in the HGS Bulletin was in November 1967, continuing through May 1974, as a Special Committee, A.A.P.G. Continuing Education Co-Ordinator with the first Chairman DeWitt Van Siclen. By September 1974, continuing through May 1975, the A.A.P.G. affiliation was removed, for the Special Committee named Continuing Education. By the September 1975 Bulletin, the Continuing Education Committee was elevated to a HGS standing committee. The Continuing Education Committee (CEC.) is a longtime stalwart HGS Committee. We produce short courses on various topics with some classic repetitions, such as those addressing petrophysics.

The CEC's stated mission from 1998 to 2023 has always been to provide *timely* courses that provide material that participants can immediately apply when they return to their offices. Until the most recent fiscal year, 2022-2023, the CEC was proud to provide courses to members at below commercial rates while providing a profit to contribute to HGS overhead. During this recent year, the CEC was proud to provide courses at commercial rates that could still attract participants while contributing a larger, significant profit to help HGS recover from the recent fiscal deficit it was experiencing.

Timely applies to world-class conferences the CEC organized while collaborating with other organizations. These conferences took a full year of planning before they were executed.

*Continuing Education Courses
provide timely material that
participants can immediately apply
when they return to their offices.*

- The HGS CEC and the Engineering, Science and Technology Council of Houston joined forces to present a 3-day conference on November 3-5, 2005, "Coastal Subsidence, Sea Level and the Future of the Gulf Coast Conference." This conference earned the CEC a reputation of prescience since the conference planning started a year earlier in 2004, and Hurricane Katrina hit New Orleans on August 29, 2005, highlighting the impact of coastal subsidence.
- The HGS CEC joined forces with the Gulf Coast Section of the SEPM (GCSSEPG) and the Engineering, Science and Technology Council of Houston to present the 2-day conference "Flooding in Southeast Texas: The Science Behind the Floods" on June 6-7, 2018. Much of the basis for the science presented was provided by Hurricane Harvey, which dumped 60 inches of rain on the southeast on August 25, 2017, causing catastrophic flooding in Houston.
- *Timely* repeatedly applies to short courses and short course series the CEC developed.

- On the heels of the passage of the 2002 Sarbanes-Oxley Act, CEC presented a 4-part mini-series, "Petroleum Reserves—Avoiding Write-downs," with world-class instructors:
 - **Part One**, "An overview of reserve definitions and reporting requirements," taught by John Hodgins and Thomas Wagenhofer of Ryder Scott Company on December 15, 2004.
 - **Part Two**, "An Overview of Recommended Geological Practices," taught by Daniel J. Tearpock of Subsurface Consultants & Associates, LLC on January 20, 2005
 - **Part Three**, "An Overview of Recommended Engineering Practices," taught by William M. Kazmann and Edward P. Travis of LaRoche Petroleum Consultants, LTD on May 20, 2005
 - **Part Four**, "An Overview of Recommended Petrophysical Practices," taught by Bill Price, John Kulha, and Ted Griffin of Petrophysical Solutions, Inc. Consultant Core Lab on September 21, 2005

To provide residual income for HGS, the CEC proposed recording the "Petroleum Reserves—Avoiding Write-downs" mini-series and creating a CD volume that could later be sold. The CEC acquired corporate donations to provide the funding to purchase a video camera, Camtasia editing software, and seed money to publish the CD volume. This initiative launched the newly created Video Committee. Creating residual income from short courses persists today as a CEC subcommittee investigates developing the process for on-demand video-recorded short courses.

Most recently, the CEC has created another subcommittee to find worthy technical papers to submit for publication in the HGS *Bulletin*. These will be another facet of continuing education.

CEC members were also the drivers behind the 2017 HGS acquisition of Zoom video conferencing licenses. We provided the technical investigation team to look at all available options and choose the best product for members who became the new HGS Communications Committee. This early effort was important to the seamless transition to virtual HGS meetings during the Covid crisis.

During HGS's second century, the CEC expects to continue innovating while providing meaningful educational opportunities for members and the Geological community. ■

Robert E. Sheriff Lecture *A Tradition from 1999*

By Charles Sternbach (Adjunct Professor at the University of Houston)



EAS Student Awardees and Department Chair (from left to right): Michael Comas (Advanced PhD), Sharmila Appini (Advanced PhD), Tom Lapen (Department Chair), Steven Ramirez (BS), Julia Villafranca (MS), Sara Rojas (Early PhD), and Daniella Gutierrez Easley (Advanced PhD).

A NEW IDEA WITH STAYING POWER

In 1999, David Meaux, HGS member and president of the University of Houston Geological Alumni Association (UHGAA), brought a new idea to the HGS Executive Committee. I was HGS president then, and I knew Dave from Shell. Dave recommended that HGS dedicate an annual dinner in honor of Dr. Robert E. (Bob), Sheriff of UH, where students present posters and network with the HGS professional community. HGS listened and acted. Two decades later, we are sure glad we did. Students and Industry have benefitted from this longstanding mentoring tradition.

EXPLORATION GEOLOGY AND GEOPHYSICS MISSION

The Sheriff Lecture has been held continuously since 1999 with scholarly presentations by outstanding scientists. The series honors Dr. Sheriff as an educator, scholar, and proponent of geosciences. Its mission is to

1. Bring some of the best-known geologists and geophysicists in the world to the Houston community to share highly relevant ideas to exploration geology and geophysics
2. Showcase geoscience activity at the University of Houston.

POSTER COMPETITION AND RECOGNIZING STUDENT SCHOLARSHIP.

Students present their research each year, and judges rank the best presentations. The competition is fun and rewarding. The students gain valuable experience and feedback interacting with

Industry professionals. These interactions nourish many valuable contacts and mentoring relationships.

HGS salutes 25 speakers, their co-authors, and hundreds of student scholars over two decades. We thank the presenters for stimulating scientific presentations and the students for sharing their research. HGS has benefited greatly from this lively interaction. Many UH alums have found leadership positions at HGS and in Industry. ■



Dr. Robert E. (Bob), Sheriff



HISTORICAL LISTING OF YEARS, SPEAKERS, AND (KNOWN) TOPICS

1999	Dr. Kurt Marfurt	—
2000	Dr. Kevin Burke	Africa's Vast Petroleum Systems
2001	Dr. John Dewey	Transtension in Arcs and Orogens
2002	Dr. Martin Jackson and Michael Hudec	Kwanza Arcana: A New Look at Angolan Salt Tectonics, Tectonostratigraphy, and Differential Uplift
2003	Dr. John Van Wagoner	Energy Dissipation: Origin of Structure and Organization in Siliciclastic Sedimentary Systems
2004	Dr. Celal Sengor	The Geology of the Middle East — Sheriff Lecture Conference held at the University of Houston to Honor Dr. Kevin Burke – Plate Tectonics, Plumes, and Planetary Lithospheres
2005	Dr. Janok Bhattacharya	Martian Deltas and the Origin of Life
2006	Dr. Henry Posamentier	Seismic Geomorphology and Seismic Stratigraphy from Shelf to Deepwater: Implications for Exploration and Development
2007	Dr. Chris Beaumont	Canada Research Chair in Geodynamics, Dalhousie University
2008	Dr. Brian Tucholke	Crustal Extension and Mantle Exhumation in Weakly Magmatic Rifts and Mid-Ocean Ridges
2009	Dr. Jürgen Schieber	Narrative of an Unrepentant Shale Geologist—Why Mudstones Have a Key Role in Unlocking Geological History and Understanding the Hydrocarbon System
2010	John Walsh	The Structure, Content, and Growth of Fault Zones within Sedimentary Sequences and their Effect on Hydrocarbon Flow
2011	Dr. Paul Mann	Major Hydrocarbon Plays in the Mexican Sector of the Gulf of Mexico, the Caribbean, and Northern South America
2012	Dr. Mike Blum	ExxonMobil Upstream Research Company
2013	Cindy Yeilding	What a Difference a Few Decades Makes: Exploration History of the US Gulf of Mexico Deepwater
2014	Dr. Tony Doré	The Arctic—a Tectonic Tour through the Last Great Petroleum Frontier
2015	Kevin Bohacs	Order from Chaos—Mudstones as Hydrocarbon Sources, Reservoirs, and Seals: Their Common Characteristics and Genetics, Essential Differences, and Recognition Criteria
2016	Dr. John Suppe	The Second Half of Plate Tectonics: Finding the Last ~200Ma of Subducted Lithosphere and Incorporating it into Plate Reconstruction
2017	Dr. Craig Shipp	Geo Hazards, Retired Shell, Where Offshore Drilling Meets Shallow Geology: Impact of Near-surface Depositional Systems on Deepwater Operations
2018	Dr. Gary Mavko	Navigating Messy Rock Physics Problems
2019	Dr. Julia Wellner	The Sedimentary Record of Antarctica's Contribution to Sea-Level Changes
2020	Dr. Timothy Chisholm, Hess	Hess's Journey into an Emerging Superbasin and Ultra-High Impact Exploration for an Independent E&P Company
2021	Dr. Sean Gulick	Life and Death by Impact—Drilling for Clues
2022	Dr. Yuxuan Wang	Connecting the Dots: Climate Change & Air Pollution

<https://uh.edu/nsm/earth-atmospheric/news-events/sheriff-lecture/prev-sheriff-lectures/>

*Students and Industry have benefitted from
this longstanding mentoring tradition*

GeoGulf23

Invigorating Gulf Coast Geoscience and Regional Plays with New Ideas

*By Charles and Linda Sternbach, Co-Chairs of the HGS 100th Anniversary Committee
and GeoGulf23 General Chair and Technical Program Chair*



The image shows the Houston Geological Society (HGS) 100th Anniversary logo unified with the 13 stars of the GCAGS constellation of affiliated Gulf Coast societies. The HGS is one of the bright stars in this constellation, radiating creative energy for 100 years. Look carefully at the center of the HGS logo. For HGS's first century, the view from the San Jacinto Monument to offshore Galveston Bay prevailed. The expansion from onshore to offshore was a giant leap in technology and abilities that continues today into ever-deepening waters. The view from above elevates our view for the next century. From this view, the Gulf Coast curves into a global community where we exchange people, ideas, prosperity, and resources.

We are pleased to celebrate HGS' 100th Anniversary (1923-2023). This year's centennial plans include GeoGulf23 at the Norris Conference Center on April 22-25, this special HGS August Centenary Edition, and a fall Gala planned for Saturday, October 7, 2023, at the Houston Petroleum Club.

GeoGulf23 welcomed 443 attendees to the premiere event of Gulf Coast geoscience. Our theme, "United we Explore the Gulf of Mexico and Beyond," reminded us that geography, geoscience, and heritage unite us. Gulf Coast Geoscience unites our Section with the AAPG global community. Our workflows unite geology, geophysics, and engineering to optimize commercial solutions.

HGS hosted the 13 affiliated society stars of the GCAGS constellation with 86 technical presentations, 40 poster sessions, 3 field trips, and 3 short courses taught by elite instructors on salt, tectonics, and sedimentary systems. Conference goals delivered

the "energy of now." We had a lively exhibition, social events, and 3 inspirational luncheons. We managed the event with experienced volunteers, and together with 62k sponsorship, we demonstrated economic viability.

Our theme, featured on the GCAGS Transactions and the GeoGulf23 Program book covers, shows the HGS logo prominently beaming like our planet's sun. If you look closely at the HGS logo, you can see that the view from land to offshore was a new frontier in the middle of HGS's first Century. We have purposely selected a theme and a logo that supports an elevated view of our Second Century.

NASA FIELD TRIP

Saturday, April 21, featured a field trip to NASA. Apollo 17 Moonwalker Harrison "Jack" Schmitt led a group of 30 geologists on a behind-the-scenes tour of the Lunar Vault, Mission Control,



Group photo at Rocket Park in front of the Apollo 17 mural.

and Rocket Park. Doug Cook, a leading member of the AAPG Astrogeology Committee, described the field trip and a technical session in June 2023 AAPG *Explorer*. Excerpts below:



Harrison "Jack" Schmitt on the bus going to NASA to talk about Apollo 17

The AAPG Astrogeology Committee led a field trip to NASA Space Center Houston on April 22 as a part of the GeoGulf 2023 Conference. Linda Sternbach and co-leaders Committee Chair Doug Wyatt, Doug Cook, and William Ambrose organized the NASA field trip.



Doug Wyatt looks ahead while enjoying the ride on the private tram with Robert Stewart, UH, and partner Andrea. The group enjoyed time for networking thanks to a temporary tram battery failure.

The field trip featured Apollo 17 astronaut-geologist Harrison "Jack" Schmitt. Activities on the field trip included visits to historic Apollo Mission Control, the Saturn V rocket, the Apollo 17 Command Module capsule, the Lunar Sample Lab, and a luncheon presentation by Harrison Schmitt. At the Apollo 17 capsule, he recounted not getting much sleep on the way to the Moon with one eye open looking for alarm lights on the instrument panel. He graciously posed for a picture with a nine-year-old future astronaut who ran up through the crowd to stand beside him.



Touching a rock sample from the Moon, collected by Dr. Schmitt, returned to Earth by Apollo 17.

"At the luncheon, Dr. Schmitt discussed the geology of the Apollo 17 landing site and various topics on lunar science and resources. He described the ongoing studies of Apollo 17 lunar samples. He is working on the 3-meter core that he drilled near Camelot Crater in the Taurus-Littrow Valley on the eastern rim of Mare Serenitatis. Detailed isotopic analyses reveal changes in solar activity and solar wind over time. Dr. Schmitt explained that it is more likely that the Moon formed coeval with the Earth rather than forming in a collision of Earth with a large planetesimal early in solar system history.

At GeoGulf 2023, Monday, April 24, Doug Cook and William Ambrose co-chaired the technical session “Geoscientists Will Be Exploring the Moon and Mars in the Next Decade.” The session featured two presentations about the Moon (Water-Ice Resources on the Moon, William Ambrose; Exploring for Lunar Volatiles, the VIPER Mission Instrument Package, Doug Wyatt, NASA) and two presentations about Mars (The Search for Life on Mars Doug Cook; Martian Field Geologist: What to Wear When Looking for Life on a Desert Planet? Dr. James F. Reilly, former NASA astronaut-geologist and USGS Director). Jim Reilly’s presentation was an in-depth look at the challenges and radiation hazards of sending a human crew to Mars.”

SHORT COURSES

On Saturday and Sunday, we featured three short courses. We aimed to feature foundational geoscience of salt, sedimentary systems, and tectonics, which conference attendees could build from the technical program. In a post-conference Survey with 50 responses, short courses received a 4.9 out of 5.0 score. The program components were highly ranked, and short courses were at the top.



Lauren Robinson and Cheryl Desforges, our Short Course chairs. Kudos to you both for such great educational opportunities with continuing education credits!

Thank you to our short course chairs, Cheryl Desforges and Lauren Robinson, who commented: “We were thrilled to offer three short courses from highly renowned geologists: Drs. Mark Rowan, John Snedden, and Jim Pindell. Rowan taught his famous “Salt Tectonics of the Gulf of Mexico” course in two days over the conference weekend. Both Snedden and Pindell led invaluable one-day courses: “Gulf of Mexico Sedimentary Basin: Depositional Evolution and Petroleum Applications” and “Structural, Tectonic, and Paleogeographic Evolution of the GOM, Caribbean, and Northern South America,” respectively.

More than 40 geologists actively participated in the classes, ranging from graduate students to seasoned professionals in experience level.



Short Course attendees Steve Getz and HGS president Walter Light interpret a seismic exercise. Colored pencils were involved!



Maria Pesek and Mark Shann attend Dr. James Pindell’s Short Course #3 “Structural, Tectonic, and Paleogeomorphic Evolution of the GOM, Caribbean, and Northern South America”

A STUDENT ATTENDEE COMMENT

“Hello, Prof. Liu. I hope this email finds you well. I had the opportunity to speak with Mark Rowan after the class, and he provided us with a wealth of valuable suggestions and insights. I look forward to discussing these in more detail upon my return. Thank you for sponsoring my visit to Houston to learn more about salt tectonics. The opportunity to explore more in this field and learn from Mark and Charles has been an incredible experience that I will always cherish. Thank you for introducing me to Dr. Bishop, and again for your support. I will continue to work hard and put into practice the knowledge I have gained during my time in Houston.

Best Regards, Yiren Gou”



PhD student Yiren Gou appreciated the special attention from Short Course Instructor Dr. Mark Rowan (right) and Dr. Charles Sternbach (on left)

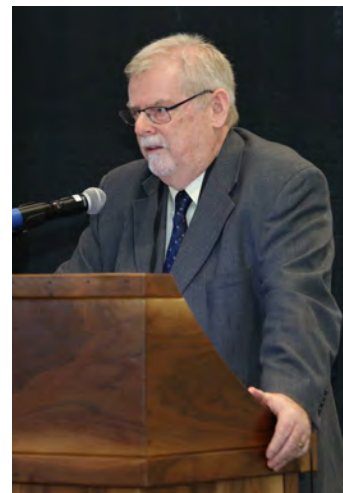
More than 40 geologists actively participated in the classes, ranging from graduate students to seasoned professionals in experience level. Importantly, we minimized expenses by distributing digital course notes before the courses and added value by providing continuing education certificates that can be used for license requirements. All in all, what a way to kick off the conference!”

OPENING CEREMONY

On Sunday, we celebrated some of the best and brightest geoscientists of the GoM with technical and service awards and celebrated academic excellence. Charles Sternbach called the meeting to order and welcomed VIPs in the audience, including AAPG president-elect Claudia Hackbarth, Rebecca Dodge, AAPG VP, HGS Host Society President Walter Light, and Paul Britt HGS President-elect. He thanked all the volunteers, sponsors, and exhibitors, James Willis, editor of the *GCAGS Transactions*, and Bob Merrill, editor of the *Journal*. Linda Sternbach reviewed the

conference highlights, short courses, field trips, posters, and technical program presenters. Linda especially thanked the Session Chairs for being the heart and soul of the meeting.

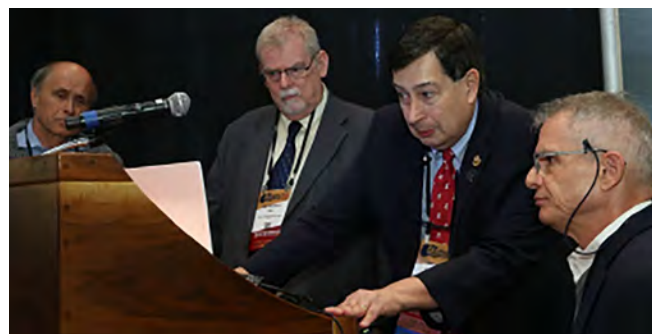
Mike Erpenbeck spoke from the heart about GCAGS and the importance of recognizing the “best of the best” with honors and awards. GCSSEPM President Mike Sweet also commented about the importance of meetings like GeoGulf



Mike Erpenbeck speaks from the heart about honoring traditions and the “best of the best.”



We celebrate two types of excellence. Service and Science.
The geoscience is the foundation of our professional growth. And we recognize those whose service improves our professional community enriching for us all. Read more <https://www.gcags.org/GCAGS%20Awards/Information.About.GCAGS.Awards.html>



The Honors and Awards team in action: Mike Sweet (GCSSEPM president), Mike Erpenbeck (GCAGS President), Charles Sternbach (GeoGulf General Chair), and Mark Schuster (GCAGS Awards Chairman)



Welcome to HGS and AAPG Leadership.
The local societies bring great geoscience to a global community. Left to right: Claudia Hackbarth, AAPG President-Elect; Rebecca Dodge, AAPG Sections Vice President; Walter Light, HGS President; Paul Britt, HGS President-Elect

20 Student Posters and 12 Professional Posters



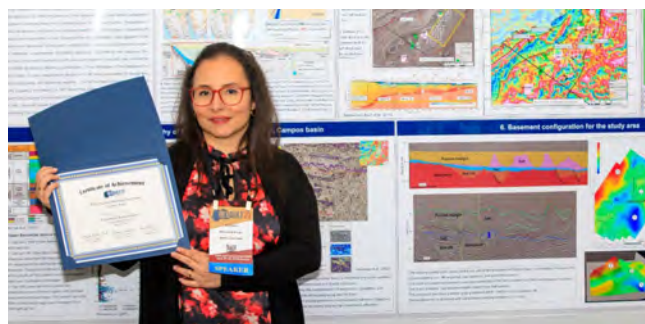
and the GCSSEPM Perkins Conference for promoting Gulf Coast Basins' geoscience. Mark Shuster, GCAGS President 2021, honored service awardees. GCAGS 2021 Technical Program Chair Toti Larsen honored the winners of best papers. Sternbach ended the awards by co-dedicating the 2023 GCAGS *Transactions* to Peter Rose (memorial) and Mike Forrest (in honor). We chose a geologist and a geophysicist to symbolize geoscience teamwork and integration.

POSTER SESSION

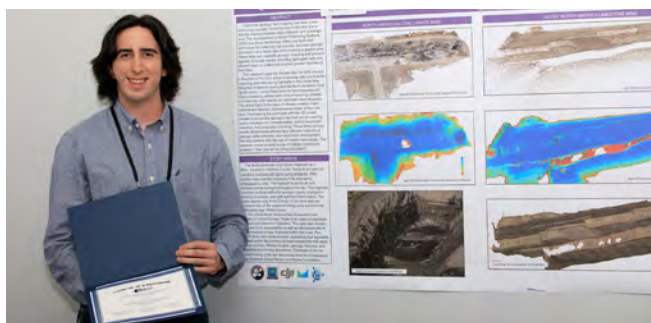
GeoGulf 2023 hosted an exciting poster session in Pecan Hall of the Norris Conference Center. Students and professionals from eight universities, three research institutions, and a few companies presented their posters. The conference participants showed keen interest in the presented research, and we saw a lot of activity during the session breaks. The poster session continued throughout the conference, and Dr. Nawaz Bugti was the session's chair.



Thank you to Sandy Rushworth and David Risch, our judging chairs, and First Place Award winner Juan Pablo Ramos Vargas



Thank you to Ruth Beltran for your award-winning poster.



Thank you to Luke Whittenburg for your award-winning poster.



Students share their research and received valuable feedback from experienced industry professionals

Elaborate arrangements were made for judging the posters by senior professionals from the oil and gas industry, and Sandy Rushworth and David Rische headed the judging activity. At least three judges judged each poster presentation. Winners were recognized with certificates.

The conference participants showed keen interest in the presented research



Lots of networking and good things to eat and drink at the IceBreaker.



Thank you to Outstanding Educator Awardee Dr. Julie Bloxson, Dr. Mindy Faulkner, Dr. Wesley Brown, and Stephen F. Austin University colleagues for strong support and student participation.



Dr. James Willis (GCAGS Transactions Editor) and Dr. Robert K. Merrill (GCAGS Journal Editor) make quite a team.

ICEBREAKER

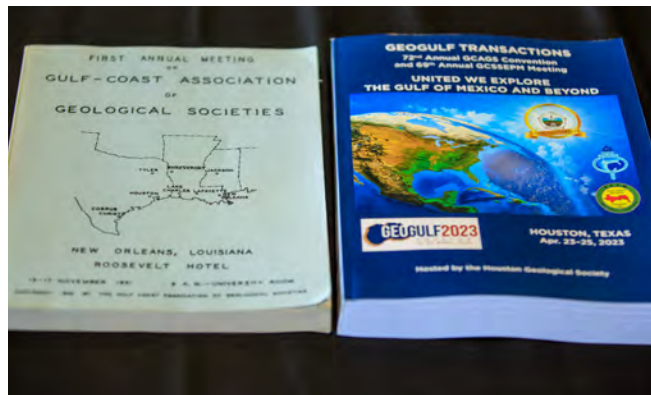
In the Exhibit Hall, student posters featured lively interactions and an abundant taco buffet. GCAGS teamed up with GCSSEPM and hosted several book signings in the GCAGS booth, prominently in the main registration area. There was great interest in the GCAGS publications and the Transactions for this 72nd annual GCAGS meeting.



Fun times with HGS Director Bill DeMis (Haynesville session chair) and Ursula Hammes (speaker).



Thank you to Diversified Mudlogging, David Tonner, and Tracy Walker for exhibiting, sponsoring, and making the Moran Party and the IceBreaker a big success.



Behold the very first GCAGS Transaction from 1951 and the latest 2023 version. There's a lot of great Gulf Coast geoscience in between.

AAPG FOUNDATION NETWORKING RECEPTION AT GEOGULF23

The AAPG Foundation, led by Chairman Jim McGhay, decided to hold a networking event in conjunction with the AAPG Gulf Coast Section Meeting, GeoGulf23, in late April 2023 in Houston. The inspiration was to take advantage of the gathering of AAPG Trustees, the large Trustee Associate contingent who live in and near Houston, and numerous geologists attending the GeoGulf conference who are potential candidates to be invited to join the Trustee Associates. Jeff Lund, AAPG Foundation Trustee and GeoGulf23 General Vice-chair, offer some comments:

“The event was very successful. We had a private room at the Hotel Moran with hors d'oeuvres and cocktails. AAPG Trustee Chair McGhay gave remarks with slides describing the Foundation's various outreach programs supporting geoscience students, the Foundation's support of worthy projects, including the Imperial Barrel program, and the numerous awards the Foundation supports, such as Teacher of the Year. GeoGulf23 General Chair Charles Sternbach welcomed the attendees.

Attendees invited included the AAPG officers, key volunteers organizing the GeoGulf23 conference, many proactive young professionals who may be interested in joining the Trustee Associates, and several executives of companies who generously sponsored the conference. In addition to current Trustee Associates having a chance to network, we believe many new candidates were reached and made aware of the Foundation's work. The GeoGulf23 All Convention Luncheon speaker, Apollo 17 astronaut/geologist, and AAPG member Harrison Schmitt attended and was excited to meet many of the Trustees and Trustee Associates.



Jim McGhay, Chairman of the AAPG Foundation, describes many valuable programs that the AAPG Foundation underwrites and supports.

In addition to current Trustee Associates having a chance to network, we believe many new candidates were reached and made aware of the Foundation's work.

We believe holding networking events like this might be a welcome addition to all AAPG Section meetings and mutually benefit everyone involved.”

GIANT FIELDS KEYNOTE TALK, MONDAY SESSIONS

We encouraged attendees to Think Big. What better way, we thought, than to start with a talk on giant fields? Monday morning began with a presentation by Charles Sternbach and Dick Bishop (both AAPG past presidents) on “Gulf Coast Basin Giant and Super-Giant Fields -Analog to help us find more” The 79 Giant Fields (>500 MMBOE) have a EUR of 107 billion BOE, which is more than half (51%) of the entire Gulf Coast Basin endowment of 210 BBOE. Eight Super Giants Fields (>2 billion Barrels) have Cretaceous reservoirs riming the GoM Basin, Tampico, and Campeche and are associated with basement highs. Trap and seal limit the giants, making seismic imaging and integrating geology and geophysics critical. Highlights of this research were published



AAPG Trustee Associates Larry and Norma Jones



AAPG Trustee Associates Win Goter, Angela Hammond, Mike Forrest, and Bruce Appelbaum

in the GCAGS Transactions and the June AAPG *Explorer*.

Bob Fryklund of S&P Global chaired a session called “Advantaged Basins” with Jim Grant (Chesapeake) and Danielle Carpenter (Chevron). They discussed the top 2-15 basins ranked by remaining liquid resources. The GoM basins rank high in the advantaged basin pantheon, including the Brazil Santos basin, the US Permian basin, and other world basins. Fryklund said, “These proven basins will drive the future because these basins provide diversified and complementary energy sources with the lowest carbon footprint.”



“Big thinking” opens GeoGulf23. General Chair Charles Sternbach presents (with co-author Dick Bishop): “Giant Fields of the Gulf Coast Basins: Analogs and Lessons to Help us Find More.”

ALL-CONVENTION LUNCHEON

Invited speakers Harrison “Jack” Schmitt, Apollo 17, and current NASA International space station Artemis Program astronaut Jessica Watkins jointly presented to an audience of 125 people. Charles Sternbach said, “We are uniting generations through the All-Convention Luncheon. It is great to see Apollo 17 moonwalker Harrison “Jack” Schmitt pass the rock hammer to Astronaut

Jessica Watkins. Jack and Jessica inspire all geologists to “Never Stop Exploring.” By the example of these two geoscientists, we will achieve greater heights and new perspectives in the Next Century”

Harrison Schmitt talked about the science of Apollo moon landings, and Watkins talked about the current operations studying science on the space station. The audience was eager to ask questions and got personal experience stories from both astronauts. Geology is important in exploration on our planet and beyond. Geologic field training was required of the Apollo crews of the past. Artemis crews of the future are also trained in geology. Note both astronauts carry rock hammers in the group photo.

“I enjoyed the Apollo to Artemis luncheon. It was a fantastic experience engaging Harrison Schmitt and Jessica Watkins’s presentations. Apollo-Artemis – the US is once again leading in space exploration,” said one attendee.



The panel of geologists discussed how geoscience played an important role in the Apollo moon missions fifty years ago, and how geoscience will be vital in the future Artemis missions.



Four Geologists Who Want(ed) to Go to the Moon: One Did, One Will, Two Bought Telescopes. Apollo passes the rock hammer baton to Artemis. From left: Jeffrey Lund, Apollo 17 moonwalker Harrison Schmitt, astronaut Jessica Watkins, and Charles Sternbach.

Schmitt talked about the science of Apollo moon landings, and Watkins talked about the current operations studying science on the space station.

GOM TECTONICS

Jim Pindell (Tectonic Analysis), Carl Steffensen, Teunis Heyn, and Chris Piela Cox (bp) chaired a full-day series of talks, "Regional Setting of the Gulf of Mexico" which includes plate tectonics, clastic depositional trends, and Mexican basins, on Monday, April 24. It turns out there are a lot of unanswered questions about the Gulf of Mexico basin formation- this included an open discussion moderated by Brian Horn. How did the Jurassic-aged salt accumulate in the GOM? To answer these questions, scientists must model what happened at depth to reconstruct subsurface layers from the Mesozoic to Cenozoic.



Jeff Allen, Entrepreneur, and Society of Independent Professional Earth Scientists (SIPES) Houston Chairman, is the master of Ceremonies. Special Thank you to Sasha Gumprecht.

CCUS AND RESOURCE PLAYS

Austin Chalk, Eagle Ford, and Haynesville resource plays sessions attracted a full room of attendees. Said one attendee, "I don't know which one to go to. I enjoyed hearing about the latest developments in drilling the Austin Chalk trend and new insights on the Norphlet. We still have a lot of exciting geoscience work in the Gulf of Mexico." Allen Bertagne chaired the GeoGulf session on (CCUS) carbon capture and storage. Gordon Holmes of Denbury Resources won an outstanding oral presentation award for his talk called, "CO₂ Clearly Seen Using Time Lapse Seismic," which demonstrated modeled seismic response to CO₂ injection into a depleted offshore GOM oil field. CO₂ seismic expression is like hydrocarbons and gas. Holmes said, "time-lapse 3-D seismic is highly effective in documenting CO₂ distribution, which is mainly controlled by fluid buoyancy and facies distributions."

UNITED WE CELEBRATE PARTY

On Monday Night, 116 entrepreneurs and young professionals including many Society of Independent Earth Scientists (SIPES)



HGS Director Judy Schulenberg, with special thanks to Allen Bertagne for an inspiring CCUS session.



"United We Celebrate" GCAGS and SIPES Houston members network and enjoy the Fireside Bar at the Moran Hotel. What could be better after a full day of technical presentations than good people, a fire pit, an outdoor poolside patio, an open bar, food, a geology trivia quiz with prizes, and a roving T-Rex? Special Thank you to our generous sponsor, David Tonner and Diversified Well Logging.



Katrina Cox comments, "I had an incredible time at GeoGulf 2023 co-chairing the Texas Rocks and Reservoirs session with Kelly Hattori. You are always in the right session when all you see are images of rocks during the presentations."

Houston chapter) attended our social event, "United we Celebrate," at the Moran Fireside lounge and patio. We thank David Tonner and Diversified Well Logging for their generous sponsorship. Jeff Allen was the Master of Ceremony for the evening and conducted an enjoyable geology-themed Trivia contest (with prizes!) devised by Sasha Gumprecht. Mike Erpenbeck, GCAGS President, made opening comments, and we recognized HGS President Walter Light and President-Elect Paul Britt.

PANELS AND SPECIAL SESSIONS

GeoGulf presented a series of high-level and insightful panel discussions on the second day — the Deepwater Business Panel chaired by Mark Leonard. Richard Sears said, "Deepwater is the cheapest and greenest source of supply, and offshore technology is the enabler and the great effort multiplier. It's the oil business, and few things are more profitable than a properly developed, producing oil field!" Audience members brought up the need to have young geoscientists at regional meetings. One senior professional said, "We need to reach out to senior-level leaders at companies to encourage geoscientists with less than 15 years of experience to attend educational and networking programs like this."

Deepwater fans (no pun intended) crowded the room to get involved with the "Deepwater Sediments Symposium" chaired by Jon Rotzien (Basin Analysis) with co-chairs Yuqian Gan (UT)



Diane Woodruff, Jon Rotzien, and Sumit Verma at the Deepwater Symposium Session at GeoGulf. Sumit Verma won the A.I. Levorsen Most Innovative Oral Presentation at the conference.



Jim Pindell leads a panel discussion with Carl Steffensen (not shown), Teunis Heyn, and Mark Rowan, addressing GOM plate tectonics and plate reconstruction Jurassic through the Cenozoic.

and Diane Woodruff (Oxy). Ali Downard (Chevron) discussed the quantitative evaluation of deepwater fan hierarchy and showed results from the full physics-based forward-stratigraphic model. She said, "Aligning a geologic problem to a computational and quantitative solution leads to deeper insights." Dr. Sumit Verma (UT Permian) presented an award-winning talk on "Seismic Attributes for Deep Water Depositional Systems."

Verma said, "Multi-attribute analysis helps interpret complex depositional features in deepwater settings." He illuminated different geomorphological features using coherence and coherent energy, spectral decomposition, and unsupervised clustering on a 3D seismic dataset. "I was grateful for the deepwater presentations. I get a lot out of being able to talk to the authors and question them about the various topics," said a young professional first-time GeoGulf attendee.

Tuesday's Salt Tectonics Session highlighted the role of salt as a trap for hydrocarbons and as a future project to mine critical minerals like lithium. Salt tectonics was hosted by David Lankford-Bravo (BP) and J Carl Fiduk. Speakers included Mark Rowan (who also taught a two-day short course on salt tectonics), professor Julie Bloxson (Stephen F Austin University), and Sharon Cornelius (University of Houston).



Mike Forrest (left) Introduces Technology Tuesday Jeff Nealon (Chevron, right). Mike shared a historical perspective, and Jeff showed examples of ever-improving seismic imaging.



GEOPHYSICS LUNCHEON

Jeff Nealon, Manager of Geophysics, (Chevron) united geology, geophysics, and business: “Refocusing on the Gulf: How New Seismic Methods Drive Investments” during the GeoGulf lunch session on Tuesday, April 25. Mike Forrest, who introduced Jeff at the luncheon, summarizes the talk as follows:

“Jeff showed a seismic line in the deep water GOM, in a subsalt geology setting, with data acquisition and processing improvements from the early 90s to today. The first example was narrow azimuth streamer seismic (NAZ) data – a reliable interpretation was impossible. Later seismic with Wide Azimuth (WAZ) acquisition varying from partial to full azimuth showed considerable improvement in data quality but still with many interpretation questions. Finally, the current data with Ocean Bottom Node (OBN) acquisition and Full Wave Inversion (FWI) processing to build a velocity model generated a seismic line that best represented a geology cross section in the area, including the Jurassic age Louann Salt reflection.

Jeff’s presentation was a very effective way to show seismic data quality improvements in the GOM deep water over the last 20 years with a handful of slides – easy to remember. In response to a question, Jeff stated seismic amplitude processing is a separate step.”

GCSSEPM LUNCHEON

GCAGS members united with GCSSEPM as Daniel Minisini (Shell) shared insights from interviewing dozens of brilliant geologists. The following comments are from Mike Sweet:



Daniel Minisini (Shell)

“The GCSSEPM Luncheon speaker at this year’s GeoGulf meeting was Dr. Daniel Minisini from Shell. The title of his talk was “Wise Words from Celebrated Geologists. Should We Still Listen to Them?” Since 2009 Daniel has compiled video interviews with many prominent geologists to understand the reasons for their success. Daniel’s videos can be viewed at <https://earthscience.rice.edu/minigeology/>. During his talk, Daniel showed segments of these interviews to illuminate, in their own words, how these celebrated geologists see themselves and their careers. Several people he interviewed, like Dr. Robert Folk, have since died, giving their words an added poignancy.



Bill DeMis questions Daniel Minisini about his Minigeology Interview project as Minisini fielded questions from the audience at the Tuesday GCSSEPM Luncheon

In many cases, their halcyon days as researchers were decades ago, leading Daniel to ask, “Could their

*None were overnight success stories;
each had a plan or strategy
and was action-oriented toward
those plans and strategies.*

pathways to success be replicated today?” There is no easy answer to this question. Some attributes like dedication and passion for your work are probably timeless. Others who have focused on a scientific question for decades may find it hard to replicate today.

The geoscience profession is undergoing dramatic changes in what we do, how we do it, and the demographics of our community. As Daniel’s title suggests, he challenged the audience to think if and how we can apply the wisdom of these geology giants to our professional lives today.”

THE ENTREPRENEURIAL PANEL

Attendees loved the Tuesday Entrepreneurs Session. Our goal was to unite professional geoscientists with entrepreneurs, independents, consultants, and SIPES members. Bill Fairhurst led five panelists, Walter Light, Barry Rava, Bill Fairhurst, Debra Sacrey, and Dick Stoneburner, to share how they transitioned from geoscience employees to oil & gas industry entrepreneurs. Bill Fairhurst commented: “The panelists were asked to address their transition into entrepreneurship, strategic business strategies, funding choices, and timelines. Each path was different, leading to various approaches to obtaining success, using different funding sources, and having different timelines. Most strategies were long-term, and the path to success was over a decade or several decades, strategically changed as opportunities were provided or recognized. Success occurred over similar, longer-term timeframes. None were overnight success stories; each had a plan or strategy and was action-oriented toward those plans and strategies.”



Bill Fairhurst chaired a top-rated panel of Entrepreneurs, including (from left to right) Barry Rava, Walter Light, Dick Stoneburner, and Deborah Sacrey. They offered valuable business insights.



Field Trip Leader Erik Scott (Rice T-shirt) leads a group down the Texas coastline near Galveston

A packed audience riveted in their seats late on the conference's second day proves this session resonated. Bill Fairhurst wrote a separate article for the June 2023 AAPG *Explorer*, which described six critical cognitive processes or shared traits for entrepreneurial success. We expect much interest in these kinds of panels and discussions long into the future.

FIELD TRIP TO THE COAST.

Field trip leader Erik Scott commented: "It was a great day to go to the beach and observe how sand and mud are moved around in a coastal environment. The group could see real-world examples of textbook diagrams from a beach profile, washover deposits, a wave-dominated delta, a tidal inlet, and some coastal dunes and better understand the extent of the deposits in these environments. The Texas coast is a dynamic environment, and the group can understand how quickly the coast can change at a finer scale but stay the same at larger scales through the varying energy of the sedimentary processes involved. A big thanks to Rice University Geology master's students Austin Warren and Sean Porter for helping to make the trip go smoothly and taking the great push cores. The best thing is that we didn't get the vans stuck in the sand!"

FIELD TRIP TO THE HILL COUNTRY

Sean Romito (Conoco) and Andrew Roark (Chevron), our field Trip chairs, did a great job. Andrew shares some comments: "The itinerary for this year's GeoGulf Conference Field Trip to Texas' Hill Country was ambitious: over four days, tour the "Greatest Hits" (the best exposures of every major formation) of the region's Precambrian to Lower Paleozoic strata. Current developments made the timing of this excursion prescient; in the more than ten years since GeoGulf organized a similar trip, unconventional resources and associated geohazards have become prominent, and carbon sequestration has emerged as a major investment focus. Rocks in the Llano Uplift host unique exposures that improve our understanding of these topics. The packed agenda paid dividends thanks to careful planning, generous sponsorship from Edge Systems, and nearly perfect springtime weather.

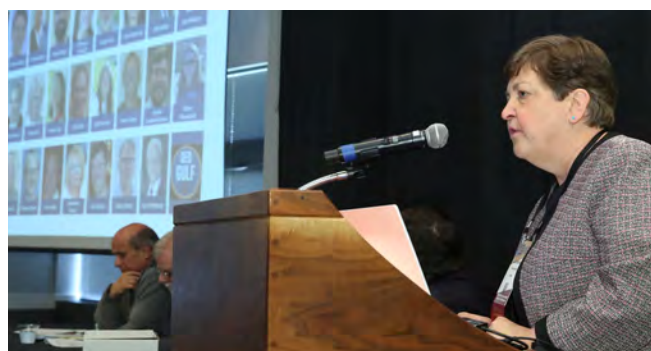
Precambrian formations of the Llano Uplift – the more than one-billion-year-old Packsaddle Schist, Valley Spring Gneiss, Coal Creek Serpentinite, and Town Mountain Granites are the best



Field Trip Leader Andrew Roark leads a group to touch "Basement" at Enchanted Rock, see Cambrian Microbialites, and Ellenburger karst exposed in a quarry on the Llano Uplift

analog for "Llano Suite" basement rocks underlying the southern half of the Permian Basin. We visited these complexly faulted, folded, and metamorphosed rocks at roadcuts and Enchanted Rock State Natural Area, where we hiked to the top of the granite dome and explored creek beds to see the contact metamorphosed wall rock. We also toured Texas Materials' active Marble Falls Quarry and Longhorn Caverns State Park. These locations expose different parts of the Lower Ordovician Ellenburger Group. Wastewater disposal into the Ellenburger and other Paleozoic carbonates immediately above the basement is associated with induced seismicity in the Permian and Fort Worth Basins. Understanding the origins of these events is important, as these carbonate strata may also have potential as carbon sequestration targets if operators can manage injection safely.

Additionally, we drove down a string of windy, isolated country roads to reach rare exposures of the Coal Creek Serpentinite. This formation—interpreted to contain metamorphosed ultramafic oceanic crust—is an essential clue to helping understand plate tectonics in the area when these rocks formed. The unusual mineral suite of these rocks spurred interesting conversations about the chemistry of carbon sequestration and hydrocarbon generation. We even spent time on the water, kayaking several miles to view the world-famous bioherms in the Cambrian Wilberns Formation. Thrombolitic texture in these 10 to 30-ft. tall mounds is an analog for subsurface reservoirs, including the Jurassic Smackover. Thanks to GeoGulf and our sponsors at Edge for facilitating this unique learning opportunity!"



Linda Sternbach (Technical Program Chair) recognizes the Session Chairs as heroes of GeoGulf23 for inviting such high-quality panelists and speakers

We built GeoGulf23 to leave a legacy. Our goal was to set a standard of excellence.

Charles Sternbach, General Chair



Chuck Caughey, Lucia Torrado, Evelyn Medvin, and James Hawkins. David Tett (not shown) provided organization support.

CELEBRATION OF THE VOLUNTEERS

The organizing committee chose the well-configured Norris Center, conveniently located (I-10 and Beltway 8) in lively City Center, to serve as a home base for this technically enriching, network-building, inspirational, and fun 2-day immersive experience. Our post-conference survey indicated that attendees felt the Norris Conference Center was “right-sized,” a good location, and an excellent choice.

And finally, we unite in a round of applause for attendees, exhibitors, and sponsors for their generous support. We deeply appreciate the session chairs leading the discussions and proactively recruiting outstanding speakers.

We built GeoGulf23 to leave a legacy. Our goal was to set a standard of excellence. We plan to share best practices with future GeoGulf conferences and AAPG Sections with handoff meetings, AAPG Explorer Articles, and articles like this one. The next GeoGulf conference will be April 10-12, 2024, in San Antonio, Texas. This meeting will pave the way for a continued series of excellent AAPG Gulf Coast Section designed to support the industry for many years. Thank you for contributing to this legacy. ■



[HTTPS://GEOGULF2023.ORG/](https://geogulf2023.org/)

WHAT DO THE CONFERENCE ATTENDEES HAVE TO SAY? HERE ARE REPRESENTATIVE COMMENTS FROM ATTENDEES:

“GOM Tectonics sessions were very informative. New ideas were presented, and nice exchange of ideas/debates.”

“I was grateful for the deepwater presentations. I really get a lot out of being able to talk to the authors and question them about the various topics.”

“Some talented and capable students and some great ideas”

“Great history of GOM tectonic history. Great presentation on transition zone mini basin formation. Excellent technical presentations overall.”

“Petroleum...traps...plays...oil...gas...these were covered, and it was so refreshing. The future is bright with hydrocarbons and because of them.”

“The close call between success and failure of plays based on the nature of the sealing that results from sand/shale ratio as was so well presented by Barry Rava.”

“GeoGulf serves the population of geologists interested in fields, oil and gas, source rocks, and plate tectonics. The other AAPG meetings are not presenting traditional material—instead going green or into digitalization and data analysis. ... GeoGulf was not an engineer’s conference. It was for geoscientists.”

“Loved the petroleum aspects. Let’s do more.”

“GeoGulf was an incredible value. More science and less cost.”

“We still have a lot of geoscience work that is exciting in the Gulf of Mexico!”



Thanks to our GeoGulf 2023 Volunteer Leadership Team



Thanks to our GeoGulf 2023 Session Chairs (and our many presenters)



That Was Quite a Field Trip!

Visiting Galveston After Hurricane Ike in 2008

By Linda Sternbach



Hurricane Ike devastated Galveston Island on September 14, 2008. Buildings on the island were destroyed, including many old historical buildings in the Strand and along the seawall. One of the most memorable field trips HGS hosted was to the damaged areas in Galveston, only six weeks after Hurricane Ike, led by Rice University expert, Professor John Anderson. HGS was the host society for the 2008 GCAGS Convention at the G.R. Brown Convention Center. The October 8, 2008 field trip was advertised and scheduled well before the infamous hurricane started swirling in the GOM, and the Sternbachs had purchased tickets to go on this field trip to see the beach erosion and processes on Galveston. The GCAGS organizing committee watched the weather unfold in September but decided not to cancel the Convention, despite the ominous Category 5 hurricane damage and negative publicity. The City of Houston got the city back on its feet relatively quickly, and by October, services were repaired to much of Houston.

It was a sunny Saturday when we boarded the 50-person rented bus at the Brown Convention Center and set off to Galveston for the scheduled field trip. John Anderson confirmed that the roads

into Galveston had just reopened, and at least one restaurant was open. The bus got down I-45 to the point near the bridge to Galveston, where we had to drive around broken material in the middle of the highway. Off to the side, an entire fishing boat was on the highway. The bus made its way over the Galveston Bridge, and people saw the debris spread everywhere on the island.

HGS hosted a GCAGS field trip to Galveston, only six weeks after Hurricane Ike in 2008.

We visited the seaway area and saw the destruction of Murdochs, the tourist stop, and pieces of concrete and plastic on the once sandy beaches. The old Flagship

Hotel had the top stories ripped away, and you could see inside the rooms. Later this Flagship Hotel would be torn down and replaced by the Pleasure Pier ride attractions we know today.

The field trip image that remains with me was the stop on 11-mile road in Pirates Beach. The bus took us up to the end of the road, and when we got off the bus, we could see partly crushed beach houses left and right, some with furniture exposed to the ocean. One beach house had a deep hole under its foundation where it looked like a giant hand had scooped out 10 ft of sand under the concrete foundation, leaving the house's piers with little under it.

The beach had pieces of metal, TV consoles, wires, and furniture just tossed around by the surf.

John Anderson kept shaking his head like he couldn't believe what he saw. He said that people need to recognize the power of the ocean and the normal passage of sand from the north part of the island to the south island. The homeowners in Pirate Beach had been trying for years to restore sand naturally moving along the island by using plastic barriers and sand traps. They had also been removing sand from the protected shallow bay and transporting it to the oceanward side to add more beaches. It became obvious that years of beach restoration had been dissolved in a matter of hours during Hurricane Ike. Anderson noted that houses in the south part of Galveston Island fared much better regarding

retaining sand, using grass to stabilize the sand, not plastic barriers. The ocean has impressive power to remake the beach landscape during hurricanes, and every geologist needs to see the destruction possible before deciding to "ride out a hurricane" if they ever choose to stay along a Gulf beach.

The rest of the story is again a tribute to Houston and Galveston's will to rebuild. A lot of the Galveston seawall was improved by newer buildings after old houses, and hotels were torn down after Hurricane Ike. George Mitchell and his companies poured millions of dollars into renovating the Strand in Galveston, and today you can't see much of the damage done by Hurricane Ike in 2008. ■



Dr. John Anderson, professor at Rice and trip leader, standing on the protective barrier.





The ocean has impressive power to remake the beach landscape during hurricanes, and every geologist needs to see the destruction possible before deciding to “ride out a hurricane” if they ever choose to stay along a Gulf beach.



Grand Canyon Field Trip

30+ Years of White Water and Thrilling Adventure

By Linda Sternbach and Charles Sternbach



First rapids

David Lazor's love of Grand Canyon Geology created a popular field trip. Dave Lazor gave HGS an enduring program. He organized decades of a geological tour inside America's incomparable Grand Canyon in Arizona, where geologists and their families can explore the stratigraphic column of Paleozoic and Precambrian rocks for eight days, and at the same time live it up, while going down Colorado River's white water rapids! HGS thanks Dave Lazor for all the years he put into the *Grand Canyon Field Trip*, a staple of HGS history with many happy participants (100s of people have participated) and fond memories. Dave Lazor was active in HGS in the 1980s and 90s and started placing ads in the *HGS Bulletin* back in 1994 to put together a raft tour

of the Grand Canyon. Dave honed his outcrop teaching style after earning a PhD in geology from the University of Indiana. In addition to his love of rafting the Grand Canyon, Dave maintained full-time jobs in Houston with Texaco, Cities Service, Valero, and Beaumont Energy, working on Gulf Coast projects.



Dave Lazor

By 2004, Dave Lazor's *Grand Canyon Field Trip*, facilitated by Hatch River Tours, was so popular that it sold out immediately, and the office maintained a waitlist for the following year. The HGS Grand Canyon geology field trip in June of 2004 was a great success, as reported by Dr. Lazor in the *HGS Bulletin*, with 30 participants enjoying more than 180 miles of the Colorado River, rapids, challenging side canyon hikes, and fantastic geological exposures. Participants ranged in age from 18 to 69. In addition to the three Hatch River guides, there were 18 men and 12 women.



Loading the boats



Grand Canyon outcrops are best viewed up close and from river level

The trip has always been guided by Hatch River Expeditions, a company started by river pioneer Bus Hatch in 1934 and still managed by the third generation of the Hatch family. The HGS field trip uses large pontoon rafts to float the river with daily stops to view the rocks and scenery. Hatch's guides provided expert raft maneuvering, led hikes, and prepared incredibly cooked hot and cold meals during the trip.

A GEOLOGIC MAGIC CARPET RIDE BACK IN TIME

The Grand Canyon Field Trip tour itinerary has maintained its core quality over the last 30 years. The rocks never change, and the river seems eternal. The river raft stops are organized by youngest to older rocks, starting with the Pennsylvanian rocks at Lee's Ferry, Arizona (mile zero). The Grand Canyon tour begins with getting on 15-person pontoon rafts and cruising the slow river waters toward the Canyon opening. *Belknap's Waterproof Grand Canyon River Guide* by Buzz Belknap (Westwater Books) is a must-have book to take with you. The book condenses the exploration of the Colorado, the geologic history, the flora, and the fauna into an 114 page booklet.



The HGS 2023 Grand Canyon trip

The experience on the raft requires everybody to leave civilization and drift down the Colorado River. The river stops, and pull-offs get more isolated; no more cell phone and internet contact. The trip lasts eight days and seven nights, as the river rafters see older and older rocks inside the canyon, ranging from Paleozoic to Precambrian. The canyon walls get higher and higher, blocking more light each day. At the "heart of darkness," tall canyon walls shade the oldest rocks. Older formations include the 1.7 billion-year-old Precambrian Vishnu Schist and Zoroaster Granite. Another old formation, the Shinumo Quartzite, is a highly indurated sandstone showing phenomenal soft sediment deformation.

One Grand Canyon outcrop geologists must try to see and experience as a bucket list stop is Blacktail Canyon and the "great unconformity" where approximately one billion years are missing. Here the Cambrian sits at an angle (unconformable) on the Precambrian. Dave Lazor and Steve Earle give excellent lectures in Blacktail Canyon, at the historic unconformity, a short walk from the river.





Steve Earle at the Nankoweap Granaries, Grand Canyon field trip, June 2018.



At the Great Unconformity at Blacktail Canyon, examining the truncation surface, looking for the missing "billion years" in 2009.

The biggest and wildest rapids were near the end of day seven at Lava Falls, mile 179. This last rafting day takes field trip members into a dark canyon where 1-million-year-old lava flowed into the gorge and formed a natural dam across the river, flooding the canyon. A residual basalt lava tower called Vulcan's Anvil marks the entry into white water. This lava feature was noted by Powell in 1869. The rapid water at Lava Falls is caused by a series of 15-foot elevation drops complicated by underwater basalt boulders. Only skillful guides can maneuver rafts and boats through the rapids.

Linda and Charles Sternbach joined HGS members Dawne, John Jordan, Tom Mather, Steve Earle, and many others on the 2009 trip, where David Lazor would hand over future field trip leadership to Steve Earle. We wanted to thank Dave Lazor and welcome Steve Earle as the new trip leader. Linda and John were celebrating birthdays, and the Hatch River guides baked them a chocolate cake with a Dutch oven!

The pluses were the nightly stars, the food and service of the river raft tour guides, the geologist companionship, and the rocks and fossils. To set the mood each day, we read a chapter at breakfast from John Wesley Powell's account of his trip *Down the Great Unknown* that corresponded to our daily journey. The scary parts included making sure you didn't find a scorpion under your pillow, the white-water rides, and some physically challenging climbs up the canyon walls. Bummer: no soap for the entire trip. You wear the same clothes for days, and a dip in near-freezing water is "refreshing." Happiness: seeing your photos and videos after the trip! Check out the 2009 Grand Canyon field trip video on YouTube at <https://www.youtube.com/@HGSGeoEducation>, Direct link: <https://youtu.be/KsFjR1VW0hE?si=hsHthRGxG89EHoLk>

STEVE EARLE TAKES UP THE TRIP LEADERSHIP BATON

In 2009, HGS Past President Steve Earle co-led the Grand Canyon Field trip, taking over the organizational role from Dave

Lazor, who retired to Washington State. Steve Earle ensured the Grand Canyon Field Trip took place every two years from 2009 to 2021 for six trips and twelve years! Steve Earle used to work as geophysicist for Carrizo Energy a well-known Gulf Coast oil and gas prospecting company. His love of Arizona landscapes goes back to his college school days at the University of Arizona, studying the tectonics and rock types of the picturesque state.

*The pluses were the nightly stars,
the food and service of the
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and the rocks and fossils.*

Steve documented one of his trips in the *HGS Bulletin* in September 2016. He fondly remembers a seven-year-old boy on the trip who was convinced by his father that elves lived in the stop called Elves Chasm. He was always asking, "Where are we going?" and his dad said "To Elves Chasm; it is where elves live." Past President Jim Tucker took the trip in 2016 and remembers, "Everyone had fun floating on their backs through the

rapids where the milky alkaline river flowed rapidly over the rocks. Conversation filled the time before dark, and we were generally in bed around 9 PM. Then the amazing abundance of stars came out above, framed by the canyon walls."

MATTIE REID AND ROSS HARRISON LEAD THE WAY

Steve Earle is now retired in Colorado. The newest co-leaders of the HGS Grand Canyon Field Trip now lead the trip as of 2023. Mattie Reid is a geologist at Anadarko, and Ross Harrison is a geologist at OXY, working in the Permian basin. Mattie worked at the U.S. Geological Survey in the Geology, Geophysics, and Geochemistry Science Center in Denver, CO, where she was involved in studies on the geochronology of regions with mineral deposits. Ross Harrison has an MS in Geology from TCU. Ross supported various modern sedimentology projects related to the Mississippi River Delta and Louisiana Gulf Coast at the LSU Coastal Studies Institute. We hope this outstanding geologic field experience, networking, and HGS mainstay continues long into the future! ■

Legends

An Enduring Idea that Showcases Excellence that Inspires Us All

By Charles Sternbach

PRESIDENTIAL GOALS

In 1999-2000 my top HGS presidential goals were to create the *Legends* program, pack monthly technical meetings with large attendance, invigorate volunteers, recruit new members, and leave a legacy. Little did we know in 1999 that *Legends* would become an enduring format for 10+ HGS programs over the next two decades (see *Bulletin* cover photos below). This program would later evolve into the Scholarship Night program that continues today (as I wrote in the March 2022 HGS *Bulletin*, pages 33-36). In total, more than 5,000 attendees have participated in these programs. Revenue to the HGS has been significant, and importantly, there

remains a legacy of videos for many of these programs on the HGS Education YouTube channel (thanks to Linda Sternbach). <https://www.youtube.com/@HGSGeoEducation/videos>

A WILDCAT OF AN IDEA FOR HGS

The idea behind *Legends* was simple: as we honor the legends among us, we celebrate the potential in all of us. When I became president of HGS on July 1, 1999, I pitched my vision for an inspirational panel program to my executive committee. I suggested we start the new millennium in an upbeat way on the 99th Anniversary of Spindletop, January 10, 2000. Many wondered,



The inaugural *Legends* panel (2000) featured Jim Funk (moderator), Joe Foster, Marlan Downey, Gene van Dyke, George Mitchell, John Seitz, and Charles Sternbach (HGS president and organizer).



Legends in Wildcatting 2003



"Would anyone attend a panel dedicated to wildcatting and the art of exploration?" Our HGS Board ventured courageously forward. More than 550 attendees filled two rooms at the Westchase Hilton Hotel. As far as I know, no HGS dinner meeting has had more attendees since. As always, top-notch speakers required the right connections, and I wisely asked two friends, Byrd Larberg and Jim Funk, to assist. The mood that evening was truly inspirational. I sensed that we were witnessing history as George Mitchell foretold the "unconventional revolution," HGS members heard it first directly from the source. Thanks to Kara Bennett, we recorded the entire program for the video archive.

THE CONFIRMATION WELL

In 2003, HGS president Denise Stone accepted my offer for me to organize and moderate a second Legends Panel. The 2003 panel had 500 attendees and confirmed the Legends Franchise was repeatable. As an organizer, I immediately invited Robbie Gries to be the first woman legendary panelist. It was also clear that a panel on wildcatting must have Michel T. Halbouty, so I visited him in his Galleria office with what I thought would be an "easy sell." Mike said, "Sorry, Charles. No can do. I have an important business meeting in NYC that day." After 30 minutes, Mike remained an intractable "no." He could see I wasn't leaving. Finally, he drew a deep breath and said: "Who else you got?" I looked at him squarely and said, "One of the panelists found a 100 MMBO oil field while still a grad student, another found several multi-TCF giant gas fields, and another has drilled 10,000 wildcat wells." A grin swept across his face. "Charles, those folks are ok, but you need a real wildcatter!" He yelled to his assistant in the next room. "MARY!! Get NY on the line. Charles needs a real wildcatter."

*Tom Barrow found a 100 MMBO
oil field while still a grad student,
Bill Barrett found several
multi-TCF giant gas fields, and
Marvin Davis drilled
10,000 wildcat wells.*

THE "THREE-PEAT" AND BEYOND

In 2006, Linda Sternbach organized the third HGS *Legends* Panel of legendary earth scientists: Peter Vail, Bert Bally, Peter Rose, and Arnold Bouma. The success of this program was deemed a "three-peat." Thus, the *Legends* franchise went into "full development" and became a longstanding tradition of excellence. Within 15 years, the *Legends* programs reached "double digits." Future leaders expanded the franchise by showcasing exemplars in creative ways. The original format thrived with innovative programs about Legendary Fields, Legendary Innovators, Legendary Volunteer Leaders for HGS and AAPG, Legendary Sedimentologists, Legendary Unconventional Wildcatters, Legendary Imperial Barrel Award Mentors, and Legendary Geophysicists.

In 2008, a sold-out 400-attendee dinner meeting organized by HGS Vice President Gary Coburn and Bonnie Milne Andrews featured personal opinions and stories from Oklahoma wildcatting legend T. Boone Pickens.

Pickens was famous for his high-stakes corporate takeover attempts of Gulf Oil and Cities Service. Plus, he published a popular book called, "The First Billion is the Hardest." Pickens predicted oil would hit \$200 at the HGS dinner meeting. At the time, oil prices were rising, and Pickens was optimistic about the future of the oil and gas business.

THE INCEPTION OF LEGENDS

But where did it all begin? On Monday, April 7, 1997, in Dallas, Texas, I attended an AAPG program called “A Legendary Tale,” organized by AAPG President Jim Gibbs. That program changed my life. I sat in the front row and took ten pages of notes (which I still refer to today). The panel included Michel T. Halbouty, Roy M. Huffington, John Masters, Bernard Duval, and Tom Jordan.

I was a young professional (at that time) looking for analogs on which to model my exploration efforts. I realized that case studies of success accelerate wisdom, and I sure needed help. I wanted more programs like the Legendary Tale, but they didn't exist. Someone would have to create them. So, I began calling my friends and making plans. My perceived need for such programs was the impetus for starting Legends for HGS (and other programs like Discovery Thinking for AAPG). <https://www.youtube.com/watch?v=GibLVk7udfo&t=66s>

A personal note: I would later develop strong relationships with the 1997 panelists. Michel T. Halbouty and I would meet regularly. John Masters and I discussed exploration creativity. I became friends with Roy Huffington's exploration manager, and Bernard Duval is a good friend to this day. And a few weeks after the Legendary Tale panel, Tom Jordan hired me as his Houston Exploration Manager.



Bill Zagorski, Range Resources, “the father of the Marcellus” Shale shares valuable insights in the 2012 Unconventional Legends panel.



SCHOLARSHIP NIGHT

Seeing HGS leaders continue to evolve the Legends programs has been exciting. In 2013 as my involvement in AAPG programs grew, I passed the *Legends* baton to the then HGS President, Dr. John Tubb, Jr. John had the brilliant idea to add a Scholarship Night theme. That was a prophetic pivot to the future! Scholarship Night quickly became an annual HGS highlight. Fundraising soared under John Tubb's leadership, guided by Jeff Lund at the Calvert Fund helm and Jeff's exceptional talents. In 2019 John Tubb passed the baton back to me as the Scholarship Night chair for 2019-2022. It is wonderful to see Fang Lin and others continue this tradition into the future. ■



A sold out, 400 attendee, dinner meeting, organized by HGS Vice President Gary Coburn and Bonnie Milne Andrews, featured personal opinions and stories from Oklahoma wildcatting legend T. Boone Pickens. Pickens was famous for his highstakes corporate takeover attempts of Gulf Oil and Cities Service. Plus he published a popular book called, “the First Billion is the Hardest.” Pickens predicted oil would hit \$200 at the HGS dinner meeting. At the time oil prices were rising and Pickens was optimistic on the future of the oil and gas business.





The Unconventional Wildcatters panel (2012) included Bill Zagorski, Dan Steward, Charles Sternbach, Moderator, Mike Johnson, and Gregg Robertson.



Dan Steward, tells the tale of the Barnett Shale

Future leaders expanded the franchise by showcasing exemplars in creative ways.



ESSENTIAL QUOTES

A few quotes capture the essence behind the Legend programs. They show the power of a single idea: Geoscientists inspire fellow Geoscientists with integrated case studies of success in various networking venues (communal meal, ACE, ICE, and 1-Day Standalone Events).

“There are many good ideas and few great ideas. Implementation differentiates the two”

Edward Tufte

“Geology and geophysics are sciences, exploration a business”

Marlan Downey

“The Hero with a thousand faces”

Joseph Campbell

“Discovery is a heroic journey with new actors playing old roles.”

“As we recognize the successful among us, we celebrate the potential of all of us.”

“From prospect to discovery, professionals lead the way.”

“If a picture is worth a thousand words, a video is worth a million.”

“Web posting of professional presentations is a mind spring, a powerful lever to communication.”

Charles Sternbach (last five quotes)



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NeoGeos

A Committee for Early-Career Geoscientists

By Charles Sternbach and Dianna Phu

The beginning of a great idea! Kelly Latter had just accepted a job at BP Amoco, moved to Houston from UTEP, and considered forming a support group for early-career geoscientists. But how to do this? In early 2000, HGS Board member Denise Stone had a mentoring lunch with Kelly Latter. Denise was wonderfully supportive of young professionals. Denise proposed forming the Neo Geo committee. The 1999/2000 HGS executive committee listened and wisely acted on her recommendation.

Kelly Latter (BP Amoco) and Andrea Adams (Amerada Hess) were the first two co-chairs, and they built out an active committee. In a few short months, they had 120 members on their member list; 90% worked in the petroleum business, and 10% were graduate students. The members had attended at least 27 different schools, and 2/3 had some prior HGS experience.

AN INSPIRING FIRST MEETING

The first official NeoGeos meeting on September 13, 2000, featured Michel T. Halbouty. Kudos to Andrea Adams (Reynolds) and Kelly Latter for arranging such a meeting. Many HGS members also attended, including the senior author of this article. It was an extraordinary evening as Mr. Halbouty told the tales of his exploration, including his adventures in Alaska, where he faced overwhelming challenges. Mr. Halbouty proudly said, despite painstaking dry holes, “I did it!” He repeatedly emphasized the need to “trust your convictions and put your ideas into action.”

EARLY ADOPTION

NeoGeos 2002 held bi-monthly dinner meetings and a short course on wellsite methods that were hugely popular. Helena Griffiths recalls, “When NeoGeos started, it was a ground-floor effort. There were no similar groups to model, no past structure to follow, and the ideas of what to do and where to take NeoGeos were endless. Over the first year and a half, the NeoGeos had many major accomplishments—acceptance within HGS, recognition throughout the Houston geoscience community, and a full schedule, jam-packed with dinner meetings, monthly socials, half a dozen field trips, and most recently our first short course. It has been a period of great growth—and quite a learning process.”

RAPID EXPANSION

Dianna Phu became NeoGeo’s Chair from Natalie Uschner in early 2006. Dianna remembers attending a co-organized event with the AAPG for a guided tour of the OTC exhibit hall. “It was an amazing event, and I enjoyed it!” She quickly took up the duties of the chair. “I was handed a small box with various NeoGeos records, leftover swag, and an email list of potential members. Our activities during my time focused on re-engaging the group, establishing central leadership for the group’s long-term

success, embedding more fully within the HGS, and networking. We sought to connect with various events and industry groups to increase volunteer opportunities and connections that could provide that win-win scenario for the HGS/NeoGeos and the other groups. Much effort was put into curating an up-to-date and accurate email list between the old NeoGeos records, the HGS membership records, and the new contacts collected at various in-person events.

By the time the 2006-2007 HGS year started, the 2006-2007 NeoGeos Leadership Team included: Amanda Beardsley, Daniela Carpio, Patty Davis, Eric Erigha, Timothy Gibbons, Nigel Hicks, Michael Kacher, Chris Madere, Bo McCarthy, Leslie Neal, Thien Nguyen, and Vivian Rohrback. The NeoGeos team enabled the committee to do a lot.

In the AAPG convention 2006 in Houston, the NeoGeos members were invited to participate as session chairs alongside other conference planning leaders and industry experts, review abstracts, coordinate the schedule, and assist in the session.

We added PowerPoint slides to the other HGS pre-meeting slide decks for all upcoming NeoGeos events to advertise the committee happenings. We printed flyers listing upcoming events (NeoGeos-specific and broader HGS activities) and took HGS *Bulletins* with us to show off the benefits of HGS membership. We mailed welcome postcards to new members that left their contact info with us. We advertised the group as something for those new to the industry or those new to Houston. It’s a great stepping-stone into HGS either way.”

BRIDGING THE GAP

A few entries from the August 2006 NeoGeos slogan contest

- Where Strangers Become Lifelong Friends
- Rockhounds for the 21st Century!!!
- For the Geology You Don’t Even Know... Yet!!!
- NeoGeos – See More. Learn More. Do More.
- Networking Towards the Future
- NeoGeos: Geoscientus Neophytus
- NeoGeos: Because the Industry Needs its Neos
- NeoGeos: From Industry Starters to Industry Leaders
- NeoGeos: Exploring and Producing the Next Generation
- NeoGeos: Add Experience, Stir, and Serve.
- NeoGeos: Where Geo Goes to Work
- NeoGeos: Explore With Us
- Bridging the Gap

Bridging the Gap won the leadership team’s vote and was used in all the marketing materials we produced that year.



NeoGeos Central Texas Field Trip (March 10-11, 2007). The group examining Enchanted Rock close up with hand lenses. Thanks to field trip leader Thomas J. Miskelly.

With a vitally engaged committee, the NeoGeos were prolific. Activities included: Regular contributions of NeoGeos articles for the *Bulletin*, Resume Workshops, Career Development Workshop: Competency Mapping, Thirsty Thursday Happy Hours, and providing volunteers to assist with Earth Science Week.

The group organized a 2-day Central Texas Field Trip (March 10-11, 2007). The photo of the whole group lying on top of Enchanted Rock for a close-up look captures happy memories! An article recapping the NeoGeos event was published in the May 2007 *Bulletin*. The trip was later reprised and offered to the whole of HGS and GSH as a joint event (April 5-6, 2008).

Events included an Etiquette Dinner on March 29, 2007. This event was later presented as an encore to the whole of HGS (October 2014, at the Petroleum Club). The NeoGeos attended Verdi's Aida with a post-show Backstage Tour for an "HGS at HGO" event (Houston Grand Opera, April 15, 2007). NeoGeos annual Family BBQ events, commonly held at Bear Creek Park, transformed into the NeoGeos-SMT beer-tasting picnic event. NeoGeos representatives engaged with OTC's inaugural The Next Wave program.

NeoGeos held annual NeoGeos Leaders' Meetings to coordinate strategy, event planning, leadership roles/responsibilities, etc. The

committee ran booths at various conferences to promote HGS and encourage NeoGeos membership/participation, including at the annual AAPG Student Expo. NeoGeos engaged with the GSH-HGS Geoscience Day program, held annually at the BEG, participated in the HGS Road Rally, and assisted with the HGS booth at the HGMS Gem & Mineral Show.

SOCIAL MEDIA

In March 2008, Tim Gibbons, Cecelia Baum, and Rachael Czechowskyj set up the first NeoGeos Facebook group, as they felt it would allow interaction and engagement with the NeoGeos target audience of YPs. The NeoGeos online Bulletin Board was the first collaborative online step into the Social Media realm for HGS. The Bulletin Board went online in April 2006 and was decommissioned in 2009, as other social platforms gained traction. The HGS Social Media Committee was born out of the NeoGeos, and the current HGS Social Media Chair, Lauren Robinson, leads the HGS to new heights.

BATON PASSING LEADERSHIP PIPELINE

Cecelia and Rachel co-chaired the NeoGeos, until the fall of 2009. Cecelia Baum served as chair for the group until mid-2010 and was elected as HGS Secretary 2010-2011. Carrie Kidd picked up the torch from Cecelia and ran with it. Sameer Baral carried the torch after Carrie from the summer of 2011 through the summer



NeoGeos Central Texas field trip (March 10-11, 2007) in front of the famous Hoover Point Cambrian glauconite green sandstone outcrop.

of 2014. Sean Kimmiagar picked up the role of NeoGeos chair from Sameer in mid-2014 and led the group until mid-2016. In the summer of 2016, Sean passed the baton to Olamide Dada, who carried the group until December 2017.

In January 2018, Tim Shane officially took the reins. Alicia Staszyc also served as a co-chair. In September/October of 2018, Casey Langdon picked up the role from Tim\Alicia and carried things forward into 2020. When Casey was elected to a director role on the Board in mid-2020, Joshua Krnavek picked up the chair responsibility. At the end of 2020, Joshua gave the role to James Cassanelli, who led the group from January 2021 to March 2022. Bryan Bottoms is the current chair.

Each leader had their own style. Some had larger teams supporting them. Some managed things solo. Some focused on HGS\NeoGeos-specific event planning, and others focused on networking within the broader YP (Young Professional, loosely defined as 32 years) community. Some integrated more with the broader HGS leadership and committees, and others integrated less. Each leader succeeded in their own way.

THE NEXT ADVENTURE

Dianna Phu recalls, “It was a whirlwind of learning, fun, networking, and a lot of planning and effort. Before jumping in, I

had no prior HGS leadership experience and limited attendance at HGS events. I was very much learning as I went. My observation was that the NeoGeos committee had the potential to interact with, rely on, or contribute to pretty much every single other aspect of the HGS. That significance drove me daily to make a difference with the group. I dragged my husband and kids to many events, and their support made my involvement possible. I’m forever grateful for the experience and all the connections and friendships I made. Even more rewarding for me is seeing the group now, almost 18 years later, still standing, bringing people together through relevant events and honing leaders that can step into the HGS and elsewhere to take us to the next adventure.

I know many of the NeoGeos leadership and key volunteers went on to be recognized with various awards and elected to Board positions. Some also went on to take on bigger roles within the national/international societies and to help organize major conferences. Others have since left the industry altogether. There is no doubt that the committee builds leaders.

I can only imagine what the NeoGeo founders might think of the committee’s journey. What a legacy they’ve left for us all to benefit from!” ■

*bringing people
together through
relevant events and
honing leaders*

Scholarship Programs

A Legacy Of Support To The Geoscience Profession

By Jeff Lund, Calvert Memorial Scholarship Board Chair, and Joe Lynch, HGS Foundation Board Chair



The Houston Geological Society supports two Foundations that give money to geoscience students to help pay for their education. Through 2022, over \$1 million has been provided to students across the United States. In 2021-22, a total of 27 students were being supported.

The HGS Undergraduate Foundation Fund and the W.L. Calvert Memorial Scholarship Fund are the entities that administer the programs. The HGS also acknowledges the awardee of the independent Maby Scholarship on behalf of the Maby family.

The Awards are given out each year in February or March in a special HGS dinner event called “Scholarship Night.” Student awardees, their parents, friends, and professors attend the dinner meeting. Industry and individuals have provided generous sponsorship of this event, adding additional funds to both scholarship programs. Scholarship Night chairs include John Tubb (2011-2018), Charles Sternbach (2019-2022) and Fang Lin (current).

BUILDING ON A STRONG FOUNDATION

The HGS Undergraduate Foundation Fund gives scholarships to students studying for a bachelor’s degree in geoscience.

The Houston Geological Society Foundation was established in 1984 to provide scholarships to deserving undergraduate

geosciences majors. The Foundation was incorporated in 1985 and achieved tax-exempt status from the IRS later the same year as a nonprofit Section 501c (6) organization for charitable, scientific, or educational purposes. As of November 2022, Foundation trustees are Joe Lynch (Chairperson), Angela Hammond (Treasurer), Shannon Lemke (Secretary), Kirstin Burns, Paul Hoffman, Scott Krueger, and John Schneider. The Foundation has provided over \$300,000 in scholarships since its inception.

The Foundation uses a variety of means to try to raise scholarship funds. Direct donations, HGS membership dues, Vendors Corner proceeds, matching-fund donations, and golf tournaments all produce funds that help support our scholarship program. Since 2011, the HGS has also allowed the Foundation and Calvert Memorial (graduate) scholarship programs to recruit sponsors for Legends/Scholarship Night and has hosted a special dinner meeting to honor the scholarship recipients. Profits from these events are split between the two scholarship funds and are a significant funding source.

Seven universities participate in the Foundation’s scholarship program: Rice University, the University of Houston, Texas A&M, The University of Texas at Austin, Sam Houston State University, Stephen F. Austin State University, and Lamar. Each fall, each university’s geosciences department head is contacted. The university submits two or three nominees and notifies the

*Through 2022, over \$1 million
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across the United States.*



Scholarship Night 2022 featured young professionals sharing advice with student scholars. Panelists Nathan Tinker (Hilcorp), Claire Bailey (Exxon), Libby Ingram Storer (Shell), Luciana Tinker (Exxon), and Eric Peavey (Chevron). Panel moderated by Charles Sternbach



HGS Thanks Chevron team members for continued sponsorship.

students of their nominations. Applications for this scholarship are forwarded to the students after nomination. Scholarship winners are notified in December, and awards are presented to students in February. Awards range from \$1,500 to \$5,500. The Foundation is pleased to be supported by both the Maby and Basinski families and awards two special scholarships in their honor every year.

The Undergraduate Scholarship Foundation of the Houston Geological Society was recently pleased to announce the creation of the Paul M. Basinski Memorial Scholarship, established by Paul's wife, Rene Basinski. Paul was a long-time HGS member and supporter, and she could think of no better way to honor his memory than supporting the next generation of geoscientists. The Foundation provides scholarships each year to students from seven local universities.

The Paul M. Basinski Memorial Scholarship will be given to one of our scholars selected by the Foundation Trustees that demonstrates



Geologists Robert Maby and Syd Bowers unpacked their 1948 company Ford to see how much field equipment it could carry while on a geological expedition in the northern Rub' al-Khali in the early 1950s. (Aramco Life, 09/01/2022).

The HGS scholarship awards significantly contribute to the professional education of geoscientists, unequaled by any other local geological society.

the most personal and scholastic growth, rising above obstacles to succeed. Rene Basinski believes this type of individual would reflect the values she and her husband, Paul, cherished. Our two major benefactors led remarkable, successful, and interesting lives. A remembrance for Robert L. Maby, Jr. can be found in the March 2009 issue (HGS *Bulletin*, Vol. 51, no. 7, pg. 13). A remembrance of Paul M. Basinski can be found in the HGS *Bulletin*, May 2018 (Vol. 60, no. 9, pg. 34).

WARREN L. AND FLORENCE CALVERT MEMORIAL SCHOLARSHIP FOR GRADUATE STUDENTS

The Warren L. and Florence W. Calvert Memorial Scholarship Fund was started in 1974 with a donation from the Calvert family and awarded its first scholarship in 1978. The fund aims "to assist worthy and needy geological students in pursuing graduate studies in some branch of Economic Geology leading to a master's or doctor's degree at any accredited university of their choice." The scholarship awards are administered by a board of five HGS Members appointed by the HGS leadership. Current board members are Jeffrey Lund (Chairperson), Nicole Villarreal (Vice Chairperson), Dick Bishop (Treasurer), Judy Schulenberg (Secretary), and Paul Britt (Ex officio HGS Board representative and HGS President-Elect).

The fund's corpus and scholarship awards grow from contributions from HGS members and interest earned on fund investments. Several appreciative recipients of Calvert scholarships later donated amounts to the fund that matched or exceeded the awards they received.

Selection of recipients is based primarily on the candidate's past academic record and their potential to complete graduate degree requirements, as attested to by faculty. A recipient may pursue studies at any accredited college or university in the United States that awards graduate degrees in geosciences. Scholarship applicants must present evidence of their unconditional acceptance for graduate study at the school of their choice. Recipients are expected to be full-time students making progress towards their degree and have expressed an interest in pursuing a career in some branch of economic geology. Second and third-year renewals may be granted provided the scholar demonstrates satisfactory progress toward their degree. Individual awards can exceed \$6000 per year.

The Houston Geological Society scholarship awards significantly contribute to the professional education of geoscientists, unequaled by any other local geological society. ■

Government Affairs Committee

By Henry Wise

To paraphrase what was stated in the August 1998 HGS Bulletin 75th Anniversary Issue, the Government Affairs Committee aims to inform our members of government activities at the national and state levels and how this activity affects all practitioners of the earth sciences. This effort includes reporting on pending and proposed legislation and the specific rule-making activities of government agencies. This information will allow our members to encourage state and national legislators to pass logical, appropriate, and beneficial legislation to the nation and our profession—the committee functions as an information resource.

Since then, the Government Affairs Committee has helped pass Texas legislation implementing the Texas Board of Professional Geoscientists (TBPG) and the licensure of Texas Professional Geoscientists (PGs). The committee has been overseen by several people since 1998, culminating with Henry Wise and Arlin Howles overseeing the committee since September 2004. Since the Texas

Geoscience Practice Act was passed in 2001, many groups have moved to disband the TBPG in almost every legislative session since then, and the Government Affairs Committee has helped keep the TBPG intact.

The most recent threat to the TBPG was in 2019 when the Government Affairs Committee, in conjunction with the HGS Environmental & Engineering Group (E&E Group) and the newly-formed Texas Geoscience Council (made up of the HGS, Austin Geological Society, AEG-Texas Section, and the AIPG-Texas Section, among others) successfully fought the Texas Sunset Committee's (TSC's) original recommendation of disbandment of the TBPG. The TBPG will be up before the TSC in 2024, and we are preparing for a fight to keep the TSC from recommending the merger of the TBPG with the Texas Board of Engineers and Land Surveyors.

The Government Affairs Committee published a monthly HGS Bulletin article called "Governmental Update" from November 2004 through June 2019. This article discussed government activities at the national and state levels, how this activity affected all practitioners of the earth sciences, and other matters of geological interest that were not actively published in the general news media. The committee stopped publishing this article because the source for this information stopped dissemination, and it would take far too long for one or two people to resource this information monthly.

In 2000, the Houston Geological Society began to carry "The Wise Report" on its website. It began at the suggestion of the HGS E&E Group and has always been written by Henry Wise. This newsletter, which had no formal name, was originally started and is still available as a free email to those who requested it from Henry Wise. After reading several of the original newsletters, Michael Campbell remarked that he found "The Wise Report" very informative and really enjoyed reading it, and the name stuck. "The Wise Report" covers only those legislative bills and rules of interest to Texas Geologists. When the Texas legislature is in session, it is usually published weekly so Texas Geologists can follow specific bills as they go through the legislative process and have the opportunity to make their opinions known to the various legislators about their bills. Between legislative sessions, the newsletter is published as needed to track any rule changes or other important Texas geologic information, generally anywhere from once a week to every month or two. ■

*the committee aims to inform our
members of government activities
at the national and state levels and
how this activity affects all
practitioners of the earth sciences*



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HGS Educational Outreach and Academic Liaison

By Janet Combes, Letha Slagle, Inda Immega, and John Adamick

The Educational Outreach Committee provides geoscience learning resources to students, educators, and the general public across southeast Texas. (<https://www.hgs.org/educational-outreach-committee-information>). Outreach activities include:

- Geoscientist visits to classrooms, scout troops, STEM events, and other public assemblages, with presentations and hands-on activities about geology and careers in geoscience using posters and rock and fossil samples.
- Field trips to explain geologic processes and the geologic profession for non-geologists.
- Assistance to other HGS committees and like-minded organizations which share our committee's goals.
- Provision of resources, such as links to web-based programs and videos, posters, and handouts, to educators and the general public.
- Participation in other opportunities as they arise to encourage the development of educator skills in the geologic sciences and to educate the general public on geologic matters.

But none of this is possible without the participation of HGS volunteers.

From the HGS Bulletin, MARCH 2022: "All of our volunteers agree that the most fun activity is to go to a public school and talk to kids about geology. Visits can be made during regular class time or in a special STEM event. The Educational Outreach Committee of HGS maintains a list of volunteers who can attend these events. If you are interested, please consider joining this group. The larger our list of available volunteers, the more confident we can offer this opportunity to schools. Volunteers are needed for more than just showing up at an outreach event. We have collections of rocks, minerals, fossils, maps, and posters that need continual curation, and some educators like to have classroom exercises ready for delivery. Organizing and maintaining these materials takes a surprising amount of backroom time.

Interested? Please contact the new Committee Chair: Phillip Caggiano, at adventureoutfitters@hotmail.com

2022-2023 OVERVIEW

2022 began with a lunch and learn presentation at Rice University, inviting collaboration between university students and HGS Educational Outreach. In the spring, as it has since its start in 2006 as the Sally Ride Festival, the HGS participated in the Reach for the Stars Festival for Middle Schoolgirls at Rice University. HGS outreach volunteers, including committee chair Steve Johansen, participated in the Houston Water Works Festival, the Houston Nature Fest, and several scout camps. The school year ended with a field trip for engineering and geoscience magnet school students to the Houston Museum of Natural Science—sponsored by the HGS Outreach Committee. The fall of 2022 had many

outreach activities—in October, there was the Earth Science Week event at the Houston Museum of Natural Science, a Spring ISD 8th grade career connection STEM event, and Bones in Schools presentations at Bendwood School for Gifted & Talented. In November, there were several activities: a La Porte ISD STEM event; an Alief ISD STEM conference for high school students; a Girls Exploring Math and Science (GEMS) day at the science museum; a career day speaker at Blue Ridge Elementary FBISD; and the annual Houston Gem and Mineral Show with the HGS outreach booth assisting with school field trips and scout badges. The HGS volunteers presented at the Young Women's College Preparatory Academy STEM festival in December.



Bones in Schools at Westside High School with Letha Slagle, Ken Theis, 2021



HGS booth at Houston Gem and Mineral Society, 2021

In the spring of 2023, the Outreach Committee visited Dulles Middle School in the Fort Bend ISD to present rocks, minerals, and the rock cycle. There was a presentation at Porter Elementary in Montgomery County. HGS also presented at the Nature Fest at Jesse Jones Nature Center, where Rice University graduate students assisted in explaining fluvial geomorphology and groundwater. In June, the HGS outreach volunteer group participated in a Cub Scout/Webelos Scout Twilight Camp STEM event. The volunteers participated in a San Jacinto College sponsored Energy Camp activity in July.

ACADEMIC LIAISON

An Academic Liaison advisor has been listed on the HGS board since at least 1959. The Academic Liaison Committee presented to junior and senior high school students and provided speakers with slides, rocks, minerals, fossils, maps, and cross-sections. In addition, the committee judged science fairs sponsored by the schools and other organizations. In 2012, a larger overall outreach group formed as the Educational Outreach Committee and Academic Liaison became a sub-committee position. Since then, Paul Mann has held the Academic Liaison position, and his role has been interaction with colleges and universities in the Greater Houston area with geology programs: UH Central, UH downtown, UH-Clear Lake, Rice, Lone Star CC.

BONES IN SCHOOLS AND MAPS IN SCHOOLS

In 2012 Jennifer Burton, chairman of the new overall Educational Outreach committee, helped inaugurate the Owen Hopkins Bones in Schools Program. The HGS purchased three truckloads of Pleistocene fossils from the Corpus Christi Geological Society, including bones and teeth of mammoths, bison, and other animals to be used in an earth science program initially for 5th grade but now available for any K-12 group. The bones are for the students to handle as they learn about the Pleistocene history of the Gulf Coast region. A lesson plan is available with each of the four kits of bones and displays that volunteers carry to schools in the Houston area. Schools are typically left with a fossil on long-term loan and a beautifully framed poster illustrating Pleistocene life on the coastal prairie. The specimens get the student's attention and engage them in learning. Ken Theis is now the primary presenter for this program.

In 2008, then HGS President Linda Sternbach published information that the HGS was distributing a map of the bedrock geology of the United States to schools in Houston. The Maps in Schools program presents local schools with a copy of the USGS "Tapestry of Time and Terrain" color map (<https://www.usgs.gov/maps/north-america-tapestry-time-and-terrain>). The goal was to place a map of the geology of the surface of the United States in the lobbies, foyers, and cafeterias of secondary schools, where students can see it daily and become interested in geology. The program originated with Owen Hopkins of SueMaur Exploration, past president of the Corpus Christi Geological Society, and is supported by the Gulf Coast Association of Geological Societies. Under the coordination of HGS Director Alison Henning, HGS

ordered 300 "Tapestry of Time and Terrain" maps from the USGS and distributed over 200 of them to local schools. This effort was such an effective outreach program that several local geo-societies joined HGS in the effort. SIPES members Jeff Lund and Phil Martin got involved, and Lisa Buckner represented the Geophysical Society of Houston. Deborah Straughan, a geologist at BP, and teacher Janie Schulke were on the HGS committee to coordinate the presentations to local schools.

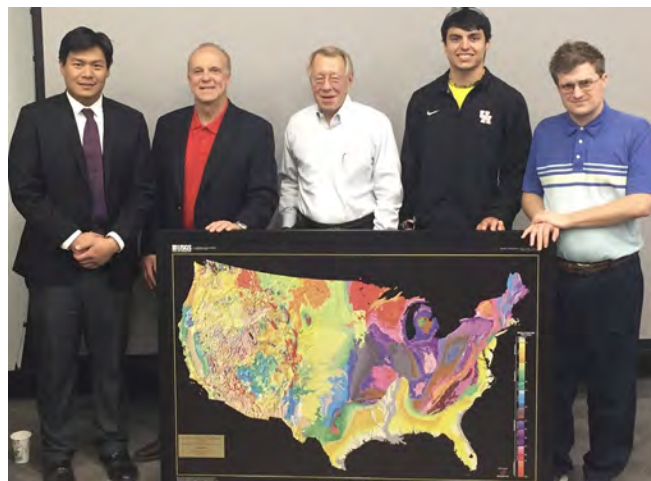
CAREER DAY AND STEM EVENTS

By Steve Johansen

One of our most commonly received requests in recent years has been for HGS to send one or more volunteers to local area schools for presentations during STEM festivals and Career Day events. The nature of these events is highly variable, as is the target audience. It may be a STEM festival in an elementary school during school hours, with hundreds of children visiting a poster session and table of minerals and fossils. Or an evening event for junior high school students and their parents. Or a weekend event for high school students, with groups of 5 to 35 students visiting the HGS presentation for a structured hands-on event that lasts for 40 minutes. We are sometimes asked for a geologist to speak in a structured presentation for high school students to encourage



Bones in Schools poster



Maps in Schools Jeff Lund (center) and UH Faculty



High school STEM event, 2016

them to consider a geoscience career. The frequency and timing of these requests have been highly variable since the end of the Covid emergency. We received over 20 requests in 2022 and 2023 and had to turn down some schools because we could not find volunteers. The committee currently possesses about 20 folded Geological Highway Maps of the Texas Region, published by the AAPG. Volunteers can use these maps for classroom exercises with older school students and with scout programs, as requested by educators and scout leaders.

COLLABORATION WITH HISD ENERGY ACADEMY

MAGNET SCHOOLS *By Letha Slagle*

In 2013, Letha Slagle, co-chair and then chair of the Education Outreach Committee until 2020, spearheaded the collaboration between HGS, the Independent Petroleum Association of America (IPAA), and the HISD Energy Academy Magnet Schools. This program, developed and managed by IPAA, provided rigorous academic and professional experiences for students dedicated to pursuing careers in engineering and geoscience. It began with four highly diverse public high schools, including Milby, Westside, Young Women's College Preparatory Academy, and the Energy Institute. It expanded to include more schools in Houston and other parts of Texas and finally went online nationally. The program culminated in paid summer externships onsite at various corporate partners, providing defining moments in preparation for college and careers. As liaison to this program, Letha and the HGS team provided almost all of the geologic technical content, and some of these students went on to careers in geology.

Collaboration between HGS and IPAA made the program work. Together, we provided individualized interview skills training, Geologic Map Labs, Rock Labs, and Career days. We guided geologic field trips to various sites, including the Texas Hill Country, Whiskey Bridge, and High Island. For multiple years, we sponsored days at the Houston Museum of Natural Sciences, where students toured the Energy, Paleontology, and Gems and Minerals Halls.

An annual highlight was a rock lab at the UT Bureau of Economic Geology core lab in Houston, rotating three magnet program schools through the event facilitated by Beverly DeJarnett and



Magnet school visit to UT Bureau of Economic Geology core lab, 2018

the HGS outreach team. Students began the day with a short presentation on rocks and minerals. Then they worked through exercises at five stations, including a hand sample/hand lens station, three core stations, and a binocular microscope station, getting a first-hand taste of what geologists do.

A sample of one of our many field trips was Galveston Island Day. IPAA/PESA sponsored the buses and a visit to the Ocean Star Offshore Drilling Rig and Museum. From there, the students took the Bolivar Ferry and met HGS on the beach of High Island. Before the day, participating students had seen a video presentation we produced to familiarize themselves with the geology and exercises at the beach. The learning points included sandstone facies and reservoir quality, barrier island depositional processes, and salt deposition, structural and trapping processes. Activities included trenching, sieving, hand lens use on sand and rock salt, and a reservoir demonstration.

Through Covid, the program evolved. Support was provided to create a library of online programs, and now our in-person collaboration with some of the schools has resumed. The program has now moved from the IPAA, which has closed its education foundation, to be replaced by the SEG Foundation with the same team of education leaders who look forward to continuing to work with us.

We recognize so many HGS volunteers who contributed time to this program, including Beverly DeJarnett, Janet Combes, Inda and Neal Immega, Debra Balthazar, Chuck Caughey, Steven Johansen, Lanette Marcha, Steve Miller, Carrington Wright, and Sharie Sartain and others for helping educate 1000s of students with hands-on experience.

EARTH SCIENCE WEEK

Earth Science Week promotes the understanding and appreciation of the value of Earth Science research and its appreciation and relevance to our daily lives. The Houston Geological Society is honored to join in this yearly celebration organized nationally by AGI (American Geosciences Institute) on the second Sunday in October and runs one week. The objectives of ESW include:

- To engage students in discovering the Earth sciences.

- To remind people that Earth science is all around us.
- To encourage Earth stewardship through understanding.
- To motivate geoscientists to share their knowledge and enthusiasm about the Earth.

The HGS has participated in ESW activities since it started in 1998 and has been recognized by AGI as the Society with the most continuous and largest ESW events. In 1999, geoscientists in all 50 states, Australia, Canada, and at least 20 other countries organized Earth Science Week activities in their communities, including field trips, demonstrations, lecture series, film series, exhibits, school visits, and open houses. The AGI initiated Earth Science Week on behalf of the geoscience community to provide an annual focal point for public education about the Earth and Earth processes.

The HGS Earth Science Week traditionally starts with a Family Earth Science Celebration at the Houston Museum of Natural Science on the Saturday preceding the second Sunday in October. During the first years of ESW, the HGS submitted a request to the City of Houston, and ESW was declared an official event in Houston. The mayor even came to one of the museum days to deliver the official document. Janet Combes, Inda, and Neal Immega were early leaders in the HGS EW efforts. Multiple organizations usually join the HGS with booths with different geoscience topics and activities set up in the Museum: groups included the HGS, the Geophysical Society of Houston, the Houston Gem and Mineral Society, the National Association of Black Geologists and Geophysicists, the Association for Women Geoscientists, GCS-SEPM and SEPM/NAMS, and student geology groups from several local universities. The conclusion of the Houston Earth Science Week is a field trip on a Sunday afternoon the next weekend. Over the years, field trips have been to Whiskey Bridge on the Brazos River, Galveston Island, High Island, Panther Creek, and the Blue Lagoon quarry. Art and essay contests were open to elementary school students from local school districts. Alison Henning was an early chair of the Earth Science Week observance and was deeply involved in many volunteer geoscience events and activities. Education was important to Alison, and she was active in numerous HGS educational outreach programs.



HGS hosted a family-friendly field trip to Whiskey Bridge on the Brazos River during Houston Earth Science Week, October 2014.

Due to COVID restrictions in 2020, we could not hold an in-person Earth Science Week event at the Houston Museum of Natural Science, which has been done every year since 1998. The Houston Geological Society celebrated Earth Science Week 2020 by hosting a week-long virtual experience, Sunday, Oct. 11 through Saturday, Oct. 17. The 2020 ESW's theme was "Earth Materials in Our Lives." Each day focused on a different area of geoscience. The week we kicked off with an AGI Earth Science Week video. Monday featured Switch Energy documentaries. Tuesday focused on AWG Geoscience Career Profiles. Wednesday's online media highlighted National Fossil Day with the Green River fossil story. Thursday's videos emphasized how minerals affect our lives. Friday featured videos from the "HGS Field Trip Friday" series. HGS/HMNS volunteers Sharon Choens and Inda Immega served as event Chairs. HGS/HMNS volunteers Lynn Travis and Janet Combes served as Co-Chairs, with help and advice from many of our colleagues in curating the selection of resources. Many thanks, Alyssa Cushing, for the great website.

Earth Science Week in 2021 and 2022 resumed with scaled-down activities at the Museum with HGS staffing several tables, giving out fossil and rock samples, and directions for family field trips. There is a website that describes the HGS's activity for ESW: www.earthsciweek.org/eswhouston/index.html

ENGINEERING COUNCIL OF HOUSTON AND SCIENCE AND ENGINEERING FAIR

The Engineering Council of Houston (ECH) committee, co-chaired by Sue Pritchett and Claudia Ludwig, and the Science and Engineering Fair (SEF) committee, chaired by Dorene West, work together to support the yearly Science and Engineering Fair of Houston. HGS members volunteer as judges for the Earth Science category. Several Science Fair participants are selected from the Senior division for the HGS-sponsored, research-assistant summer internship at the Houston Museum of Natural Science every year.



2009 Earth Science Week co-chairs Inda Immega and Sharon Choens welcome attendees at the Houston Museum of Natural Science



Outcrop Family Campout – Camp Cullen

FAMILY OUTCROP CAMP

YMCA CAMP CULLEN VOLUNTEER WORK

Camp Cullen is a YMCA camp located near Trinity, Texas. HGS has been contributing volunteers to Camp Cullen for the last couple of decades, and several HGS members have also been on the board of Camp Cullen. HGS members such as Jack Threet and Mark Leonard long ago realized the geologic potential of Camp Cullen. John Adamick began recruiting HGS volunteers to help at Camp Cullen's Volunteer Day in 2014/2015, and there has been HGS representation at this event every year since then. These HGS volunteers typically work on the Camp's geology-focused activities, including the quarry field trip, the geology lab with hand samples on site, and the gold mining/panning area. We chose to help Camp Cullen for several reasons. First of all, most of the kids attending Camp Cullen are from the Houston area.

Also, many are from underprivileged families and attend the Camp free of charge. Last, but not least, there is a significant geology component to the Camp's programs. Efforts have focused on the geological quarry exhibit and construction of the "mining camp" youth activity area. Work also has focused on Prospectors' Ridge, where kids pan for pyrite "gold" in an Old West setting. Camp Cullen works hard to help local kids learn about the outdoors, and geology is part of the curriculum. One year the Neo-Geos worked on the Geological Discovery Zone at the Camp, a geology lab with age-appropriate activities designed to pique children's interest in geology. Those activities include gold panning, fossil hunting, and other activities. Camp Cullen is now teaching over 5,000 kids a year about basic geology! In addition to week-long summer camp courses, we have begun hosting many Houston area schools



Cullen staff teach the kids basic geoscience

during the academic year. The kids are typically in 5th, 6th, or 7th grade and stay at Camp for three days with their teachers/counselors. During that time, Cullen staff teach these kids basic geoscience (in addition to much else). Several HGS members, including Dianne Tompkins and John Adamick, have been involved in helping ensure that the classes meet Texas state requirements.

HGS has had its Outcrop Family Campout several times, where members can see how much fun children of all ages have in the Geological Discovery Zone. The Outcrop Family Campout provided a weekend jam-packed with fun, including a zip line, archery, riflery, arts and crafts, Marathon pipeline slide, canoeing, Gaga ball, campfires, and basketball, as well as the Geological Discovery Zone.

HOUSTON GEM AND MINERAL SHOW

The annual Houston Gem and Mineral Society Show, held at the Humble Civic Center, is an event in which HGS has participated every year since 2005 when over 3000 students, teachers, scouts, and parents visited the HGS booth at this annual event in Humble. The HGS booth included K-12 student posters, rock displays with hand lenses, 3D maps, seismic lines (Gulf of Mexico samples from ION), a well log provided by Neuralog, and giveaway samples of rock salt donated by the Hockley Salt Mine. Thursday afternoon is the set-up time. Friday is for school field trips: the 2015 show had 2,172 students, teachers, and chaperones that came through — all with a sheet of TEKS-oriented questions that included the HGS as a designated stop. In addition to the general public, about 100 Boy Scouts and Girl Scouts came through the HGS 2015 booth on Saturday, working on their geology badges and patches, again with



Scouts working on their Geology Badge – HGS Booth at The Houston Gem And Mineral Show 2017



Scouts working on their Geology Badge – HGS Booth at The Houston Gem And Mineral Show 2017

specific questions for an HGS geologist. On Sunday, volunteers answered questions from the eager general public and helped the junior college students answer their “scavenger hunt” questions for extra credit. Many parents commented on how interesting and informative the HGS displays were and how the children could handle the rock specimens. Total attendance at the 2015 show was 5,218. Several of the show organizers made a point of telling us how much the HGS effort was appreciated.

Due to the pandemic, the 2020 HGMS show was canceled. The 2021 show was held, and the HGS booth was staffed but with limited touch (no hand lenses or 3D glasses). There were no public-school field trips, but 97 private school students and 660 home-schooled children did come on Friday with specified stops at the HGS booth. On Saturday, 83 scouts were working on geology badges. The 2022 HGMS show had a total paid attendance of 2964 = 2557 adults + 407 kids (not including vendors and volunteers). This number does not include attendees admitted free for school field trips – home schools, private schools, and some public schools – which had another 933 kids and about 480 adults. The students on Friday came with specified stops at the HGS booth. On Saturday, 97 scouts worked on their Geology badges with the HGS booth as a designated part of the process. Geology posters on geologic topics and geoscience careers, rocks to look at, samples to take home, and geologists to talk with were there at the HGS booth. Sarah Heinlein co-chaired the 2022 HGS participation with Janet Combes.

HOUSTON MUSEUM OF NATURAL SCIENCE

The HGS has always had a strong relationship with the Houston Museum of Natural Science, formerly with a Special Advisor and now with the liaison committee that initiates ways to involve our membership in volunteer efforts at the Museum and provide geosciences advice to the Museum where appropriate. In 1995, HGS President Clint Moore initiated the change from a liaison officer to an HGS committee to recruit, train and certify geologists as museum volunteers. On this important HGS anniversary, we would like to honor the memory of people who were responsible for ramping up the Society’s interaction with our community: Clint Moore formalized the process of getting more geoscience



2015 Houston Gem And Mineral Show



2001 Earth Science Week with Houston Mayor Lee Brown (yellow tie) at the Houston Museum of Natural Science along with volunteers from Participating Organizations: Houston Geological Society, AAPG Houston House of Delegates, Association for Women Geoscientists, Engineering, Scientific, and Technical Council of Houston (ECH), Geophysical Society of Houston, Gulf Coast Section SEPM, Houston Gem and Mineral Society, Houston Museum of Natural Science, National Association for Black Geologists and Geophysicists, Rice Student AAPG chapter, Society of Independent Professional Earth Scientists, Society of Petroleum Engineers-Gulf Coast Section, Texas Earth Science Teachers Association. Mayor Brown proclaimed the second week of October to be Earth Science week for the City of Houston.



Neal Immega and San Jacinto College student setting up shark table for the Earth Science Celebration at HMNS, 2014.



HGMS 2014

HGS VOLUNTEERS AT HMNS

OVERALL 2019	TOURS	PATRONS	DOCENTS
Gems & Minerals	13	737	57
Paleo	127	7238	723
SE – Life in Stone	1	5	4
Wiess	219	8542	833
Totals	360	16522	1617

volunteers involved in the Houston Museum of Natural Science, worked on Guest Nights at the Museum, and got very involved in the making of several giant screen films.

By 2000 100 HGS members were volunteering at the Museum. As stated in the 1998 HGS 75th Anniversary Bulletin, the Museum of Natural Science Liaison Committee is responsible for involving and enriching our membership through the Museum and the Society programs. Traditionally, at least one society function annually is held at the Museum for our general membership to attend and reacquaint themselves with the many exhibits. The Houston Museum of Natural Science is a great learning center for “kids” of all ages. Inda Immega and Janet Combes are currently the committee chairs in HMNS’ docent program with multiple volunteers who have taken docent training and now guide people through the Museum; this is a worthwhile, low-key teaching opportunity.

The volunteer office at the Museum was able to pull some information on the number of volunteer hours in the Wiess Energy Hall, the Morian Hall of Paleontology, and the Cullen Hall of Gems and Minerals.

- In 2019, 7982 volunteer hours were logged in Wiess Energy Hall, Paleo Hall, and Gems & Minerals.
- Docent Requests for Wiess, Paleo, Gems & Minerals, and Life in Stone in 2019 are in the table below. (This overlaps with the logged hours but counts only the specific docent requests. Special events such as Gem & Mineral Show or Earth Science Day are not necessarily included because those data were cumulative in an “Other” category).
- In the five years between 7/7/2018 and 7/7/2023, 21,950 hours were logged in Paleo, Gems & Minerals, and Wiess, including the Gem & Mineral show and Earth Science Day. That works out to be about 380 docents.
- In general, there are 196 docents in the museum volunteer registration system (from all time, at least as long as recorded in the system) noted as having an affiliation with HGS. Note that the affiliation is self-reported, and there may have been lapses in data entry of that field over time.
- 56 docents have noted Geology as an area of study.

The HGS actively participates with the Museum in Earth Science Week events and the newer GEMS – Girls Engaged in Math and Science Day. During the traditional (pre-pandemic) ESW Day at the Museum, activity tables were organized by HGS in hands-on activities and demonstrations in the Glassell Hall, Wiess Energy Hall, Morian Hall of Paleontology, and the Cullen Hall of Gems and Minerals. The HGS ECH and Science Fair committees have provided summer internships at the Museum for student winners at the Science Fair. In 2005 the HGS provided funding for the Museum’s Dino Days event.

SALLY RIDE REACH FOR THE STARS

In 2006 the astronaut Sally Ride worked with Rice University to establish a STEM festival for middle school girls; middle school is the typical age to attract students to science. It was originally called the Sally Ride Science Festival, and in 2016 the name was changed to Reach for the Stars! STEM Festival. Each event includes a street fair, a presentation by a woman astronaut, and science and engineering workshops with women hosts. Each



Sally Ride Science Festival – Michelle Pittenger is talking to one of the groups of students at the HGS display area.

student attends two workshops and visits the street fair – where HGS has staffed its outreach booth for every festival. The yearly festival is sponsored by the Ride Family Foundation and Rice Space Institute, with major funding from Cheniere, plus many other donors.

At the 2016 festival, the HGS display was staffed with seven volunteers, and it was swarming with 5th-9th grade girls from all over Houston and East Texas, picking up rocks, learning about water resources and petroleum exploration, and walking away with a sample of genuine Hockley Dome salt. The HGS was part of the Discovery Fair portion of the festival – showcasing Science and Technology with dozens of hands-on experiments and displays by Rice University, Festival Sponsor BASF and other sponsors, community organizations, science clubs, and more. According to the Festival organizers, there were about 650 kids and 250 adults (parents/educators); 30 exhibits (with about 250 exhibitors/volunteers); and another 100 “general purpose” volunteers, workshop presenters, and Festival crew. In 2019 (pre-covid), 502 girls attended with 130 chaperones and over 200 exhibitors and volunteers. HGS Director Barbara Hill participated in the career panel in 2022; she said the overall messages from the panel were for the girls to be willing to try new ideas, to find their passion, and not be discouraged when things didn’t work out as expected, but to keep moving forward.



Cynthia Palomares describing a rock sample to students during the Sally Ride Reach for the Stars STEM Festival, 2014.

OTHER EDUCATIONAL OUTREACH PROJECTS

YouTube

HGS began posting online recorded, technical content on YouTube in the summer of 2012. The Video Committee has recorded and posted many videos, and viewers can watch recordings from past luncheons and dinner meetings to review or catch up on what they missed. While they are primarily meant for HGS members, teachers, and students, use them to learn more about our interests. The videos cover various domestic and international geology topics such as unconventional resources, carbonate rocks, salt tectonics, Iraq, and South American geology. HGS also has a YouTube channel called HGSGeoLegends, which hosts video recordings from 2000-2015 Legends Nights. The easiest way to view any videos is to go to the YouTube home page at www.youtube.com and type “HGSGeoEducation” in the top search bar.

Teacher of the Year

Through the years, the Houston Geological Society has presented an HGS Teacher of the Year Award established to honor teachers who have made extraordinary efforts or unique contributions to earth science education. Information on requirements and applications can be found at <https://www.hgs.org/houston-geological-society-awards-criteria>. The selected teacher is given a cash award and a plaque presented at an HGS Event. To name just a few of the recent awardees, in 2020, Astra Zeno of the HISD Young Women’s College Prep Academy won the award; she has enjoyed teaching math, science, robotics, aerospace, marine science, technology applications, engineering, and computer science over her eighteen years of teaching. In 2018 Jody Gibson won the award; he teaches at the Energy Institute High School, an engineering magnet campus in HISD. HGS recognized Ilena Krupala from Bellville as its 2015 Teacher of the Year. She was nominated for and recognized as the GCAGS 2015 recipient of the Owen R. Hopkins Outstanding Earth Science Teacher Award. 2008 the winner was Francisca Enih of HISD in 2003, Lexy Bieniek, who assisted in educational outreach with the HGS and the HGMS over the years.

Energy Day

Houston’s Energy Day started in the fall of 2011. The HGS participated in several of the events and linked them to Earth Science Week’s events due to the overlapping schedule. In 2019, when the HGS could not participate, the American Association of Blacks in Energy asked for rocks for their display, and HGS arranged for rocks to be displayed. Salt from the Hockley Mine was provided for giveaways. The AABE organizer was appreciative and said, “All of the samples, handouts, and delivery of materials were all so appreciated. You have to look at the faces of our booth goers. One student knew so much we brought her behind the table to facilitate”. Info on Houston Energy Day can be found at: <https://energydayfestival.org/houston/>. HGS should participate in this event again.

Scouts

According to the 75th-anniversary issue of the HGS *Bulletin* in August 1998, an Explorer Scouts Committee operated two Explorer Scout Posts sponsored by the HGS - The Northwest Post



CAST 2003

2004 and the Southwest Post 2005. About 40 students between 15 and 18 were active in these two troops. Central to the program was career interest and students interested in the geologic and oceanographic sciences attended lectures and field trips to various work locations to gain insights into possible careers. Scouts also participated in camping trips to locations of geologic and environmental interest. As part of the Sam Houston Area Council of the BSA (Boy Scouts of America), the posts enjoyed many regular activities held by the scouting organization. The Explorer Scout Post Leaders and Advisors (HGS members) also served as references for the scouting organization in geologic matters. The last time a scouting Committee was listed on the HGS Committees list was in the fall of 2007.

Currently, the HGS interacts with many scouts via the Houston Gem and Mineral Society Show Scout Badge Day every fall and through participating in scout fairs. For a history of geology scout badges and the input from the AAPG and HGS, see the June 2003 *Bulletin* article by Jeff Spencer, page 21, "Petroleum Geology and the Development of the Boy Scout Geology Merit Badge"

The committee frequently receives requests from cub scouts, webelos, and boy scout groups for presentations on rocks, minerals, and geologic map exercises. When we receive a request, we arrange for volunteers to discuss with the scout leaders what kind of program they desire. We dispatch appropriate volunteers with wheeled carts full of minerals, rocks, fossils, geologic maps, posters, and PowerPoint presentations. The target audience for a presentation is highly variable; we have recently done presentations for groups as small as a dozen scouts or groups as large as about 3 or 4 dozen.

Teaming Up With Teachers

In 2003 the Conference for the Advancement of Science Teaching (CAST), organized by The Science Teachers Association of Texas (STAT), requested the assistance of the Houston Geological Society at its annual convention. At Reliant Center, an estimated 5000-7000 science teachers from across Texas and other states were expected at the conference on October 30-November one. After initial contact with Lexy Bieniek, that year's HGS Earth

Science Teacher of the Year, the HGS board then decided that the HGS would participate in CAST and offer numerous field trips (the most popular activity at a CAST meeting), several workshops, and a session of talks. Alison Henning helped organize and lead HGS activities at several CAST (Conference for the Advancement of Science Teaching) meetings, and in 2008-2009, she was an HGS representative on the Texas Board of Education to develop the earth science high school curriculum and fought valiantly to keep valid earth science in our schools,

The opportunity to connect with thousands of students through their teachers and impart some of earth science's wonder and excitement to the next generation was exhilarating. This activity should be continued when the conference is in Houston. ■



2003 CAST field trip to Galveston

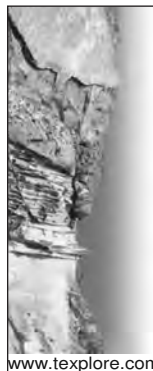


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Science & Engineering Fair Committee

By Claudia Ludwig, Richard Howe, Mike Erpenbeck, and Dorene West

PRELUDE

Before there ever was an HGS Science Fair Committee, there was an Engineering, Science, and Technology Council of Houston (ECH). HGS is a member of ECH, and for many years there was a committee or liaison listed in the HGS *Bulletin* Committee Directory for ECH. ECH cofounded the Science & Engineering Fair of Houston (SEFH). However, that is only one of the many services ECH provides to Houston and the engineering, science, and technical professions. The HGS Science Fair Committee was formed to manage HGS's support of the SEFH.

The current ECH team consists of 10 members (from ASME, ASCE,

HGS, HMNS, AIChE, SEG, and SAME); three of the ECH team are from HGS (more than any other constituent society). The internships that HGS awards to two senior students each year are named Claudia Ludwig (long-time HGS Councilor to ECH, ECH Past President, and two-term SEFH President), and one past HGS ECH team member, Richard G. Howe (ECH Past President, SEFH President). A third internship honoring HGS's Past President, Barry Katz, has been suspended due to budget constraints.

To further these goals, ECH established an award, given at their discretion, to recognize an Outstanding Engineer/Scientist whose work has contributed to the community and as a focal point for

ECH'S FOLLOWING MISSION AND HISTORY IS QUOTED FROM THE ECH FACEBOOK PAGE.

ECH has served the Houston Community since 1945. ECH aims to promote math and science education, enhance professional development and discussion opportunities, and serve as a focal point for informing the public on engineering, science, and technical matters. Its mission is to:

- Focus the diverse resources of its constituent organizations on significant engineering, scientific and technological issues facing the greater Houston area.
- Promote educational programs in grades K-12 in math, science, and technology subject areas and the development of engineering, science, and technical career opportunities in the greater Houston area.
- Promote the professional growth and community involvement of its constituent organizations, their members, and their respective professionals.
- Serve as a forum for communications between the professional engineering, scientific and technical community and Houston area public officials at all levels.
- Increase the general public's awareness of the engineering, scientific, and technical community's continuing contribution to improving the health, safety, welfare, and standard of living of the residents of the greater Houston area.
- Create and support programs such as The Science Engineering Fair of Houston and the World Congress on Superconductivity, which enhance the image of Houston throughout the nation and the world as a center of science, engineering, and technology.

Founded in 1945, ECH celebrates 50 years of service to Houston and the engineering, science, and technical professions. During this period, ECH has provided a continuing forum for dialogue among various disciplines and professional societies. ECH complements the roles of its individual Constituent Societies by emphasizing areas of common interest and providing and communicating opportunities for service and professional development. The objectives of ECH are to promote math and science education, enhance opportunities for professional development and discussion, and serve as a focal point for informing the public on engineering, science, and technical matters. Over time, as issues and interests have arisen, ECH has evolved to respond to community and professional needs. ECH has or has had numerous interdisciplinary committees to discuss issues of collective concern, such as its Environmental, Water, Flood Control, Energy, Transportation, Museum, Quality, Productivity, and Media Interface Committees. ECH has become a 501(c)(3) non-profit organization, emphasizing its educational and service roles. ECH also has been a catalyst in creating three affiliated non-profit organizations: the Science Engineering Fair of Houston, the World Congress on Superconductivity, and the Willow Street Foundation. Education is a major focus of ECH. The organization continues to cosponsor the Science Engineering Fair of Houston and has initiated a Science Engineering Fair Summer Internship with the Houston Museum of Natural Science. The Technical Careers committee has a strong outreach program, bringing science into elementary and secondary school classrooms. The World Congress on Superconductivity illustrates ECH's dedication to professional and technical development. Locally, ECH provides a forum for communications among the constituent Societies through mailings, monthly roundtable meetings, and workshops or seminars on subjects of common interest.

informing the public on engineering, science, and technical matters which impact the Houston Metropolitan Area, ECH established the Houston in the 21st Century symposiums which to date consist of:

1. Flooding issues impacting the Houston Metropolitan Area (sponsored by ECH after Tropical Storm Allison, ca 2002),
2. Subsidence issues facing the Gulf Coast Region (Coastal Subsidence, Sea Level and the Future of the Gulf Coast, November 3-5, 2005, Houston, TX; cosponsored by ECH and HGS),
3. Flooding issues impacting Southeast Texas after Hurricane Harvey (Flooding in Southeast Texas: The Science Behind the Floods, June 2018, cosponsored by HGS and ECH),
4. Climate Solutions (ECH Climate Solutions Symposium held virtually on August 22, 2020), and
5. Second ECH Climate Solutions Symposium (2023 Climate Solutions Symposium: Texas, the Energy Capital of the Planet, Can and Should Lead, September 2023, University of Houston Student Center Theater).

Cosponsoring ECH symposiums has allowed HGS to reach out to and gain recognition from the public.

HGS SCIENCE FAIR COMMITTEE

The Science Fair, now known as SEFH, traces its beginning in Houston since around 1960. It serves as the regional Fair for all junior and senior high school students in Harris County and 22 surrounding counties. HGS has long been associated with this Fair through its early membership in the Engineering Council of Houston (ECH). HGS has continuously shown an ECH and Science Fair Committee in the *Bulletin* since 1958, indicating an affiliation since the Fair's beginning. In 2018 the ECH Committee disappeared from the HGS committee list.

Claudia Ludwig (since the 1980s), Richard Howe, and Sue Pritchett have served as Councilors from HGS to ECH (ECH Committee), and each, in turn, has served HGS as President of ECH. This group re-involved HGS in judging and special awarding judging of science fair entries. The Science Fair committee was officially added in 2013. Mike Erpenbeck in 2016 and Dorene West in 2021 assumed respective chair leaderships.

SPECIAL AWARDS

HGS sends a team of Special Awards Judges to review Earth Sciences-related projects in the Junior and Senior Divisions at SEFH each year. HGS gives two types of awards, rank and internships, that are meant to encourage students to pursue Earth science-related education and careers.

- **Rank Awards** A top project is picked for each division; 2nd and 3rd place projects are picked for the Senior Division. HGS presents these winners with a certificate and congratulatory

letter at the SEFH Awards Ceremony. These winners are usually invited to be recognized at Guest Night (June).

- **Internships** Through our membership in The Engineering, Science, and Technology Council of Houston (ECH), HGS funds two summer interns at the Houston Museum of Natural Sciences (HMNS). These Finalist HMNS Summer Intern Awards are nominated by HGS but awarded to two Senior Division finalists by ECH. Students must meet work requirements (so they are not necessarily the top-ranked project winners). The awardees are invited to an ECH awards banquet, where the students showcase their projects.
- **Challenges in judging** An effort is made to remove "community bias" from our judging. Students are judged on their effort; those with fewer resources cannot compete with student projects from areas with more resources/community support. We are charged with encouraging students to participate in STEM, not to penalize students from schools/communities with fewer resources.

There are also opportunities for HGS members to volunteer as SEFH Place Judges. HGS members involved in the general/Place judging can encourage students to submit future earth science-related projects that can qualify for our sponsored internships.

HGS gives two types of awards, rank and internships, that are meant to encourage students to pursue Earth science-related education and careers.

SEFH judging is in early February each year. Each January, a request for volunteers for Special Award Judges and SEFH Place Judges is published in the HGS newsletter. Past Special Award Judge volunteers are contacted by email. The chair and Special Award Judge volunteer to review the list of science fair projects and abstracts online and pick Earth Science-related projects to judge at the Science Fair.

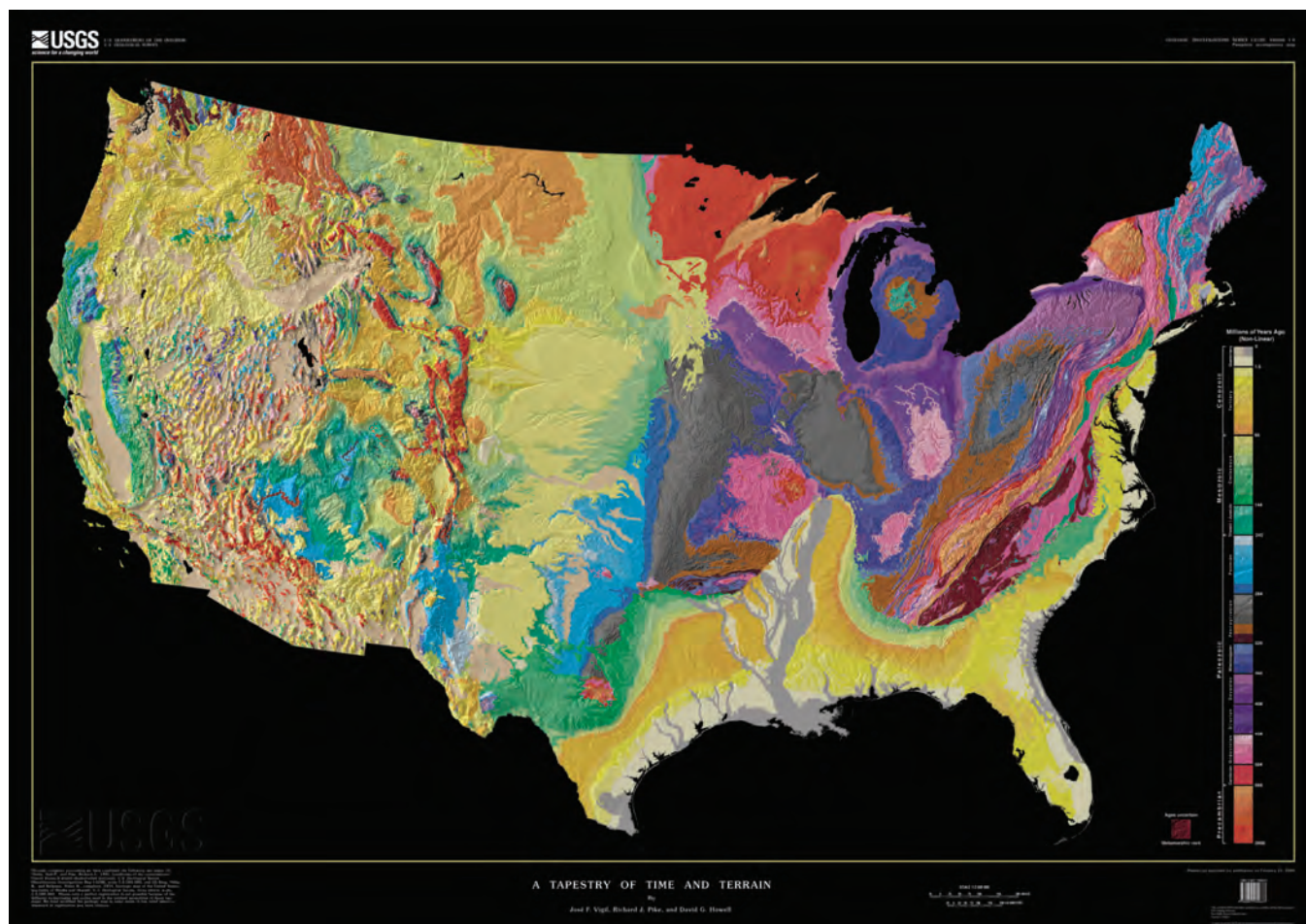
Many of our judges volunteer every year; special thanks go to recent annual judges Mike Erpenbeck, Jim Tucker, David Miller, Dwaine Abraham, Martin Cassidy, David Risch, Sandy Rushworth, Marsha Bourque, Judy Schulenberg, Patricia Walker, and Sharma Dronamraju.

Judging occurs Saturday morning, the committee chair delivers our list of awardees to Sue Pritchett (SEFH Board of Directors Secretary) and Carolyn Sumners (SEFH Board of Directors and VP Astronomy and Physical Sciences HMNS), who make the final decision on HGS-sponsored intern awards. The chair sends letters/emails to each of the top project winners' parents and teachers and contacts the parent to congratulate them by phone; a report is written for the newsletter. The chair and judges are invited to the ECH Awards Banquet in May, where we try to get pictures of our sponsored students/interns and their project boards for the newsletter. If possible, the chair visits the students while working at HMNS and gets more pictures for the newsletter. The goal is to encourage students to pursue Earth science education and careers, provide support, and become members of HGS in the future. ■

Maps in Schools

Outreach Program of HGS and SIPES Houston

By Jeffrey Lund



OVERVIEW

Maps in Schools is a major outreach program of the Houston Geological Society and the Society of Independent Professional Earth Scientists (SIPES) Houston Chapter that began in 2009. Since then, more than 24 schools (mostly in greater Houston) have received framed maps, had a lecture on the geologic phenomena the map illustrates, and, in several cases, asked for repeat presentations. Nearly 40 such presentations have been made. Maps have been placed in elementary, middle, and high schools (public and private) and community colleges, primarily in the greater Houston area.

The map is called “A Tapestry of Time and Terrain.” It is a creation of the US Geological Survey. The map is a large, colorful geologic map with shaded topographic relief of the continental US, color-coded to the geologic column, with an absolute time scale. HGS

provides high-quality geologic maps covering the lower 48. SIPES Houston pays to frame the maps and adds a dedication plate describing the origin of the gift to each school.

The Corpus Christi Geological Society and the Corpus Christi SIPES Chapter, under the leadership of the late Owen Hopkins, a well-known petroleum geologist in Corpus Christi, inspired this outreach effort. Following the lead of our colleagues in Corpus Christi, the SIPES Houston Chapter, and HGS began placing the USGS

geologic maps in local schools in 2009. Early on, the maps were presented as rolled, unframed maps. Still, soon it became apparent that a framed map that could be prominently and permanently displayed would be more effective in drawing student attention. SIPES Houston Chapter has supported the project financially at a cost of about \$400 per map.

Maps have been placed in elementary, middle, and high schools (public and private) and community colleges, primarily in the greater Houston area.

*HGS provides high-quality geologic maps covering the lower 48.
SIPES Houston pays to frame the maps and adds a dedication plate
describing the origin of the gift to each school*

Unframed maps have been sent to schools in Massachusetts, South Dakota, New York City, and Tulsa because shipping a framed map is prohibitively expensive.

Initially, progress was slow, largely because of the reluctance of schools to understand we had a message of significance and the “red tape” administrations deal with in the current environment of bad things happening in schools. Covid also slowed down the ability to visit schools dramatically.

THE PRESENTATION

The presentation we make at each of the schools consists of five parts:

- 1. Introductory Comments** What is Earth Science, and why are we giving your school a map? (answer: to stimulate interest in geoscience!)
- 2. Show a DVD** the AGI DVD entitled “Why Earth Science: Because We Live on Earth,” which is a very professional 10-minute overview of geoscience, including geoscience careers, volcanoes, the Chixulub impact and dinosaurs and geologists as astronauts.
- 3. PowerPoint Presentation** 30 slides describing the geologic map, features observable on the map, geologic time, careers in geoscience, and fossils. A new addition is discussing pioneering British geologist William Smith using the book “The Map That Changed the World” by Simon Winchester. A copy of the book is donated to the school.
- 4. Fossil Collection Review** a quick review of part of my fossil collection and a discussion of how fossils help define geologic periods.
- 5. Questions**

IPAA/PESA ENERGY ACADEMIES

Due to a connection to IPAA made for us by HGS/SIPES member Evelyn Medvin, we connected with the IPAA/PESA (Independent Petroleum Association of America and the Petroleum Equipment Suppliers Association) program coordinated by their Energy Education Center. IPAA/PESA has established and supported five “petroleum academies” that teach engineering, geosciences, leadership, and math students in the Houston Independent School District and the Fort Worth Independent School District. The program began at Houston’s Milby High School and has grown to include five schools, culminating in The Energy Institute High School, which opened with 200 students in 2013. The Energy Institute High School will add 200 students each year until a total enrollment of 800. This institution is unique for not only HISD but the nation! The Young Women’s College Preparatory Academy, also part of HISD, is the nation’s first all-girls engineering and geoscience program at the high school level.

The five schools involved are:

- Energy Institute High School, Houston
- Milby High School, Houston
- Southwest High School, Fort Worth
- Westside High School, Houston
- Young Women’s College Preparatory Academy, Houston

I am happy to say each of the schools (including Fort Worth) has received a framed map from us, and four of the schools have requested and received a presentation on earth science and the geology observable on the map. The map delivery to faculty and administrators and presentations have been done primarily by HGS Past-President and SIPES Board Member Jeff Lund and HGS/ SIPES member Elizabeth de Leon-Maestas (aka EA).

IPAA PROGRAM EVOLUTION

IPAA program has changed its name to the “IPAA Energy Workforce Education Center.” Their educational program has been working with educators for nearly 20 years with a professional staff supporting programs, resources, and advice to member schools to enhance STEM education, especially energy-focused programs.

The “Maps in Schools” program joined the IPAA program when we connected to the Houston ISD high schools hosting “Petroleum Academies” and presented them with maps. That was an unplanned synergy!

As you might expect, Covid placed a huge damper on the ability to visit and make presentations at schools personally! IPAA has adapted effectively, and the newest feature of the IPAA programs includes a “Virtual Exploring-Energy Program” featuring a video library. The library provides content including STEM topics, energy, leadership skills, and industry-animated tours to high school educators and students in middle and high schools.

Thanks to HGS/SIPES Houston members Linda and Charles Sternbach, the “Maps in Schools” PowerPoint presentation has been recorded with audio. It is one of the library’s main geoscience content videos. (<https://www.youtube.com/watch?v=ohDHhtZTxo0>)

The goal for the program is to have annual return visits as classes of students see the colorful map in their classroom or hallway and wonder what it means. For example, we have returned five years to speak to the entire 7th grade at Duchesne Academy.

Many thanks to everyone involved and several recent Houston SIPES Boards for their support at the expense of framing the maps! ■

Guest Night

Captivates at the HMNS Museum with Stars, Mars, and Dinosaurs (and more!)

By Linda Sternbach

THE STORY OF GUEST NIGHT

From 2003 to 2019, more than 7,800 HGS members, their spouses, and families attended seventeen 400-person HGS Guest Nights at the Houston Museum of Natural Science. How did this happen? First, the HMNS was a perfect venue that continuously evolved, adding exhibits and floor space. Second, a concerted effort was made to engage attendees with IMAX movies, new exhibits, and world-class speakers. It helped that many HGS members were also Museum Docents. Clint Moore, Inda and Neal Immega, Janet Combes, and many other HGS leaders championed the HMNS museum, recognized as one of the top science museums in the United States.

Impressed by the first-floor Wortham IMAX theatre, Clint Moore created HGS Guest Night as an evening private museum event for members, friends, and families. The first Guest Night was in 1992. The HGS rented the lobby area with the sole dinosaur relic of the time, the *Diplodocus* skeleton (nicknamed Dippy), for an HGS award ceremony, followed by the experience of seeing a large screen movie on a screen taller than a three-story building.

The HMNS Museum continued to evolve in the 2000s, adding an updated Energy Exhibit, which included the GeoVator ride down a well borehole, revising the Gems and Minerals, and retiring

*Clint Moore created HGS Guest Night
as an evening private museum event for
members, friends, and families*

older chemistry exhibits. Guest Night was revamped starting in the late 1990s to include rented floors of the Museum, so the night included: catered dinner, time to look at Museum exhibits, followed by the IMAX movie.

Guest Night chairs from 1992- 2002 included Clint Moore and Bill Osten. Then, in 2003 former HGS Bulletin Editor Linda Sternbach and past HGS President Charles Sternbach had a new vision for the Guest Night Committee. They decided to “kick it up a

GUEST NIGHTS FROM 2003 ONWARD

2003 Dr. Harrison Schmitt, Apollo 17 Astronaut
Return to the Moon

2004 Dr. Gordon McKay
The NASA Mars Rovers: Robot Geologists on Mars

2005 Dr. David Applegate
Earthquakes and Tsunamis!

2006 Dr. Jeff Fox
The Deepwater Ocean Drilling Program

2007 Dr. Bob Bakker
*Amazing Fossils from the Permian of Texas —
New Insights and Ideas on Reptiles and Dinosaurs
Solving a 287 MMY Crime Scene*

2008 Dr. James Reilly, NASA Scientist and ISS Astronaut
My Strolls Among the Stars

2009 Dr. Michael R. Waters
*In Search of the First Americans Recent Discoveries and
the Role of Geology in the Pursuit of the Past
Held at the Houston Downtown Aquarium*

2010 Dr. Patricia Dickerson
*Big Bend — Where the Rockies Meet the Appalachians,
Discoveries, Enigmas*

2011 Derek Main
Wildfire Paleoecology Along the Cretaceous Coast of Texas

2012 Susan R. Eaton
*A Geoscientist in Antarctica: Following in Shackleton's
Footsteps 100 years Later*

2013 Dr. Dawne Sumner
*The Mars Science Laboratory Mission,
A Roving Geochemist on Mars!*

2014 Pasquale Scaturro
A Trip Down the Nile

2015 Dr. Jeff Karson, Syracuse University
Exploring the Ultra-Deep Ocean Seafloors of the World

2016 Dr. David Kring
*Origin of Life on Earth and Connection to Lunar Impacts
3.8 Billion Years Ago*

2017 Dr. Don Corrick
Big Bones in Big Bend

2018 Paul Bernhard, Designer of the Weiss 3.0 HMNS Energy
Hall and the GeoVator operator

2019 John M. Moody
*La Brea del Sul: Discovery of Ice Age Fossils in
Tar Pits of Venezuela*

2020+ No Guest Nights

*The recipe for success was a speaker with an adventure story
that included paleontology, geoscience or archeology*

notch” by inviting global experts, world famous geoscientists, and captivating speakers. In this new format, Guest Night programs benefited from dedicated committee chairs Bill Osten, Dave and Suzy Reynolds, Pete Emmet, and David Orchard.

Combining top-notch speakers and HMNS innovations As program chairs know well, the challenge to recruiting great speakers is identifying and connecting with them. Guest Night June 2003 took the event to a new level with guest speaker Harrison “Jack” Schmitt, Apollo lunar module pilot and Apollo 17 moonwalker. The story of how Jack Schmitt came to speak at



Guest Night goes back to the AAPG Houston ACE meeting in 2002, where Michel T. Halbouty introduced Dr. Harrison “Jack” Schmitt to Charles and Linda Sternbach. This introduction later helped the Sternbachs invite Dr. Schmitt to speak to HGS at the HMNS. In June 2003, the Guest Night was a complete sell-out, with 425 people and a long waiting list. Everyone wanted to meet the only geologist yet to walk on the Moon. This event was the first time the tall screen was used for a slide show instead of just an IMAX movie. Bill Osten delighted in giving out door prizes in a raffle, including mineral specimens and fossils.

Featuring notable speakers in engaging venues made Guest Night a highly anticipated annual event from 2003 to 2019. Guest Nights regularly sold out to capacity. The recipe for success was “a speaker with an adventure story that included paleontology, geoscience or archeology, coordinated with Museum exhibits on energy, space, stars, Mars, and dinosaurs.” Popular Guest Night speakers include:

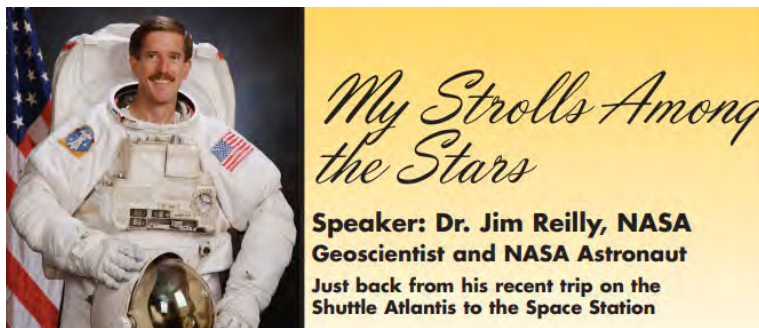
- Dr. Gordon McKay (manager, NASA Johnson Space Center) on the first Mars rovers Spirit and Opportunity.
- Dr. David Applegate (USGS) on Tsunamis after the 2005 tidal wave that devastated Indonesia.
- Dr. Bob Bakker, the dinosaur expert, and author, spoke in 2007 for HGS and again in 2014 at an HGS-organized event for AAPG Annual Meeting.
- Dr. James F. Reilly, Jr returned from space on the Shuttle Atlantis and lectured in 2008.

Later Guest Night themes included: Big Bend geology (2010 and 2017), The Mars Rover Curiosity with a talk and video from NASA’s Dawn Sumner (2013), and Rafting the Nile with Pasquale Scaturro (2014). Pasquale told how he was nearly shot several times in hostile territories and how getting the rafts and IMAX equipment over waterfalls was quite challenging! Jeff Karson (2015) told us about deep ocean exploration in a submersible down to 13,000 below sea level to see ocean floor vents and oceanic crust being formed. Dr. David Kring (2016) told us about the important role of impacts in the origin of life and the plans for future landing sights on the Moon. Paul Bernhardt (2018) explained how he designed the Weiss Energy Hall 3.0. Many will remember Paul as the driver of the GeoVator dressed in blue coveralls. He told us of the thousands of VIP tours he gave, including one to President George and Barbara Bush.

FINDING THE SPEAKERS

How did Guest Night round up so many extraordinary and famous speakers? Here are a few stories, starting with NASA. Booking a NASA scientist can be challenging as the agency has rules, etc. In the case of Gordon McKay, the connection came during a Lunar and Planetary Society conference in Clear Lake attended by the Sternbachs. After McKay gave a talk on the Mars Rovers Spirit and Opportunity, he gave his business card to Charles Sternbach, leading to a personal connection.

In the case of Astronaut Jim Reilly, he was a friend of both Past HGS President Jeff Lund and HGS member David Reynolds. The Sternbachs were thrilled to attend the Launch of STS 117 Atlantis from Cape Canaveral on June 8, 2007. The launch was extra special since Jim had invited us to attend, and he was on board! We knew that Jim would make a great Guest Night speaker. We first contacted Reilly by personal email, but as a NASA employee, we needed to involve the NASA Astronaut Appearance Office. It could have been a snail mail problem, but they did not respond to our request letter. Fortunately, Jim Reilly retired from NASA just before the Guest Night in 2008, so he could speak without NASA’s permission. One week before Guest Night, we did get a letter from the Astronaut Appearance Office denying permission for Jim Reilly to speak at our event. Reason: he had retired from NASA. Problem solved!





Dr. Bob Bakker drawing a Dimetrodon as a gift for a young Guest Night attendee.

Bob Bakker is a fantastic speaker and one of Guest Night's most popular speakers because of his humorous stories, recreations of Permian reptile life, and innovative hand-drawn cartoons drawn on white paper, which he often gives to children. Charles Sternbach first met Bob Bakker on a field trip to Montana in 1994, so we reconnected using postal mail and email when we wanted to get Dr. Bakker to speak at Guest Night 2007. However, if you want to find a world-class paleontologist, there is a better way than mail, email, and telephones. Look for them in preparation labs and on outcrops!

And that's what happened! The Sternbachs stumbled into meeting Bakker in person while on a trip to Dinosaur Ridge Museum in Morrison, Colorado, in 2006. We entered the Museum to look at the fossils, and Charles noticed Bob Bakker's name on the museum scientist list. We asked about Bob Bakker, and the lady at the front desk said, "Bob Bakker? He's here on site today. He's out back." So, we walked around the back of the building, and Bob Bakker was there looking at some fossils in a rock pile. After some



Dr. Bob Bakker

dinosaur discussion, we introduced ourselves. Charles reminded Dr. Bakker of their trip together to Montana in 1994. We pitched the idea of him coming to Houston and speaking at the HGS Guest Night in June, which, fortunately, was possible in his busy schedule. So, we left a handwritten note with Bakker. As the time to finalize plans approached, we tried unsuccessfully to reach Dr. Bakker with emails and phone calls. Neal Immega, who digs fossils on Bakker's field trips to Seymour, Texas, provided second-hand personal contact. As planning deadlines loomed, Linda Sternbach took time off from her job downtown to go to HMNS at noon one day on a "hot tip" that Dr. Bakker was doing a paleontology show for kids in the Museum basement. She said, "Remember me from Colorado? Can we confirm you will be at Guest Night because we are booking the Museum and putting out ads?" Well, he confirmed his appearance and travel arrangements to Houston, and the rest is sold-out Guest Night history, where Bob Bakker gave one of the best and most entertaining paleontological talks we ever saw.





Dining at the unveiling of the Weiss Energy Hall 3.0 in 2018 where Paul Bernhardt “The GeoVator operator” explained his vision for the exhibit

Many Guest Night speakers got involved in the HGS event through recommendations of HGS members and interested people. Dr. Jeff Karson, who wrote a book on the Oceans of the World and talked about diving to the bottom of the Atlantic Ocean in a submersible vehicle (the ALVIN) at the 2015 Guest Night, was recommended by the chair of the Syracuse University Earth Science department, where Linda Sternbach studied geology as an undergraduate. John Grotzinger of Cal Tech recommended Dawn Sumner (2013 Mars Curiosity scientist). We connected with rafting legend and author Pasquale Scaturro, an adventurer who also summited Mount Everest and was on the cover of Time magazine, through a geophysicist friend in Denver who co-managed an international seismic business with Scaturro. Often all it takes to connect with well-known speakers is a chain of contacts leading to emails, a phone number, or showing up on the right outcrop.

THE SPIRIT OF GUEST NIGHT

One of Dave Reynold’s favorite memories of Guest Night was the 2012 presentation by Dr. Derek Main, who described the paleo-environment of the Arlington dinosaur dig site where he worked. Derek showed great slides and painted word pictures of what the setting of this Cretaceous estuary looked like. Dr. Main highlighted all the discoveries he and his co-workers made, including predator alligators, turtles, and proto-hadrosaurs in a setting much like Galveston. When Dr. Main opened the floor to questions, the first

question came from a 10-year-old girl whose question showed that she thoroughly understood the presentation. That is what Guest Night should do—inspire our youth to explore the geosciences and share some top-notch speakers with our friends who might never have taken a formal class in geology.

THE FUTURE?

Will there be future Guest Nights at the HMNS in a post-Covid world? It’s certainly possible. The HMNS is a fantastic museum and well worth a private event so HGS members and guests can enjoy learning about science. Guest Night provides meaningful experiences that further HGS’s mission of public outreach, education, professional fellowship, and dissemination of science.

It helps the event enormously to have generous corporate sponsors to defray Museum rental and catering. Thousands of Guest Night attendees purchased tickets costing \$60 for a lecture, movie, museum access, dinner, and beverages. Few attendees knew the actual ticket value was \$120 or more. A huge thank you goes to generous sponsors who, for many years, supported Guest Night. The challenge of creating future Guest Nights requires planners to solve the financial aspects of such an event. The inspiring history of Guest Night shows that the immense benefits to HGS members, the community, and students are enormous. ■



Janet Combes and young person



Dr. James F. Reilly, STS astronaut (who would later serve as USGS chief) with his good friend Dave Reynolds

GUEST NIGHT VIDEO ARCHIVE

Many Guest Night Videos can be found on the HGS Education channel.

<https://www.youtube.com/watch?v=vKVec9Dk-Sc&list=PLs6d6cNggaUZXYnc9OuE-ICR0ZkRdOYz6>

Social Events

By Charles Sternbach.

HGS has a long tradition of Social Events, including the Shrimp and Crawfish Boil, Skeet Shoot, Tennis, and Golf Tournaments. These events promote fun, networking, and camaraderie among geoscientists.

SHRIMP PEEL

Cooking up a tradition Honorary life member Howard Kiatta recalled seafood parties in the southwest Louisiana area that would become the origin of the HGS Shrimp Peel.

“These oil industry events became famous in southern Louisiana. They were known as the FSLG & ES, or Fine Southwest Louisiana Geologists and Epicurean Society. In 1959, it was re-formed and carried on in Houston’s “sin alley” as an annual event. In 1964, the name became the FSLG&CES, or Fine Southern Louisiana Geologists and Crawfish Eating Society...With some creative and big thinking, they came up with their Big Pot Recipe, which debuted on May 10, 1969, when the group returned to Louisiana. The city park of New Iberia treated somewhere between 700 (plus) attendees to 325 gallons of that special gourmet gumbo, which was cooked in a huge eighteenth-century sugar kettle.”



Lee Shelton (center) Originator of the SHRP Events

Sam Houston Racetrack Events were held at various venues for many years, including the St. Arnold Brewery. Lee Shelton proposed hosting the HGS/GSH shrimp peel at the Sam Houston Race Park (SHRP) on October 30, 1999. The HGS Board acted decisively to actuate Lee’s proposal. We thank Lee and his team for organizing fun-filled years of “eating lots of boiled shrimp with cold beverages, watching horse races (right on the home stretch), and door prizes between races.”

The SHRP Shrimp Peel offered a great venue for team building. “If you are looking for an opportunity to show your team some appreciation for their hard work or just to want to build esprit de corps, consider bringing out your team. This event is a sure winner, and your employees will appreciate it. For you folks in the

service business, consider getting tickets for your clients to show you appreciate their business.”

The SHRP named the HGS Handicap and GSH Handicap races for our societies. Members could meet Jockeys and horses in the winner’s circle. Enthusiastic marketing echoed a popular home stretch refrain, “Go Baby Go.” Charles Sternbach recalls standing with the 1999/2000 Executive Board at the start of the HGS Handicap. “We were within a few tens of feet of the gate on the other side of the railing. When the starting gate opened, alarm bells blared, chaos ensued, and the horses thundered forward. We experienced a calvary charge at close range! Almost as exciting as drilling an oil well.”



Charles Sternbach with program



2017 First year in Bear Creek Park



2019 Kenneth Peoples

Bear Creek Park. The next generation of the Shrimp Peel moved to Bear Creek Pioneers Park, holding a very successful event starting in 2017. We are grateful to the organizers for this fun innovation and to HGS Office Manager Andi Peoples for all her hard work making this a successful annual event. Michael Salazar is the current chair for this event, and the tradition of good food, good folks, and fun continues!

SKEET SHOOT AND SPORTING CLAYS

A Straight Shooter Tom McCarrol has served as Skeet Shoot Chair numerous times since the first skeet shoot in 1982. His first year as chair was around 1989, but he can't remember how many years he has served. His best estimate is ten years as chair in the 41 years the event has been held. Thank you, Tom!

Tom organized many programs and wrote in 2008, "The 25th Annual Skeet Shoot Goes Off with a Bang! "Well, the \$140/bbl oil must have a good effect on the HGS membership because they showed up in record numbers (164) on June 28 to participate in the 25th Annual HGS Skeet Shoot at the Greater Houston Gun Club in Missouri City. Gun Club Manager Kevin Dougherty had the fields and grounds in top shape and made sure that registration and scoring went off without a hitch. The weather cooperated, with no rain and some cloud cover to break the worst of the heat. The shooters shared prizes and gave back to HGS. Thanks also to generous sponsors. Nice going, all of you!"

Aiming for the future! The current chair of the Skeet Shoot Sporting Clays committee recently chaired by Howard Woods, with new chair David Perez. This tradition continues with enjoyable annual events.

GOLF AND TENNIS TOURNAMENTS

The HGS Social Committees also include the Tennis Tournament chaired by Constantine Platon and the Golf Tournament chaired by Jimmy Bagley and Kenneth Baucum. Thank you for all these wonderful programs that keep fun HGS traditions alive! ■



Andrea Peoples 2019



2019 Bear Creek Park Claudia Ludwig & Annie Walker



Skeet Shoot



Skeet Shoot

HPAC

*The Houston Petroleum Auxiliary Council**As given in the HPAC 2022-23 Yearbook***MISSION STATEMENT**

To promote and foster social relationships among its members and to assist the Engineering, Geological, Geophysical, and Land Societies in their various requests.



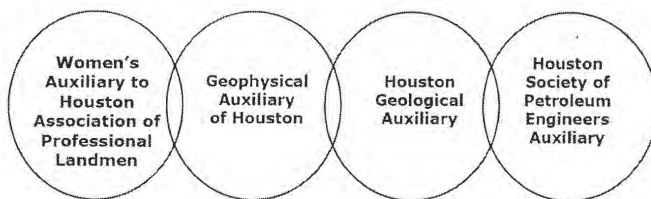
In 2006, Norma Jean Jones, President of the Houston Geological Auxiliary, and her Board voted to initiate a study to determine if a merger of the Petroleum Auxiliaries in the Houston Area was possible. This action was needed to overcome the loss of membership and the difficulty in filling all offices/committee chairs and continue to have quality programs and facilities to house their socials. Winona LaBrant Smith was asked to begin this investigation. Edie Bishop agreed to co-chair this assignment. After numerous phone calls to Auxiliaries in other cities who had already accomplished this feat, a "Brain Storming" luncheon was held at the Junior League. Leaders of Geophysical, Land, Engineering, and Geological were in attendance. Following a pleasant meeting, a vote passed unanimously to pursue this idea. A formation meeting was held, and the Houston Petroleum Auxiliary Council, HP AC, was born. Officers were elected in 2006 for the 2006-07 term, and the movement was underway with Lynn Schoenberger, Geophysical, as the first Chair of HPAC.

A successful trial luncheon/style show was held in the first year at Junior League. In the second year, three joint functions were hosted to determine the feasibility of this venture, with all four auxiliaries participating under the leadership of Sheri McQuinn as the 2007-08 Chair. At the end of the second year, a vote was taken by the membership of each of the four auxiliaries. It was determined that HPAC would be officially formed, and the Auxiliaries would become one group. To maintain a close relationship with each of the four professional Associations (Engineering, Land, Geological, and Geophysical), a member whose husband is affiliated with one of the four professional associations will be appointed as liaison to that association. Liaisons allow HPAC members to continue long-established relationships with the four represented professional Societies. The Land, Geological, and Geophysical voted overwhelmingly to join the movement.

The Engineering Auxiliary had a unique problem; their Scholarship Fund (a very important part of their functions) is written as part of their By-Laws. They cannot disband and join HPAC, as a group, without losing this fund. They join HPAC on an individual member basis.

A Nominating Committee was formed by appointment of the HPAC Board, with one member from each of the auxiliaries forming this group. They were Mary Harle, Geological; Linnie

Edwards - Chair, Geophysical and June Harrison, Land. The Nominating Committee met and selected members from various groups to hold the offices for the first year. The HPAC Board approved the appointments, and after operating for two years on a "trial basis," HPAC began its first official year with Phyllis Carter at its helm as President. Other officers included Millie Tonn, 1st Vice President; Nan Pye, 2nd Vice President; Paulette Williams, Secretary; Wanda Shaw and Holly Dodds, Co-Treasurers and Lois Matuszak, Editor. ■

**ORGANIZATIONAL CHAIRMEN AND PAST PRESIDENTS****CHAIRMEN**

Winona LaBrant	2005-2006
Lynn Schoenberger	2006-2007
Sherilyn "Sheri" McQuinn	2007-2008

PRESIDENTS

Phyllis Carter	2008-2009
Millie Tonn	2009-2010
Edie Bishop	2010-2011
Kathi Hiltermann	2011-2012
Mickey Murrell	2012-2013
Barbara Peck	2013-2014
Sally Blackhall	2014-2015
Norma Jean Jones	2015-2016
Bernadine Billard	2016-2017
Donna Parrish	2017-2018
Shirley Gordon	2018-2019
Nancy Hill	2019-2020
Sandra Pezzetta	2020-2021
Sally Blackhall	2021-2022
SaraNan Grubb	2022-2023
Kathi Hiltermann	2023-2024

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AEXCO PETROLEUM, INC.
Oklahoma & Kansas
Prospect Development
PRIVATE BUYER

Current
TEXEGY
Austin Chalk Project

Undisclosed
HAIJEX OIL CORPORATION
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& Woodrose Assets to
eogresources

Successful Transaction
Trio T LLC
Advised on the Sale of a
Northwest Jacobsen Project to
U.K. INVESTOR

Current
WELBA PEAK
Sweet Wash Basin

\$10,000,000+
Joint Venture
CALIFORNIA RESOURCES CORPORATION
Original Joint Venture
California Exploration
INTERNATIONAL PARTNER

\$3,500,000
Advised on the Sale of
Utah Drilling Project to
WHITING

Current
UNITED OIL & GAS
International Offshore

\$10,000,000
Hiborg Energy Company
Advised on the Acquisition of
Southeast Texas Permian from
PETROCULF

Undisclosed
SOURCE ROCK RESOURCES
Advised on the Sale of Oklahoma
Woodford Shale Assets to
CIMAREX

Current
WestOil
West Coast West Africa Offshore



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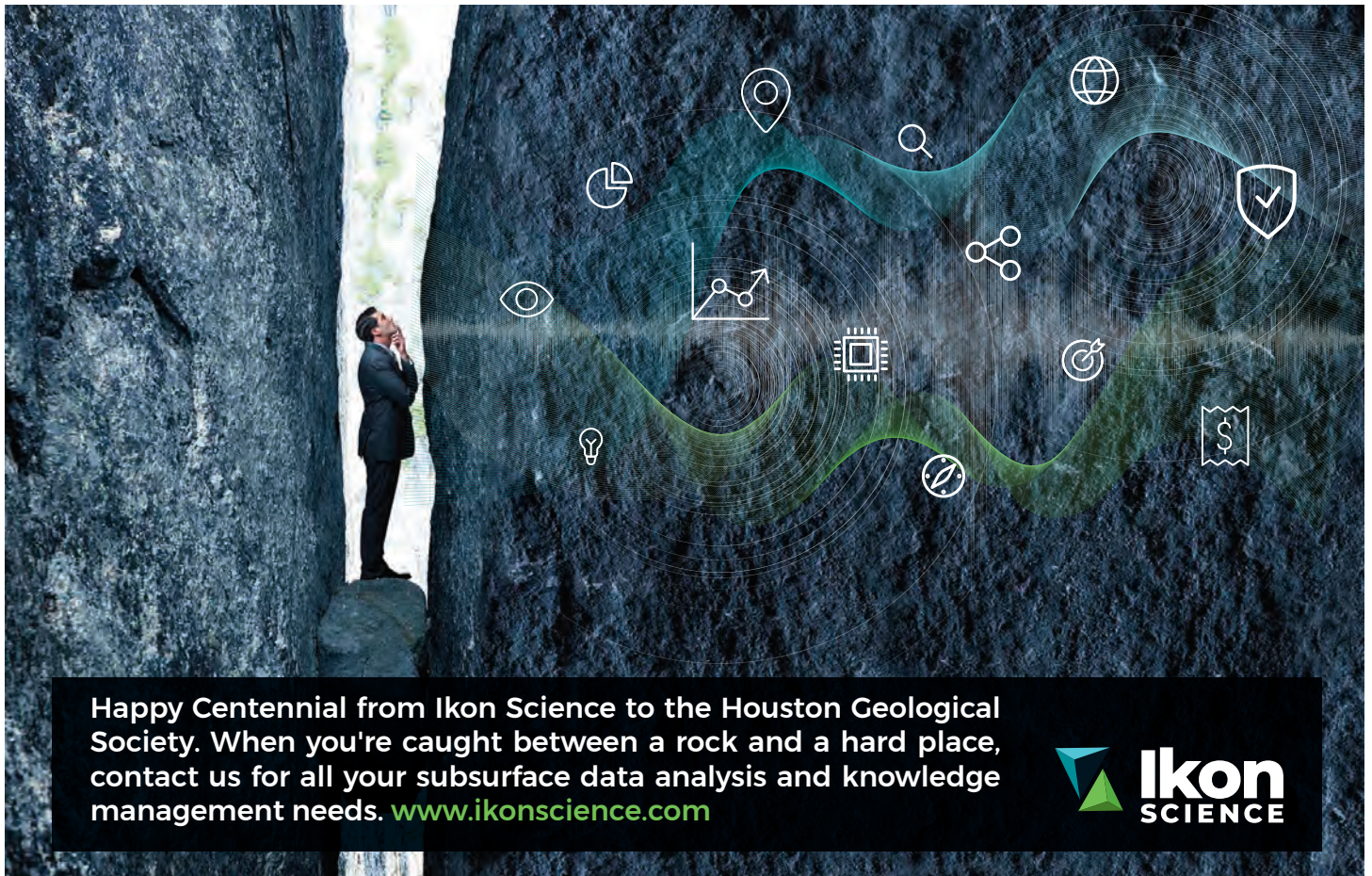


Congratulations to the
Houston Geological Society

100 YEARS

of exploring the world
and improving lives

Congratulations from Dr. Tom & Evonne Smith
to the HGS for outstanding achievements.



Happy Centennial from Ikon Science to the Houston Geological Society. When you're caught between a rock and a hard place, contact us for all your subsurface data analysis and knowledge management needs. www.ikonscience.com





1999

The Dow Jones Industrial Average closed above 10,000 for the first time.

The world worried about the Y2K bug and celebrated the start of the new millennium.

HGS

First HGS Jerry Cooley Award, the society's highest honor, given to its namesake.



Jerry Cooley

2000

The dot-com bubble burst, leading to a significant decline in the stock market.

Minute Maid Park, home of Major League Baseball's Houston Astros, opens.

HGS

First Legends Night held with an overflowing crowd at the Westchase Hilton.

First Robert E. Sheriff Lecture with U of H.

GCAGS Held its 68th Annual Convention at GRB, Houston, Larry Bartell Chair.

Initiated in the spring of 2000, the "NeoGeo" program held its first meeting on September 13, 2000, encouraging new industry geological professionals to become active in our society.

HGS held the first "Dry Hole Seminar" on Nov 8, 2000, organized by Kevin McVey.



First Legends Night, George Mitchell and Charles Sternbach

2001

The NEAR Shoemaker spacecraft lands on the asteroid 433 Eros, becoming the first spacecraft to land on an asteroid.

Tropical Storm Allison devastates the Houston area.

The September 11 terrorist attacks kill nearly 3,000 people and trigger a global war on terror.

Enron is found to have accounting scandals. The company goes bankrupt.

HGS

HGS Held a 100th Anniversary Field Trip to Spindletop with Michel T. Halbouty, January 10, 2001.

Inaugural APPEX (precursor to Summer NAPE), Aug. 2001, chaired by Chuck Noll



*Spindletop 100th Anniversary Field Trip
Dan Smith, Clint Moore, Charles Sternbach, Craig Moore, Jeff Lund, Paul Hoffman*

2002

The Winter Olympics are held in Salt Lake City, Utah.

The human genome is published in full.

The Houston Texans joined the NFL, playing at the newly opened Reliant Stadium.

HGS

AAPG Annual Convention, March 2002, chaired by Jeff Lund, Theme – "Our Heritage: Key to Global Discoveries"

2003

The space shuttle Columbia explodes over Texas, killing all seven astronauts aboard.

The human genome project is completed, revealing the entire sequence of human DNA.

Halliburton's headquarters move from Dallas to Houston.

HGS

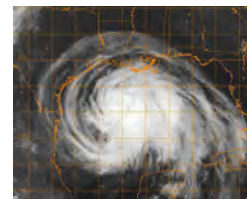
Formation of the Northsider's Group.

First HGS/PESGB African Conference was held in Houston.

"Disappointing Seismic Anomalies" held Oct 21, 2003, at the Marathon Building, co-chaired by Kevin McVey and Evelyn Medvin.



2002 John Adamick, Jeff Lund, Deborah Sacrey, Jim Reilly, Charles Sternbach



2004

NASA lands the Opportunity Rover on Mars.

Facebook was founded by Mark Zuckerberg.

Freak snowstorm hits, causing record Christmas snowfall in the Houston region.

Unconventional horizontal drilling by Mitchell Energy in the Barnett Shale of the Fort Worth Basin was kicked off and soon changed the US energy business.

HGS

Major redesign and upgrade to the HGS website.



95th Birthday Michel Halbouty Family

2005

Hurricane Katrina causes catastrophic damage in Florida and Louisiana. Houston welcomes more than 125,000 displaced residents.

YouTube is launched by three former PayPal employees.

HGS

HGS and ECH co-sponsor "Coastal Subsidence, Sea Level and the Future of the Gulf Coast," a conference to increase awareness of subsidence issues

2006

Pluto was reclassified as a "dwarf planet" by the International Astronomical Union.

Twitter is founded and launched by Jack Dorsey.

HGS

HGS hosts the AAPG annual meeting and exposition at the George R. Brown Convention Center chaired by Charles Sternbach Theme "Perfecting the Search, Delivering on Promises"



2007

A mummified dinosaur is found in North Dakota, revealing details of its skin and muscles.

Steve Jobs announces the iPhone.

HGS

HGS office moved to St. Mary's Lane.

Frank Wallis and team launched the first ever "Applied Geoscience Conference: U.S. Gulf Region Mudstones as Unconventional Shale Gas/Oil Reservoirs, Fractured, and Non-Fractured," was held at the downtown Houston Doubletree Hotel, October 1 and 2, 2007, with 180 attendees.

2008

Scientists find ice on Mars, using the Phoenix lander, which confirms the presence of water on the red planet.

Hurricane Ike passes through Houston causing flooding, wind damage and widespread power failures.

HGS

GCAGS Held its 69th Annual Convention at GRB, Houston, David Rensink Chair.

GSA and other societies joined GCAGS



Guest Night James Reilly and Dave Reynolds

HISTORICAL NOTE

HGS Presidents Awarded AAPG Sidney Powers Medal

Paul Weaver 1958

J. Ben Carsey 1985

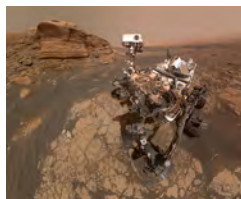
HGS Presidents Awarded AAPG Halbouty Medal

John Amoroso 2007

Daniel Smith 2011



Mudrocks Committee Matt Boyd, David Tonner, Frank Wallis, Paul Basinski, Kirk Barrell, Tony D'Agostino



Credit: NASA/JPL-Caltech/MSSS

2009

Bitcoin is launched by Satoshi Nakamoto.

The H1N1 virus causes the 2009 swine flu pandemic.

HGS

Maps for Schools and Bones for Schools programs are highlighted.

2010

The Deepwater Horizon oil spill occurred in the Gulf of Mexico.

HGS

HGS establishes social media connections via Facebook and Twitter.

2011

The Tōhoku earthquake and tsunami devastate Japan and trigger a nuclear crisis.

HGS

AAPG Annual Convention, chaired by Steve Levine, Theme "Taking Geoscience to Greater Heights"

2012

NASA lands the Curiosity rover, the largest Mars rover yet built, which explores the planet's geology and climate.

HGS

Technofest held in July.



Africa Conference Crowd

2013

Oil prices peak at \$108 per barrel in June before plunging 75% over the next 18 months devastating the Houston-area energy industry. Nearly 80,000 energy-related jobs are lost.

HGS

Applied Geoscience Conference for Mudrocks System: Characterization to Improve Exploitation of Unconventional Oil and Gas Reservoirs was held in February.



HGS Past President's Luncheon



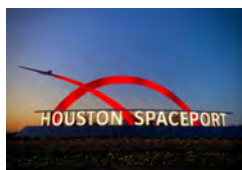
Grand Canyon Field Trip John and Dawne Jordan, Linda and Charles Sternbach



HGS past president, Stephen Levine, welcomes the 2011 AAPG Convention to Houston.



HGS Field Trip to NASA at AAPG Convention. Retired astronaut James Reilly (right) would later become Director of the U. S. Geological Survey 2018-21.



2014

Scientists perform the first robotic landing on a comet, using the Philae probe from the Rosetta spacecraft, which explores the surface and composition of comet 67P/Churyumov-Gerasimenko.

HGS

AAPG Annual Convention, April, chaired by Steve Brachman, Theme "Ideas & Innovation: Fuel for the Energy Capital".

Dr. Bob Bakker speaks to HGS and AAPG to showcase the new HMNS Paleontology Hall

2015

Houston's Ellington Airport receives a commercial spaceport license by the Federal Aviation Administration.

HGS

GCAGS Held its 70th Annual Convention at GRB, Houston, Larry Bartell Chair.

In 2015 the Petroleum Club of Houston, where many HGS luncheon meetings and special events are held, moved to Total Plaza from its longtime home in the Exxon Building.



GCAGS leaders Larry Bartell, Martha Lou Broussard, Linda Sternbach, and Charles Sternbach

2016

The U.S. Geological Survey says the Wolfcamp shale in West Texas is the largest continuous oil and gas deposit ever discovered in the United States, containing 20 billion barrels of oil and 16 trillion cubic feet of natural gas.

HGS

HGS – PESGB hold 15th Conference on African E&P in Houston

**Africa: What's Next?**

The 15th HGS-PESGB Conference on African E&P
September 12-14, 2016
The Westin Houston, Memorial City, Houston Texas



2017

Hurricane Harvey devastates Houston, flooding homes and roads with over 50 inches of rain over 4 days.

The Houston Astros win the World Series.

HGS

AAPG 100th Annual Convention, April, chaired by David Rensink, Theme "100 Years of Science Fueling 100 Years of Prosperity"

Paul Britt, 2023-2024 HGS president (#100), served as AAPG's 100th president! Charles Sternbach co-chair of the HGS 100th Anniversary Committee, served on the AAPG 100th Anniversary Committee!



2018 Africa Conference Committee (L-R) William Dixon, Brian Horn, Phil Towle and Paul Haryott.

2018

Lifted by the shale oil boom, the United States overtakes Russia and Saudi Arabia to become the world's largest oil producer for the first time since 1973.

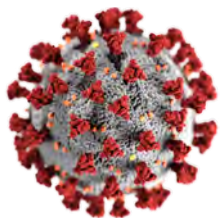
HGS

June 6-7 HGS holds the Flood Conference: "Flooding in Southeast Texas: The Science Behind The Floods", at the University of Houston.

Guest Night features Paul Bernhard, Designer of the Weiss 3.0 HMNS Energy Hall and "The GeoVator operator"



Petroleum Club of Houston moves to Total Plaza



2019

COVID-19, a novel coronavirus, emerges in China and begins to spread globally, causing a pandemic.

HGS

GCAGS Held its 71st Annual Convention at Marriot Westchase Houston, Mike Erpenbeck Chair, Theme "Where the Entire Greater Gulf of Mexico Comes Together!"



2020

Wildfires burned more than 8.2 million acres in the American West.

HGS

On Feb 10th, HGS holds another popular Scholarship Night, raising nearly \$50k, featuring Artemis Astronaut Jessica Watkins.



HGS Scholarship Night Charles Sternbach, Jessica Watkins, Jeff Lund

2021

Winter storm Uri resulted in widespread power outages and water supply interruptions for several days in Houston.

HGS

AAPG and SEG cohost IMAGE meetings in 2021, 2022, 2023 and are planned through 2025.



2022

The Houston Astros win their second World Series.

The world population reached eight billion people.

HGS

The 21st annual HGS-PESGB Africa Conference was held 26-28 September 2022

2023

ExxonMobil relocates its corporate headquarters from Irving to its campus north of Houston.

OpenAI launches GPT-4, a large language model for ChatGPT, which can respond to images and can process up to 25,000 words.

HGS

GeoGulf2023 GCAGS Held its 72nd Annual Convention at Norris Conference Center Houston, Charles Sternbach Chair, Theme "United We Explore the Gulf of Mexico, and Beyond"

HISTORICAL NOTE

HGS Presidents Who Chaired AAPG Conventions

Carlton Speed, Jr. 1957
Edd R. Turner 1971
Anthony Reso 1979
Richard S. Bishop 1988
James O. Lewis, Jr. 1995
Jeffrey W. Lund 2002
Charles A. Sternbach 2006
Stephen Levine 2011
Steve Brachman 2014
David Rensink 2017

HGS Presidents Also Elected AAPG Presidents

Edd R. Turner 1977-1978
John J. Amoroso 1983-1984
James Gibbs 1990-1991
Richard S. Bishop 1998-1999
Daniel Smith 2002-2004
David Rensink 2020-2011
Paul Britt 2016-2017
Charles A. Sternbach 2017-2018



HGS Takes Geoscience to Greater Heights by hosting a memorable AAPG 2011 All Convention Luncheon with astronauts from three generations – Harrison "Jack" Schmitt from Apollo 17, Scott Carpenter from Mercury, and James Reilly from ISS. Charles Sternbach moderated the panel. Linda Sternbach is also shown. Houston and HGS look upward to space exploration, the new technology it creates, and the Artemis astronauts (and future generations) who will leave geoscience bootprints off Earth.

Bulletin and Website

The Digital Journey of the HGS

By Linda Sternbach

HGGS has adapted to many technological advancements, particularly in the last thirty years, to fulfill its mission better. As HGS *Bulletin* Editor 1997–1998, President 2007–2008, website committee chair, and video committee chair, I worked with many HGS leaders and committee members to advance publishing and digital communication to further the mission. These are a few stories and milestones along that journey.

INTRODUCTION

The history of the HGS is recorded in print as old *Bulletin* issues and as PDFs made from the *Bulletins*, stored online under the domain www.hgs.org. The leaders of the HGS from 1973 to today were technologically in tune with their times. They succeeded (and struggled) to keep Society communications relevant in a changing digital environment over the past 30 years.

In this article, we will list some key dates, changes, and innovations and mention people at the forefront of creating the monthly content of the HGS *Bulletin*, HGS.org website, and recent social media accounts.

1994 HGS OFFICE GETS AN IBM PC

Many computer-savvy HGS members also belonged to the HAL-PC computer group composed of scientists building computer applications and using Microsoft PC personal computers connected to the early world wide web and dial-up Internet. The Office Committee, and the Computer Applications Committee, helped install an IBM personal computer in the HGS office on Harwin Avenue for the HGS office secretaries. Membership records (up to 4000 members' names and addresses) were typed into the first Microsoft databases for dues renewal and

creating mailing labels for the HGS *Bulletin*.

HGS TECHNOLOGY CONFERENCES

The Society hosted a “GeoTech” Conference at the Astro Village in 1987-89, organized by Sandi Barber. The Emerging Technology Committee began in 1995 when Thom Tucker and others felt the need to feature technological options open to HGS members. HGS president Clint Moore asked Charles Sternbach to chair E-Tech in 1996.

Charles enthusiastically accepted the assignment and formed a dynamic committee and added regular meetings to the Emerging Technology. Each of the five programs had 100+ attendees.

Thanks to the vision of team members Shawn Porche, Rosemary Mullin, and Dan Morris, the group proposed a new summer event featuring vendors and technological software. “Technofest” held its first meeting on July 24, 1997, and was proclaimed a popular success and money maker for HGS. Shawn Porche and Rosemary Mullin ran annual successful events from 1998 to 2005.

This initiative was followed by several years of *Technofest* (2005-2009) at the Westin Galleria, headed by Deborah Sacrey, Bonnie Milne-Andrews, and Robert Pledger. Software vendors presented their petrophysical and geophysical products in booths, and attendees enjoyed buffet food and technical talks. *Technofest* was a regular annual success for HGS for 12 years. Thousands of HGS members accessed the latest software in a rapidly evolving technological field. And HGS made a lot of money.

HOUSTON
GEOLOGICAL
SOCIETY



BULLETIN
1938 - 1959
HOUSTON, TEXAS



HGS secretary Leslie Tolar at the keyboard of the society's new IBM PC-AT computer. See the February 1994 *Bulletin* for more info about this computer.



Rosemary Mullin, Charles Sternbach, Shawn Porche and Dan Morris of the Emerging Technology Committee. Not pictured are Frank Rabbio and Missy Feeley.



*Vendors and
Attendees found
TechnoFest
a Great Value!*



John Tubb, Rosemary Laidacker, Donna Davis



Sandra Babcock and John Grubb

HGS 2009 Technofest Showcases Technology Software for Oil and Gas

This was another successful year for HGS Technofest! Over 350 people attended the exhibition on August 13 at the Westin Galleria Hotel, thanks to the efforts of Deborah Sacrey and her committee. Helping Deborah were HGS members Bonnie Milne-Andrews, Jim Grubb, Robert Pledger, and Jennifer Burton, who were assisted by local geoscience university students.

The HGS thanks the vendors who participated and the Platinum, Gold, Silver and Bronze sponsors: SMT, Vanco, Swift Energy, SeisWare, IDML, Dan Smith, RCL Systems, GeoComputing, Slawson, Corridor, Halliburton, Landmark, SeismicVentures, CoreLab, Resolve Geosciences, Saudi Aramco, Steve Brachman, Star Creek Energy, NuTech, and Swift Oil and Gas.



Technofest Chairperson Deborah Sacrey (HGS Honorary Member) of Auburn Energy organized the program. She has expanded Technofest over the last 2 years.



Technofest key committee members Bonnie-Milne Andrews (front), Jim Grubb, Robert Pledger (new HGS Director, far right).



Sponsors of Technofest 2009 include SMT, Vanco, Swift Energy, SeisWare, IDML, Dan Smith, RCL Systems, GeoComputing, Slawson, Corridor, Halliburton, Landmark, SeismicVentures, CoreLab, Resolve Geosciences, Saudi Aramco, Steve Brachman, Star Creek Energy, NuTech, and Swift Oil and Gas.



Deborah Sacrey and John Tubb

*Technofest was a regular annual success
for HGS for 12 years.*

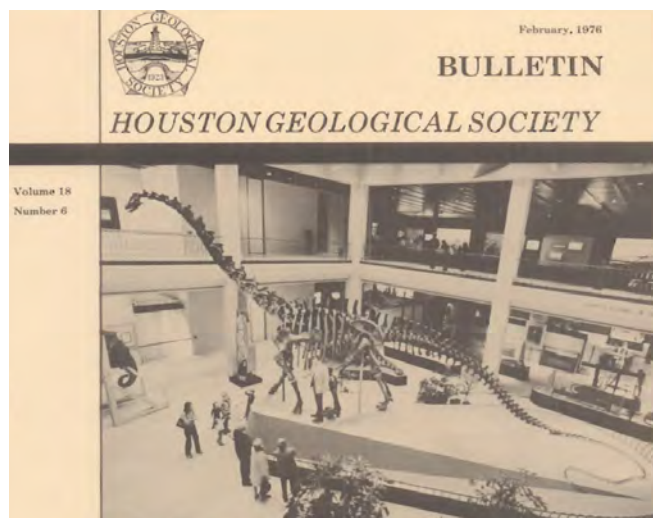
*Thousands of HGS members accessed the
latest software in a
rapidly evolving technological field.*

HGS BULLETIN MAJOR CHANGES

February 1976: the first black and white photo was presented on the cover. Before this time, the *Bulletin* was mostly text-only on the front cover, and the entire *Bulletin* looked like it was typed in the Courier font by a secretary, copied, stapled, and mailed to members.

September 1995 First Color Cover Photo *Bulletin* cover and interior revamped by editors John Turmelle and Gail Bergen. The new layout had a bold banner at the top, a cover photo, and coming attractions. The first all-color cover appeared in September 1995. The *Bulletin* benefited from the work done by the Computer Applications Committee headed by Craig Moore and Paul Britt. Membership records (up to 4000 members' names and addresses) were typed into the first Microsoft databases for dues renewal and creating mailing labels for the HGS *Bulletin*.

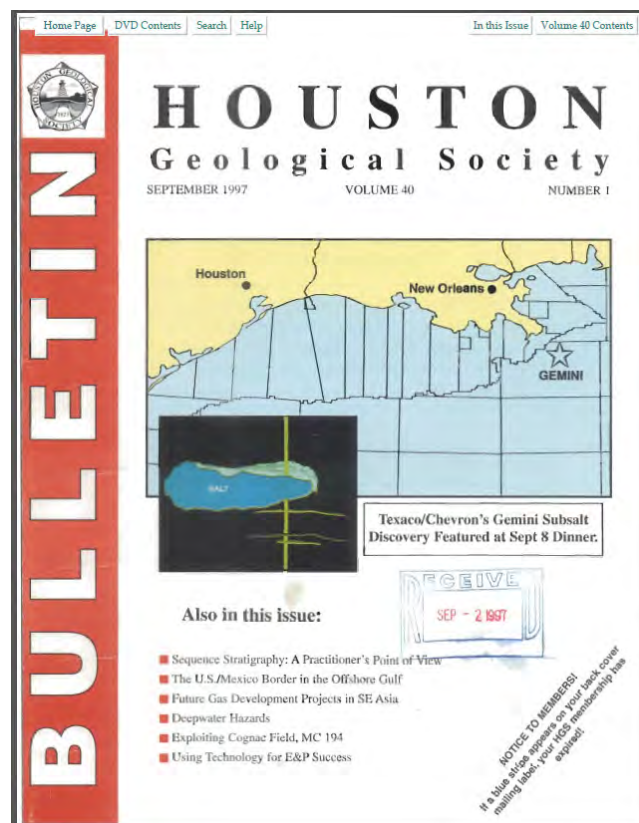
The first email addresses appeared in the *Bulletin* in January 1997. The *Bulletin* Editor Dave Orchard moved the publication from a home office environment to his Manzanita Alliances



Office secretary Margaret Blake updating HGS files on new Compaq 386 system.

company. Dave, a geologist who was changing careers, started a new print services and language translation business housed in the Amoco building on the Katy Freeway at Dairy Ashford. Manzanita took care of the *Bulletin* layout and delivered the printed design three weeks in advance to "MyPrinter," who took care of the monthly *Bulletin* printing. The *Bulletin* was often 50+ pages long and held together by three staples in the middle. The office staff tried to keep the mailing labels up to date. Email addresses then back reflected the corporate email of the time (very long) and the upcoming AOL -PDQ-Concentric, and Earthlink new email-hosting online services. For example, Dave Orchard's email was orchardm@txpcap.hou.xwh.bp.com, and incoming *Bulletin* Editor Linda Sternbach's email was lsternbach@aol.com. The Computer Applications Committee used HAL-PC (Houston Area Users Group) email addresses.

1997: First HGS webpage and formation of an E-Zine The Mars Pathfinder lander made the news in 1997, and editor Linda Sternbach and the Computer Applications Committee were excited to record the breaking news in the *Bulletin* and online. The computer committee had started a domain with a basic webpage, www.hougeosoc.org, with sidebar menus. They announced plans to make an E-zine where the website would have its own editor in charge. The *Bulletin* committee transferred by hand and by mail Word 2.0 documents graphics in jpeg and gif (using 3.5-inch square disks) relating to the Mars Pathfinder landing. The HGS webpage duplicated content in the *Bulletin*, plus some additional material from the E-zine administrators. However, duplicating the print *Bulletin* and sending all material to an E-zine with a separate editor was too much work. The first HGS website was soon retired.



The HGS.org domain name was purchased around the turn of the Century in 2000, under Bill Osten, as head of the new Website Committee. Bill researched options on webpage design and recommended HGS sign up for a “content management” website using Schipol, a website design company located on the Katy Freeway at Kirkwood. Schipol offered non-profit organizations a series of website modules, including membership, credit card services, an online calendar, and an online ballot module for elections. There was a yearly fee, and Schipol also administrated the renewal of the domain www.hgs.org. HGS office staff secretary Lilly Hargrave became the point person in charge of updating the website with monthly activities and handling problems using credit cards for meetings and dues renewal.

In March 2005, HGS Editor Arthur Berman wrote: “The End of a Stage. The *Bulletin* is no longer intended to stand alone as a print document. At the beginning of the 21st Century, we find ourselves in the midst of the biggest advance in communication (the World Wide Web) since the invention of moveable metal type for the printing press in 1455... We can communicate more effectively and offer readers more, much more, and at a lower cost by linking future printed *Bulletins* into the web of electronic information that is already available. Rather than a contraction, it's an expansion that cannot be achieved through the print medium alone.”

HGS TECHNICAL CONFERENCES

June 2008 HGS improves the website with a front-page redesign. HGS forked over additional money to Schipol in 2008 to get a new design of top menus that dropped down and had a light green and black look. The website committee comprised Bill Osten, Dianna Phu, Robin Heim, and Gordon Shields. The improved website could send mass email reminders to members about events, voting, and dues. Members and non-members were able to register for meetings. Hypertext links were embedded in the emails, but people needed to sign in to the website to pay for meetings. Online registration freed up the office staff, decreasing the number of people making meeting reservations by phone and fax. Many

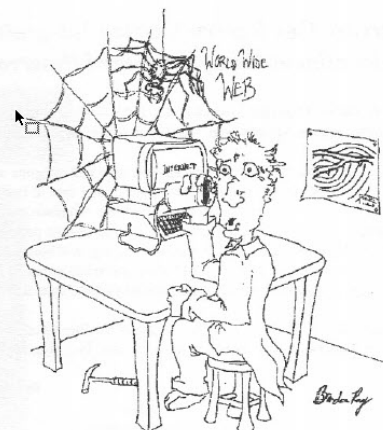
Introduction to the Internet For Geoscientists

When?	September 23, 9:00 a.m.–5:00 p.m.
Where?	Exxon Auditorium 800 Bell, Houston
Cost?	\$30 preregistration before Sept. 15 \$35 at the door
How?	Contact the HGS office at 785-6402

For more information about the class, contact Craig Moore at 951-0336 or craig@dolomite.com, or Inda Immega at 544-4706 or inda@shell.com. For logistical information, contact Robert Ray at 266-4300.

Sponsored by the HGS Computer Applications Committee, with the coordination of the HGS Education Committee and the assistance of the Exxon Exploration Technical Group.

HGS Computer Applications Committee ran this cartoon about learning the world wide web back in 1997.



members still paid for meeting fees by checks instead of trusting credit cards, keeping the Treasurer and Treasurer-Elect busy running paper checks to the bank. The HGS *Bulletin* went digital in addition to print and has been a downloadable pdf since 2008.

WE NEED A NEW WEBSITE 2011!

HGS was making significant money on conferences in the 2008-2011 era, and many people suggested moving away from Schipol's control of hosting the website and moving towards creating a new website HGS could administrate on its own using an in-house “webmaster.” Past President Sandi Barber organized a committee to hire a website developer. The basic decision was between using WordPress, mostly for blogs at the time, or creating an open-source web code using CiviCRM. Presidents Martin Cassidy and Steve Earle approved funds and the contract to design a site from the ground up. The new website finally launched in August 2012. HGS was fortunate to hire an onsite webmaster, Troy Fearnow, who is experienced in website administration and debugging HTML code. Troy helped fix passwords and user issues, making the new website workable.

Online videos and social media started in 2005-2012, along with HGS YouTube Channels, Facebook, and Twitter accounts. Mike Allison, Board Member/computer expert, suggested HGS try video recording meetings using a home video recorder, microphone, and computer movie-making software. Previously Mike Allison pioneered the HGS video by recording Guest Night 2005, a program about “Tsunamis,” and this video is still online. The first dinner meeting video was created at a dinner meeting in 2012, featuring UH professor Janok Bhattacharya. Making this video taught the Video Committee of Mike Allison, Linda Sternbach, and Thom Tucker that poorly recorded sound and dim lighting can't be fixed later. After trial and error, the video committee recorded almost 200 videos from 2012-2021.





Mike Allison and Thom Tucker video team



HGSGeoEducation

@HGSGeoEducation 2.66K subscribers 230 videos

the Houston Geological Society >

The HGS YouTube channel started at the suggestion of then webmaster Gabby Hernandez at the HGS office, but this first channel was lost as we attached it to Gabby's email, and she left our employment.

A second YouTube channel called HGS GeoEducation in 2011 was created using an HGS email, and this is the YouTube we see today online. Since 2011, the HGS YouTube channels have 2600 subscribers, 230 recorded individual videos, and many subject playlists by theme. The most popular video is Dr. William Sager of U of H talking about the "Largest Volcano in the World," undersea in the Pacific. The most popular video has 160,000 views. The second most popular video series is Art Berman's dinner meeting videos discussing oil prices and shale plays, which have gathered 5000 views.

HGS social media sites started with Twitter (@HouGeoSoc), administrated by Dianna Phu. Popular HGS social media sites include HGS Facebook, LinkedIn, and Instagram. Dianna Phu and Lauren Robinson administrate these sites.

END OF PRINTED BULLETINS-2018

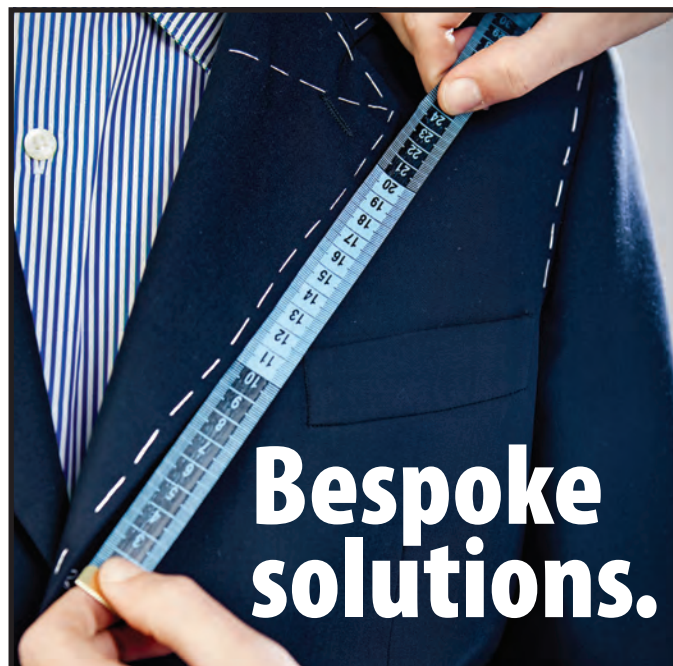
The last printed *Bulletin* issue mailed to members had the cover image of the "Big Bones in Big Bend" Guest Night theme of June 2018. HGS President John Jordan decided the mailing cost of the printed *Bulletin* was a cost the Society could not afford. Other local societies have also discontinued printing and mailing newsletters, so HGS is not alone in this decision.



Linda Sternbach videoed 100+ HGS technical talks posting them (with speaker permission) on the HGS Education Channel. Enjoyed by more than hundreds of thousands views, video technology greatly promoted the HGS mission.

WHAT'S NEXT?

As of 2023, the HGS shares information from the *Bulletin* to the website www.hgs.org. The website can be updated in real-time and adds timeliness to *Bulletin* content. The *Bulletin* presents beautiful covers, inside photos, and expanded dinner meeting articles. With innovative communicators and new technology, it seems likely that HGS will adapt to new media to further its mission. ■



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PETROPHYSICS THAT PAYS OFF

Dear HGS: Congratulations on making it to 100 glorious years!

I know the next 100 years will be even more spectacular. You do so much for the geological community here in Houston and beyond – I can't image being in the oil patch without the HOUSTON GEOLOGICAL SOCIETY

Your Friend,

Deborah K. Sacrey

Auburn Energy

Past HGS President

President-Elect

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PETROLEUM GEOLOGISTS

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John B. Tubb, Jr. PhD.
Consulting Geologist

President 2010-2011
Houston Geological Society

713-805-5649
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AAPG/DPA, SIPES, Calif. Reg. Geologist, Tex. Reg. Geologist

Past Presidents from the Last 25 Years

Memories, Highlights, Advice to Future Presidents, and What are They Doing Now?

By Charles Sternbach, Kara Bennett, Craig Dingler

JON BLICKWEDE 2019-2020

Advice Among other things, I would urge a President-elect to formulate a plan to lobby the local employers (especially the major oil companies and large independents) to return to the old policy of encouraging their geoscientists to join and actively participate in the HGS—including paying for their employees' membership fees and event registration costs.

CHERYL DESFORGES 2018-2019

My term had many events that impacted HGS into the future, and some things took more than one year. As President-Elect, I established virtual communications to improve HGS communications internally and externally, resulting in HGS using the Zoom platform. The adoption of Zoom prepared us for the Covid era. The Constitution and Bylaws needed to be modernized to allow the Board to vote over Zoom, and revisions my ad-hoc committee proposed were approved by members the year following my term. During my term, I successfully led HGS' involvement in lobbying the Texas legislature during Sunset review to retain the Texas Board of Professional Geoscientists.

I knew HGS would have financial problems due to revenue not being shared from the AAPG Conventions. We moved the HGS Office to a smaller space to save money. I initiated the 4-year contract with EAGE for the Latin America Conference to bring in revenue. To attract more members, I launched the first Friends and Family Fall Fun Day in the Woodlands, collaborating with the Geophysical Society of Houston.

JOHN ADAMICK 2017-2018

One of my favorite memories was the planning and writing of *Bulletin* articles. I thought I would dread the deadline each month, but it was fun trying to develop germane articles. I also enjoyed working with my board member team and the office staff. They were great. Last, but not least, I enjoyed Scholarship Night. I had been involved in that event for years, but it was great to be President during the event that year.

JOHN JORDAN 2016-2017

I began my term as President-Elect working with Wayne Camp to move the Mudrock Conference out of hotel venues into the Anadarko Tower (The Woodlands) greatly increasing the profitability. I also worked with the HGS planning team hosting the Africa Conference. Almost immediately after I became President, the HGS hosted the 15th annual Africa Conference. It was a great success but made no profit. After that event, I continued the effort

started by Deb Sacrey to get the annual Shrimp Peel social event up and running again by moving the venue to Bear Creek Park making the Shrimp Peel/Crawfish Boil a money-maker. Finally, I reduced office overhead by 25% to 30% through staffing changes.

DEBORAH SACREY 2015-2016

Advice Delegate! The President's role is substantial, and you can't do everything yourself. Quickly learn who you can trust and delegate to them as much as possible. Also, remember that you are dealing with Volunteers! They give personal time to work for HGS, so always treat them respectfully.

MARTIN CASSIDY 2012-2013

My favorite memory from my term is working with our officers and education-related committees to accomplish many events. The Bones in Schools was a great start and will mature one day. The conferences went well and made money. That is satisfying.

JOHN TUBB 2010-2011

I have had hearing loss problems for most of my life. Although I had Hearing Aids during my year as President, I still had hearing issues during the HGS Meetings. After my year as President, one of the ladies on the Board told me, "John, it took us only one meeting to understand that if you weren't looking at us, you didn't hear us." After about two meetings, I built a pedestal to use during the meetings to allow me to stand up and move around to be closer to the person talking.



Dr. John Tubb, Jr. modeling "the Judge," a convincing gavel to be sure!

My Board gave me an amethyst mineral at my President's Night meeting. In addition to the mineral, the Board members collected money from themselves and bought me a handgun called "The Judge." After my year, I had a "joke picture" of me standing on my pedestal using "The Judge" as a gavel.

KARA BENNETT 2008-2009

I'm thoroughly enjoying living in Virginia. I grew up in the DC area and missed the seasons the whole time I was in Houston. I'll be teaching a fun course in geological hazards for the local

university’s Lifetime Learning arm in the spring, and I’m still doing tai chi. Plus, one of my sons lives nearby, which is great, particularly since he and his fiancée were married on the beach around three weeks ago. And I’m counting my blessings that I’m not having the heat spell you guys have endured. I missed seeing everyone at the President’s lunch—so many of my friends are in the HGS.

LINDA STERNBACH 2007-2008

Linda is still working in the oil and gas exploration business with Star Creek Energy in Katy, TX. Linda also served in leadership roles in AAPG as Vice President of Sections 2020-22 and is HGS Vice President 2023-2024. She was GCAGS GeoGulf Technical Chair for the 2023, 2019, and 2015 Houston GCAGS conventions.

During my term as HGS President, Gary Coburn, Bill Howell, and I organized a January HGS dinner talk with T. Boone Pickens, a highlight of the year with hundreds of attendees. The HGS was settling into its newly acquired Dairy Ashford office on St Mary’s Lane, and the HGS website was upgraded to include more features. HGS sent AAPG funds for their new IBA student contest program. Steve Earle was Bulletin Editor and published an official statement that HGS supports academic science being taught in schools and not creation science. The Board met in person at the HGS office, and I think in-person meetings contributed to a sense of community on the Board. Plus, we all remember some lighter moments and jokes. Luckily, the oil industry was picking up due to the “shale plays,” HGS could add new members using a membership drive, and money was not too tight.

STEVE BRACHMAN 2006-2007

Advice Figure out what you want to accomplish as HGS president, and go for it. Gain allies in your quest among the other board members. And—listen to them. Delegate, Delegate, Delegate.

DAVE RENSINK 2005-2006

My life since retirement has been dull or serene, depending on your point of view. I spend the mornings online checking news feeds doing crossword puzzles, and afternoons in my wood shop. The efforts of the afternoons can be seen on my website (www.daverensink.com). Covid knocked out all of our travel plans, and we have not yet gotten them back on track.

STEVE LEVINE 2004-2005

I enjoyed working with the many HGS volunteers who assisted in community events such as the science museum, a scholarship fundraiser dance and auction, a science fair, and the African-American cemetery restoration. My best moments include the HGS construction of a new white picket fence at the Evergreen Cemetery in the Third Ward, editor Art Berman’s massive HGS *Bulletin* publications, and the help of so many wonderful volunteers.

CRAIG DINGLER 2003-2004

Advice It helps to have some experience on the Board and in leadership positions so you learn how the Society functions and who is helping run the subgroups. The HGS is run from the bottom up, with the movers and shakers at the committee level. So, the Executive Board

and I just facilitated the work done by all of our volunteers and ensured we could budget the activities.

DENISE STONE 2002-2003

It seems impossible that I was President of HGS 20 years ago. However, 2002-2003 was a great year, an enriching and positive experience. Good memories include my great Board, the positive words of the Legends Night Legends, the happiness of HGS Scholarship recipients and their families, and the professional growth of the members. I remember the challenge of selecting a topic for the monthly President’s Column. Recently, I reviewed several of my old columns to see if what I said held together after 20 years. Here’s a quote from the March 2003 column; “...as long as there is a world economy to fuel and no better energy source on the horizon, there will be need for oil and gas and the technical talents of petroleum geoscientists.” Although each day brings new economic challenges for the industry, I believe this still holds. I sincerely congratulate HGS, my favorite society, on this 100th anniversary.

I’m retired and living in Centennial, Colorado. I volunteer on the Rocky Mountain Assoc of Geologists (RMAG) Field Trip Committee. I’m learning the geology of the very complicated Rocky Mountains.

PAUL HOFFMAN 2001-2002

Life in near-retirement is great, slowing down only barely since selling our Houston home to settle 80 miles north on the west shore of Lake Livingston and resuming travel post-Covid, with visits during the last year to five countries in Europe and to the states of Washington, Idaho, Montana, and Colorado. I concluded a term on the AAPG Advisory Council on June 30th, still serve on the Board of the HGS Foundation, do some limited consulting, and look after our remaining equity interests. I serve as VP of the Property Owners Association Board and as a parish church cantor.

CRAIG MOORE 2000-2001

Advice Find dynamic speakers with interesting exploration topics that will draw members to turn out in large numbers.

CHARLES A. STERNBACH 1999-2000

I focused on three major things: 1) creating Legends programs, 2) packing the house at technical meetings, and 3) growing the membership. Since 2000, HGS has held 12 Legends panels with more than 5,000 attendees. Our technical meetings averaged 220 attendees by focusing on discoveries, new plays, and technology. And we improved HGS membership from 3300 to almost 5,000 in the year 2000. I am grateful to countless volunteer leaders who have made me a better person. Service and Science at local, regional and global levels keeps me creative.

Advice Foster a supportive culture and vision to inspire volunteers to create long-lasting initiatives. Use your President columns to publicly praise outstanding volunteers and contributors. During my term, I gave nearly 100 “shout-outs” to others that energized our EC and swelled the ranks of volunteers. Be courageous and act on initiatives that support our mission. Succession planning is important. I am proud that most of my Board members became HGS presidents with great accomplishments. ■

HGS Past Presidents Centennial Luncheon
August 8, 2023

By Charles Sternbach

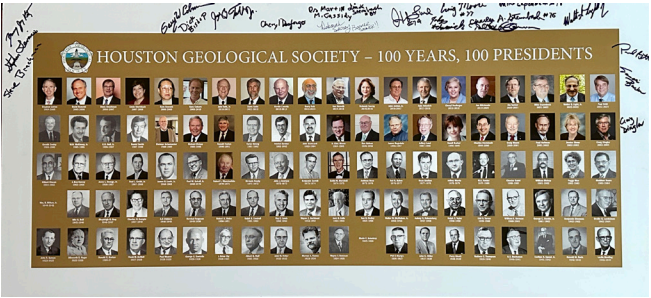


A mural entitled 100 YEARS, 100 PRESIDENTS hung over the proceedings as if to bring all past presidents together in one place at one time.

We remembered presidents separated by distance, those no longer with us,
and all who have gone before.

HGS FIRST LUNCHEON: BREAKING BREAD AND
BREAKING GROUND

On August 8, 1923, dedicated geoscientists formed the Houston Geological Society (HGS) at a luncheon in downtown Houston. On August 8, 2023, 20 HGS past presidents and one current president gathered at the Petroleum Club of Houston for a luncheon to celebrate the 100th anniversary of this historic occasion to the day. We remembered presidents separated by distance, those no longer with us, and all who have gone before. Many individuals largely responsible for the success of HGS these past 25 years were



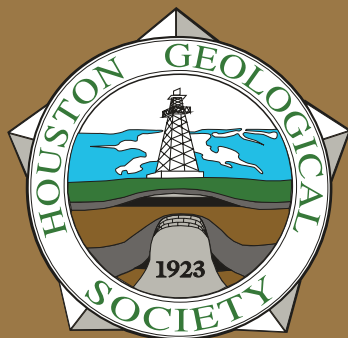
These are the autographs from past presidents present at the historic luncheon.

gathered in one room to reflect on an extraordinarily productive run and the need for sponsorship to support all that we do (see below). The luncheon was glorious, historic, and deeply moving as dear friends celebrated service to others.

STORY OF THE MURAL

A mural entitled “100 years, 100 presidents” hung over the proceedings as if to bring all past presidents together in one place at one time. The inception inspiration for the mural was twofold. I first saw a mural of 100 women leaders in geoscience at AAPG. This remarkably inspiring mural connected people as they approached photos of faces from long ago. The Viet Nam Memorial Wall in Washington, DC, also creates an interactive experience where you can reach out and touch treasured names or memories. Considering these antecedent experiences, I thought, “We need a mural showing the photos of all the past presidents!” But could it be done, and how?

Enter Craig Dingler, an accomplished miracle worker. Craig took on the challenge and searched historical archives, publications, and records. Craig found photos for 98 out of 100 past presidents to his immense credit. In any test I ever took, 98% is a pretty good



HOUSTON GEOLOGICAL SOCIETY



Stephen Levine
2004-2005



David Rensink
2005-2006



Steve Brachman
2006-2007



Linda Sternbach
2007-2008



Kara Bennett
2008-2009



Gary Coburn
2009-2010



John Tubb, Jr.
2010-2011



Steve Earle
2011-2012



Martin Cassidy
2012-2013



Barry Katz
2013-2014



Ken Nemeth
2014-2015



Gerald Cooley
1984-1985



W.N. McKinney, Jr.
1985-1986



C.R. Noll, Jr.
1986-1987



Daniel Smith
1987-1988



Dietmar Schumacher
1988-1989



Richard Bishop
1989-1990



Ronald Harlan
1990-1991



Cyrus Strong
1991-1992



Patrick Gordon
1992-1993



John Biancardi
1993-1994



D. Clint Moore
1994-1995



Hillford Hinson
1964-1965



J. Ben Carsey
1965-1966



Jesse L. George, Jr.
1966-1967



Fred L. Smith, Jr.
1967-1968



James O. Lewis, Jr.
1968-1969



Fred M. Schall, Jr.
1969-1970



Robert L. Musslewhite
1970-1971



McInnis Newby
1971-1972



John J. Amoruso
1972-1973



Benjamin Sorrell
1973-1974



Sabin W. Marshall
1974-1975

Wm. B. Milton, Jr.
1944-1945



Olin G. Bell
1945-1946



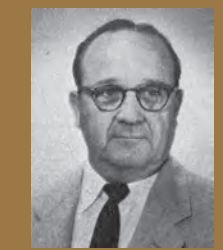
Shapleigh G. Gray
1946-1947



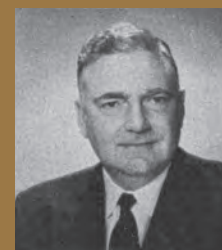
Charles H. Sample
1947-1948



A.F. Childers
1948-1949



Hershal Ferguson
1949-1950



Robert R. Rieke
1950-1951



Ralph B. Cantrell
1951-1952



Ray C. Lewis
1952-1953



Wayne Z. Burkhead
1953-1954



Jack O. Colle
1954-1955



John R. Suman
1923-1925



Dilsworth S. Hager
1925-1926



Donald C. Barton
1926-27



Frank W. DeWolf
1927-1928



Paul Weaver
1928-1929



George C. Sawtelle
1929-1930



J. Brian Eby
1930-1931



Albert G. Wolf
1931-1932



John M. Vetter
1932-1933



Marcus A. Hanna
1933-1934



Wayne F. Bowman
1934-1935

100 YEARS, 100 PRESIDENTS



Deborah Sacrey
2015-2016



John Jordan, Jr.
2016-2017



John Adamick
2017-2018



Cheryl Desforges
2018-2019



Jon Blickwede
2019-2020



Jim Tucker
2020-2021



Mike Erpenbeck
2021-2022



Walter S. Light, Jr.
2022-2023



Paul Britt
2023-2024



Ron Nelson
1995-1996



James Ragsdale
1996-1997



Jeffrey Lund
1997-1998



Sandi Barber
1998-1999



Charles Sternbach
1999-2000



Craig Moore
2000-2001



Paul Hoffman
2001-2002



Denise Stone
2002-2003



Craig Dingler
2003-2004



Anthony Reso
1975-1976



Hal H. Bybee
1976-1977



Dean Grafton
1977-1978



Jeffrey Morris
1978-1979



W.A. Fowler
1979-1980



Chester Baird
1980-1981



William Bishop
1981-1982



Peggy Rice
1982-1983



Matthew Daura
1983-1984



Tom D. Hedley
1955-1956



Walter W. McMahan, Jr.
1955-1956



Aubrey H. Rabensburg
1957-1958



Ralph E. Taylor
1958-1959



Edd R. Turner
1959-1960



William A. Gorman
1960-1961



George C. Hardin, Jr.
1961-1962



Benjamin Simmons
1962-1963



Orville G. Lundstrom
1963-1964

Merle C. Israelsky
1935-1936



Phil F. Martyn
1936-1937



John C. Miller
1937-1938



Perry Olcott
1938-1939



Wallace C. Thompson
1939-1940



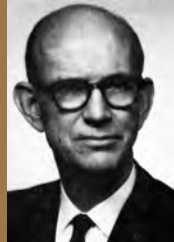
G.S. Buchanan
1940-1941



Carlton D. Speed, Jr.
1941-1942



Donald M. Davis
1942-1943



Leslie Bowling
1943-1944

MISSION STATEMENT

To enrich earth science through technical education, networking opportunities, and community service.

VISION

To be the essential organization serving earth science professionals in the greater Houston community.

SLOGAN

A local geoscience society with global reach.



Past Presidents study spreadsheets and autograph an archival version of the mural.

score! Then, graphic artist Lisa Krueger went to work, restoring, editing, and enhancing photos of wide-ranging quality to produce an impressive mural four by ten feet with a commanding presence setting the tone for the luncheon and that will continue to be enjoyed by HGS members at the Gala and many meetings to come.

FRONT ROW SEAT TO HISTORY

If you look closely at that mural, I am president #76. During the HGS 75th Diamond Anniversary, I was Mr. Irrelevant. But my gift was that I was first in line to see the next 25 years unfold. And what a quarter century that has been, as reflected in the pages of this 100th Anniversary Special Issue.

GROUP HUG

Recall that HGS is part of the larger Gulf Coast community and a valued member of GCAGS. The GeoGulf23 Conference in April 2023 (detailed elsewhere) united this community to celebrate with HGS and produced significant resources.

SPONSORSHIP

GCAGS presented sponsorship checks to HGS at the luncheon for the mural and this *Bulletin*. GCAGS also became the first gold sponsor of the HGS Gala. As we say Happy 100th Birthday to the HGS, we also say thank you to HGS and neighboring Gulf Coast geological societies.

Several past Presidents at the meeting joined in the spirit by also providing generous sponsorship. And dear reader, you can too! You can support the Gala, Bulletin, or Scholarship programs. Contact Jeff Lund and see the sponsorship form on page 102. ■



More spreadsheet moments. Membership and finances are perennial duties of the leadership.



Walter Light, President #99, gets promoted to "Past President" by incoming President #100 Paul Britt.



The group discusses global trends with Past President #92, Deborah Sacrey, also AAPG President-Elect.



The HGS 100th Anniversary committee plans the October 7, 2023, Gala in the main room of the Petroleum Club of Houston. Discussions included "Where do we put the Mural?", "Where should we place the Silent Auction items?", wine selection, dessert design, and entre options (all delicious).

Recent Past President Letter Greetings, Fellow Geoscientists, and HGS Members!

The Board of HGS officers and I thank you for supporting the Houston Geological Society with your membership and participation in the scheduled events. We also thank all the committee chairs and volunteers who helped us accomplish our mission. We encourage you to join us and reconnect with your local geological community. Finally, we thank our numerous sponsors who have generously supported HGS over the past year.

During the fiscal year (July 1, 2022 - June 30, 2023), the board had three objectives to rebuild from the devastating effects of Covid-19. I am proud to say we achieved all three.

1. STABILIZE AND INCREASE MEMBERSHIP AND MEMBERSHIP RENEWALS

With new members trickling in monthly, we accomplished this goal, and our numbers appear to improve. The Houston Geological Society (HGS), as of mid-May 2023, had approximately 1760 members.

In addition to a limited telephone campaign, membership and membership renewals were promoted at the registration table at each event. We also instituted a QR code to facilitate the application/renewal process.

2. REBUILD OUR PROFESSIONAL COMMUNITY

Rebuild by restoring face-to-face events, technical dinners, and Continuing Education classes, minimizing Zoom meetings, and working diligently to promote our social/fundraising events. We accomplished this goal. Our attendance numbers, while low by historical standards, appear to have stabilized. The number of individuals attending dinner meetings ranged from 22 to 68. We held our technical dinner meetings for all but two months. In addition to our long-standing Vendor Corner Sponsorship at dinner meetings, we instituted The President's Table Sponsorship as a second dinner sponsorship opportunity to offset costs further. We also had at least one significant event every month. These combined events, our renewed understanding of costs, and our revised pricing structure contributed to our financial stability.

3. RETURN HGS TO FINANCIAL STABILITY AND SUSTAINABILITY

Our annual membership dues are excessively low, currently \$36.00/year. According to the bylaws, dues increases are limited to 20 percent every two years. (The last dues increase was in April 2022). The low professional dues create a financial challenge to the HGS budget. The

membership dues should be higher for our professional Society and one of its size. The low dues and the bylaws-limitation forced our leadership team to look at alternatives to achieve financial sustainability. We discovered we needed to significantly raise our event pricing as costs have increased dramatically over the last three years. After determining what our actual costs were for each event, we priced the event in such a way as to cover our expenses, including our internal General and Administrative expenses (the cost of staff and maintaining a physical office). To our knowledge, the analysis of event-related G&A expenses has never been performed. To track G&A time/expenses by event, we instituted time sheets by our administrative staff and determined G&A expenses on a person-hour basis. We still need more run time on the clock to use the time sheets effectively and to accurately project the administrative time for future events. However, our collected data will help the budgeting process this coming year. Even with the challenge of bylaw-constrained dues, we have achieved financial sustainability. By revising the prices of all in-person events (technical dinners, Continuing Education, and social) and limiting Zoom events, we may end the year close to a break-even position. Wherever we end up financially for the year, we should finish better than our beginning-of-the-year projection of an \$80,000 deficit.

Significant Events that also contributed to our income stream (2022-23): Student Jobs Expo (09/19/22).

- HGS-PESGB (Petroleum Exploration Society of Great Britain) Africa Conference (09/26/22).
- Golf Tournament (10/17/22).
- Scholarship Night Dinner (2/13/23).
- Continuing Education (11/11/22, 1/20/23, 3/10/23, 5/24/23)
- Annual Crawfish-Shrimp Boil (4/21/23).
- Grand Canyon Field Trip (6/1/23).

I want to thank those members, board members, and sponsors for their efforts in achieving our goals. We can all be proud to be members of The Houston Geological Society and that we will be celebrating the Society's 100th Anniversary this year. ■

Keep up the great work!

Walter S. Light, Jr.

President 2022-2023



Gerald A. Cooley Award Winners

The Houston Geological Society Executive Board recognizes that some outstanding HGS members continue to serve well above and beyond the call of duty. Some HGS members have received every recognition and accolade that the society offers. Of these, a few continue to generously donate a considerable amount of time and effort to the Society's activities, volunteering for the routine, time-consuming, essential jobs that make the HGS run. The purpose of this award is to honor those rare few. It is intended to be the highest recognition given by the HGS and thus will seldom be presented. Because of his generous volunteer efforts through the years, Jerry Cooley embodies the philanthropy and graciousness that this award is meant to recognize.

A few words about Jerry Cooley: Jerry joined the Houston Geological Society (HGS) in 1953. He was elected treasurer in 1980-1981, secretary in 1981-1982, vice president in 1982-1983, president-elect in 1983-1984, and president of HGS in 1984-1985. He has chaired the Exhibits Committee and Office Management Committee. He received HGS Honorary Life Membership in 1987, the HGS Distinguished Service Award in 1993, and the HGS President's Award in 1996. Because of his unique, unselfish, longtime commitment and service to the HGS, the Gerald A. Cooley Award was created in 1998, with Jerry being the first recipient in October 1998.

Gerald A. Cooley Memorial, Sharie Sartain and Dixie Cooley Hicks, AAPG Bull., V. 84, No. 1, pp. 151-152.

*The Cooley Award
is the highest
recognition given
by the HGS, and
thus will seldom
be presented.*



Gerald A. Cooley 1998



John Hefner 1999



Dean Grafton 2000



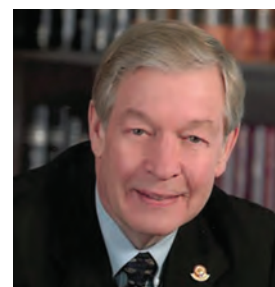
James Ragsdell 2002



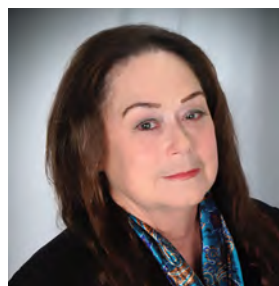
James Becnel 2003



Jeffrey Lund 2004



Dan Smith 2005



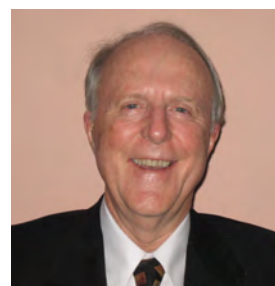
Claudia Ludwig 2008



Deborah Sacrey 2011



Charles A. Sternbach 2012



John Tubb 2013



Linda Sternbach 2015



Frank Wallis 2017



Richard S. Bishop 2018



Ken Nemeth 2019

Houston Geological Society

RISING STAR AWARDEES

This Award has been established to honor individuals, who are relative newcomers to the Houston Geological Society, who have made significant and promising contributions to the enhancement and success of the HGS

1995	Dana Morgan, Linda Sternbach
1996	—
1997	—
1998	Elizabeth Watkins
1999	Lee Boatner, Rene Mott
2000	Sharma Dronamaraju, Lee Shelton
2001	Andrea Adams, Janet Combes, Alison Henning, Kelly Latter, Kevin McVey
2002	Mike Barnes, Lee Backsen, Mike Cline, Stephanie Matthews, Bobby Perez
2003	Parrish Erwin, George Klein, Tom Miskelly Jr., Ken Nemeth
2004	Valdis Budrevics, Jennifer Burton, Sherrie Cronnin, Elizabeth Fisher, Jim Grubb, Natalie Uschner
2005	Mike Allison, Mike Jones, Frank Walles
2006	Gary Coburn, Walter Light, Martha McRea, Ianthe Sarrazin
2007	Matt Cowan, Dianna Phu
2008	Tim Gibbons
2009	Cecelia Baum
2010	Carrie Kidd, David Tonner
2011	Mike Erpenbeck, Rosemary Laidacker, Shannon Lemke, Kelly Limbaugh, Bill Mason
2012	Sameer Baral, Sharon Choens, Marc Fagelman, Paul Riegler, Wayne Xu
2013	Enrique Guasch, Steven Macalello, Ellyia Saudale, Michael Salazar
2014	Crystal Alavarcas, Taras Brynzdia, Sean Kimiagar
2015	Bryan Guzman, Cassee Lemons
2016	Rich Germano, Firas Jarrah, Ian McGlynn, Sydney Weitkunat
2017	Ryan Yarrington, Stephen Adeniran, Nkechi Odumodu, Brad Hammel
2018	Nicole Arres, Judy Schulenberg, Tim Shane, Alicia Staszyc, Lisa Neelen
2019	Jeremy Andrews, Casey Langdon, Bryan Flynn, Rebecca Morgan, David Orchard, Mark Herkommer, Ceri Davies, Lauren Robinson, Jason Simmons, Marcus Zinecker
2020	Jake Shultz, Lanette Marcha, Tiffani Kennedy
2021	—
2022	Amanda Johnston, Mark Hamzat, Dorene West
2023	Bryan Bottoms, Alexandra Price, Rachel Lishansky, Bryan Ott, Angel Callejon

PRESIDENT'S AWARDEES

Each year certain individuals stand out for their efforts and/or their unique contributions to HGS. It is intended that this award be a small token of the president's esteem and appreciation. In order for the award to maintain a high standard, no more than five awards are given in any one year and executive board approval is required.

1987	David M. Eggleston, Clyde E. Harrison, John H. Hefner, Richard R. McLeod, John W. Sauri
1988	Marilyn M. Gruebel, George E. Kronman, Edward McFarlan, Jr., Santiago M. Reynolds, Cyrus Strong
1989	F. Kenneth Aitken, Houston Geological Auxiliary, Claudia P. Ludwig, W. Don Neville
1990	Barbara P. Bentley, John M. Biancardi, William C. Eisenhardt, Bruce A. Falkenstein, Stephen G. Starr
1991	John Chronic, Sue van Gelder, Andrew Lattu, Jo Ann Locklin, Robert Rieser
1992	John A. Adamick, David Fontaine, John Merritt Gorman, Jim Lantz, Martin J. Oldani
1993	Saul Aronow, Dwight (Clint) Moore, Doug Selvius, Pinar Yilmaz, Morad Malek-Aslani (Posthumously)
1994	Ann Ayers Martin, Paul Britt, Joe Eubanks, Annette Mather, Lynn Feldkamp
1995	Dan Bonnet, Sandi Barber, Carol Lucas, Steve Shirley, John King
1996	Charles Sternbach, Larry Bartell, Gerald A. Cooley, Gail R. Bergen, Mike Deming
1997	Chris Bechtel, Gregory Gregson, Jeffrey Lund, Craig Moore, Deborah Sacrey
1998	John Adamick, Bob Ardell, Paul Hoffman, Sarah Stanley, Shawn Porche
1999	Martin Cassidy, David Crane, Evelyn Wilie Moody, Bill Osten, Robert Pledger
2000	Paul Babcock, Kara Bennett, Jim Funk, Denise Stone, Gabor Tari
2001	Lee Boatner, Steve Hill, Inda Immega, Rene Mott, Scott Thornton
2002	Al Danforth, Craig Dingle, Frank Rabbio, Dave Rensink, Lee Shelton
2003	Linda Sternbach, Steve Levine, Matt Bognar, George Krapfel, Elsa Kapitan-White
2004	Robert Hubbell, Glenn Lowenstein, Evelyn Medvin, Rosemary Mullin, Carl Norman
2005	Art Berman, Marsha Bourque, Cheryl Desforges, Ken Nemeth, Andrea (Adams) Reynolds
2006	Janet Combes, Dave Fontaine, Ian Poyntz, Thom Tucker
2007	Ross Davis, Elsa Kapitan-White, Charles Revilla, Leta Smith, Frank Walles
2008	Tarek Ghazi, William Howell, Arlen Howles, Michael Jones, Tom Mather, Henry Wise
2009	Matt Cowan, Bonnie Milne-Andrews, Donna Davis, David Lazor, Joe Lynch
2010	Jennifer Burton, Janet Combes, Joe Lynch, Sue Pritchett, Sharie Sartain, Justin Vandenbrink
2011	Tom McCarroll, Evelyn Medvin, Dianna Phu
2012	Sandra Babcock, Rosemary Laidacker

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PRESIDENT'S AWARDEES*continued from page 90*

2013	Paul Babcock, Michael Cameron, Linda Sternbach, David Tonner, Michael Van Horn
2014	Jennifer Burton, Donna Davis, Mike Forlenza
2015	Mike Erppenbeck, Christina Higgenbotham, John Jordan, Sue Pritchett, Dave Reynolds
2016	John Jordan, Larry Quandt
2017	Phil Towle, Tami B. Shannon, L. Taras Bryndzia, John Breyer
2018	Stephen Adeniran, Gustavo Carpio, Sean Kimiagar, Walter Light, John Tubbs, Jr.
2019	—
2020	Casey Langdon
2021	—
2022	Steven Johansen, Sharon Choens, Steve Earle, Letha Slagle, Barbara Hill
2023	Paul Britt, Caroline Wachtman, Bill DeMis, Dianna Phu, Bruce Blake, Amanda Johnson, Lanette Marcha, Galen Threadgold, Michael Salazar

DISTINGUISHED SERVICE AWARDEES*This award honors members who have rendered long-term
valuable service to the society.*

1978-79	James O. Lewis, Jr.
1979-80	Sabin W. Marshall, Edd R. Turner
1980-81	James A. Wheeler, Dewitt C. Van Siclen
1981-82	Clyde G. Beckwith
1982-83	Walter Boyd
1983-84	Dean Grafton
1984-85	Stewart Chuber, Anthony Reso
1985-86	Martha Lou Broussard
1986-87	John Amoruso
1987-88	John H. Hefner
1989-90	William F. Bishop, Carolyn Miracle Ross
1990-91	George Kronman
1991-92	Richard S. Bishop, Daniel L. Smith
1992-93	Charles R. Noll, Jr., Gerald Cooley
1993-94	Claudia Ludwig
1994-95	Cy Strong
1995-96	Dwight (Clint) Moore, John Biancardi
1996-97	Ann Ayers Martin
1997-98	James Ragsdale, Gregory Gregson, Paul Britt
1998-99	Ken Aitken, Daniel Bonnet, Jeffrey Lund, Deborah Sacrey
1999-00	John Adamick
2000-01	Sandi Barber, Steve Brachman, Charles Sternbach
2001-02	Bill Osten
2002-03	W. N. "Mac" McKinney, Bill Champion, Donald Scherer
2003-04	Larry Bartell, Al Danforth, Richard Howe, Inda Immega
2004-05	Craig Dinger, Linda Sternbach
2005-06	Paul Babcock, Steve Henry
2006-07	Glenn Lowenstein, Ken Nemeth
2007-08	Janet Combes, Cheryl DesForges
2008-09	Paul Hoffman, Frank Walles
2009-10	—
2010-11	Mike Deming, Steve Getz, Martha McRae, Rene Mott
2011-12	Marvin Smith, John Tubbs, Mike Allison
2012-13	John Dombrowski, Patricia Santagrossi
2013-14	Martin Cassidy, Steve Earle, Dianna Phu, Scott Thorton
2014-15	Denise Stone
2015-16	Alison Henning (Posthumously), Sharon Choen, Mike Deming, Tom McCarroll, Bonnie Milne-Andrews, Dianna Phu, Robert Pledger, Shari Sartain, Thom Tucker
2016-17	Charles Revilla, Neal Immega, Weixin (Wayne) Xu
2017-18	Rosemary Laidacker, Evelyn Medvin, Carl Normam
2018-19	Matthew Cowan, Bill Dupre, Walter Light, Jr., Letha Slagle, Sue Pritchett, Henry Wise
2019-20	Elliot Wall, Tarek Ghazi, Umesh Prasad
2020-21	—
2021-22	Casey Langdon, Ceri Davies, Dianna Phu, Elliot Wall, Michael Salazar, Sharie Sartain, Janet Combes, Martha McRae, Kenneth Mohn, Joe Lynch
2022-23	Cheryl Desforges



HONORARY LIFE MEMBERS

Honorary Life Membership is one of the society's most prominent awards. The Executive Board of the HGS elects from time to time persons to this honor who have distinguished themselves in the science of geology, or who have contributed outstanding service to the success and welfare of this organization.

John Adamick	*Rufus J. LeBlanc
Paul Babcock	Steve Levine
Sandi Barber	*James O. Lewis
*Thomas D. Barber	*Ray C. Lewis
*Olin G. Bell	Glenn Lowenstein
*Ben C. Belt	Claudia Ludwig
*Alfred Bentz	Jeffrey Lund
Richard S. Bishop	Annette Mather
*R. C. Bowles	*Shirley L. Mason
*Wayne F. Bowman	*Phil F. Martyn
Steve Brachman	*W. N. "Mac" McKinney
Paul Britt	*Richard McLeod
Martha Lou Broussard	*Clarence L. Moody
*Wayne Z. Burkhead	*Kenneth Nemeth
*Warren Calvert	Bill Osten
*Ralph B. Cantrell	*Wallace E. Pratt
*J. Ben Carsey, Sr.	James Ragsdale
Martin Cassidy	*E. H. Rainwater
*Almer F. Childers	David Rensink
*Stuart K. Clark	*Peggy J. Rice
*Jack O. Colle	*Robert R. Rieke
Janet Combes	Deborah Sacrey
*Gerald A. Cooley	*Charles H. Sample
*Ira H. Cram	Sharie Sartain
*Doris M. Curtis	*George Sawtelle
Al Danforth	Dietmar Schumacher
*Matthew W. Daura	*Elias H. Sellards
*Morgan J. Davis	*Martin M. Sheets
Mike Deming	*Fred L. Smith, Jr.
*Alexander Deussen	Charles Sternbach
*J. Brian Eby	Linda Sternbach
*Alva C. Ellisor	*John R. Suman
Steve Getz	*Wallace C. Thompson
*Dean Grafton	Robert Traylor
*Michel T. Halbouty	John Tubb, Jr.
*Merrill W. Haas	Thom Tucker
*Marcus A. Hanna	*Edd R. Turner
*Clyde Harrison	*Dewitt Van Siclen
*John Hefner	*John M. Vetter
Paul Hoffman	*Paul Weaver
Richard Howe	Frank Walles
Inda Immega	*James A. Wheeler
Neal Immega	*Albert G. Wolf
*Howard W. Kiatta	

* = deceased

HGS LEADERSHIP THROUGH THE YEARS

YEAR	PRESIDENT	PRESIDENT-ELECT VICE-PRESIDENT	SECRETARY	TREASURER TREASURER-ELECT	EDITOR EDITOR-ELECT
2023-24	Paul Britt	Penny Patterson Linda Sternbach	Ken Mohn	Fang Lin Glenn Lowenstein	Caroline Wachtman Ted Godo
2022-23	Walter Light	Paul Britt Scott Sechrist	Amanda Johnston	Bruce Blake Fang Lin	Ken Thies Caroline Wachtman
2021-22	Mike Erpenbeck	Walter Light Patricia Walker	Lucia Torrado	William Gough Bruce Blake	Scott Sechrist Ken Thies
2020-21	James Tucker	Mike Erpenbeck Bryan Guzman	Dianna Phu	Brent Boyd William Gough	Ceri Davies Scott Sechrist
2019-20	Jon Blickwede	James Tucker Scott Sechrist	Judy Schulenberg	Annie Walker Thomas Reed Edward Jones	Fang Lin Ceri Davies
2018-19	Cheryl Desforges	Jon Blickwede Penny Patterson	April Parsons	Tarek Ghazi Annie Walker	Jim Tucker Fang Lin
2017-18	John Adamick	Cheryl Desforges Bob Wiener	Annie Walker	Mike Allison Tarek Ghazi	Brian W. Horn Jim Tucker
2016-17	John Jordan	John Adamick Thomas E. Hearon IV	Sasha Gumprecht	Bryan Guzman Mike Allison	Tami B. Shannon Brian Horn
2015-16	Deborah Sacrey	John Jordan Cheryl Desforges	Gulce Dinc	Larry Quandt Bryan Guzman	Jon Blickwede Tami Shannon
2014-15	Kenneth Nemeth	Deborah Sacrey John Jordan	Ashley Garcia	Joe Lynch Larry Quandt	Dave Miller Jon Blickwede
2013-14	Barry Katz	Kenneth Nemeth Mike Deming	Bryan Guzman	Mike Erpenbeck Joe Lynch	Michael Forlenza Dave Miller
2012-13	Martin Cassidy	Barry Katz Justin Vandenbrink	Shannon Lemke	Mike Erpenbeck	Patricia Santogrossi Karen Pate
2011-12	Steve Earle	Martin Cassidy David Meaux	Matthew Cowan	Christina M. Higginbotham Donald Walker	Ron Waszczak Patricia Santogrossi
2010-11	John Tubb Jr.	Steve Earle Amy Sullivan	Cecelia Baum	David Meaux Christina M. Higginbotham	Barry Katz Ron F. Waszczak
2009-10	Gary Coburn	John Tubb Jr. Art Donovan	Amy E. Sullivan	Matt Boyd David Meaux	Barry Katz
2008-09	Kara Bennett	Gary Coburn Art Berman	Mike Jones	John Tubb Jr. Matt Boyd	Michael Forlenza Gordon Shields
2007-08	Linda Sternbach	Kara Bennett Gary Coburn	Ianthe Sarrazin	John Jordan John Tubb, Jr.	Steve Earle Michael Forlenza
2006-07	Steve Brachman	Linda Sternbach Andrea Reynolds	Jennifer Burton	Cheryl Desforges John Jordan	Bill Rizer Steve Earle
2005-06	David Rensink	Steve Brachman Linda Sternbach	Susan Black	Ken Nemeth Cheryl Desforges	Paul Britt Bill Rizer
2004-05	Stephen Levine	David Rensink Kara Bennett	Victor Schmidt	Chuck Sharpe Ken Nemeth	Arthur Berman James Granath
2003-04	Craig Dinger	Stephen Levine Paul Babcock	Kevin McVey	Parrish N. Erwin Chuck Sharpe	Diane Yeager Arthur Berman
2002-03	Denise Stone	Craig Dinger Robert E. Pledger	Sarah G. Stanley	Rick L. Nagy Carol M. Lucas	Stephen Levine Steve Starr
2001-02	Paul Hoffman	Denise Stone Paul Britt	Sharie Sartain	Craig Dinger Rick L. Nagy	Wendy Hale-Erlich Stephen Levine
2000-01	Craig Moore	Paul Hoffman Denise Stone	Greg Gregson	Bill Osten Craig Dinger	Chuck Sharpe Wendy Hale-Erlich
1999-00	Charles Sternbach	Craig Moore Paul Hoffman	Denise Stone	David Rensink Bill Osten	Kara Bennett Chuck Sharpe

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HGS LEADERSHIP THROUGH THE YEARS *continued from page 93*

YEAR	PRESIDENT	PRESIDENT-ELECT VICE-PRESIDENT	SECRETARY	TREASURER TREASURER-ELECT	EDITOR EDITOR-ELECT
1998-99	Sandi Barber	Charles Sternbach Craig Moore	Matthew Bogнар	Michael Deming David Rensink	Craig Dingler Kara Bennett
1997-98	Jeffrey W. Lund	Sandi Barber Charles Sternbach	Dan Bonnet	Deborah Sacrey Michael Deming	Linda R. Sternbach Craig Dingler
1996-97	James A. Ragsdale	Jeffrey W. Lund Sandi Barber	Larry D. Bartell	Steve Shirley Deborah Sacrey	David M. Orchard Linda R. Sternbach
1995-96	Ron Nelson	James A. Ragsdale Ann Ayers Martin	John M. Turmelle	Paul W. Britt Steve Shirley	Gail Bergan David M. Orchard
1994-95	Dwight (Clint) Moore	Ron Nelson Jeffrey Lund	Carol M. Lucas	Jeannie F. Mallick Paul W. Britt	John M. Turmelle Gail Bergan
1993-94	John M. Biancardi	Dwight (Clint) Moore Ron Nelson	Steve Brachman	Ann Ayers Martin Jeannie F. Mallick	Lynne D. Feldkamp John M. Turmelle
1992-93	Patrick (Pat) Gordon	John M. Biancardi Dwight (Clint) Moore	Jeannie Fisher Mallick	Steve Brachman Ann Ayers Martin	Sue van Gelder Lynne D. Feldkamp
1991-92	Cyrus (Cy) Strong	Patrick T. (Pat) Gordon John M. Biancardi	Ann Ayers Martin	Sandi M. Barber Steve Brachman	Jo Ann Locklin Sue van Gelder
1990-91	Ronald (Ron) Harlan	Cyrus (Cy) Strong Patrick (Pat) Gordon	Martin J. Oldani	Denise M. Stone	George E. Kronman
1989-90	Richard (Dick) Bishop	Ronald (Ron) Harlan Cyrus (Cy) Strong	Paul Hoffman	Larry Bartell	George E. Kronman
1988-89	Dietmar (Deet) Schumacher	Richard (Dick) Bishop W. L. (Bill) Tidwell	Richard Scattolini	Cyrus (Cy) Strong	John Sauri
1987-88	Daniel L. Smith	Dietmar (Deet) Schumacher Ed (Ted) McFarlan	Steven Thornhill	Tamara L. Braun	John Sauri
1986-87	C.R. (Chuck) Noll, Jr.	Daniel L. Smith Dietmar (Deet) Schumacher	A. David Engel	Lynn Williams	John Sauri
1985-86	W.N. (Mac) McKinney, Jr.	C.R. (Chuck) Noll, Jr. Daniel L. Smith	Kenneth L. Russell	William R. Dupre	Dietmar (Deet) Schumacher
1984-85	Gerald A. Cooley	W.N. (Mac) McKinney, Jr. Ronald W. Harlan	David A. Fontaine	Kenneth L. Russell	Dietmar (Deet) Schumacher
1983-84	Matthew W. Daura	Gerald A. Cooley W. N. (Mac) McKinney, Jr.	Gregory K. Burns	Steven Thornhill	Jerry A. Watson
1982-83	Peggy J. Rice	Matthew W. Daura Gerald A. Cooley	Joan E. Carlson	Donald R. Scherer	Rlchmrd S. Bishop
YEAR	PRESIDENT	FIRST VICE-PRESIDENT SECOND VICE-PRESIDENT	SECRETARY	TREASURER	EDITOR
1981-82	William F. Bishop	Peggy J. Rice Matthew W. Daura	Gerald A. Cooley	Richard R. McLeod	Rlchmrd S. Bishop
1980-81	Chester A. Baird	William F. Bishop Peggy J. Rice	Matthew W. Daura	Gerald A. Cooley	Gregory K. Burns
1979-80	Wm. A. Fowler	Chester A. Baird Wm. F. Bishop	Peggy J. Rice	Matthew W. Daura	Gregory K. Burns
1978-79	Jeffrey V. Morris	Wm. A. Fowler, Jr. Richard B. Hohlt	James A. Ragsdale	John H. Hefner	Chris P. Cunningham
1977-78	Dean Grafton	Jeffrey V. Morris Wm. A. Fowler, Jr.	W. L. Tidwell	Eleanor M. Hoover	Chester A. Baird
1976-77	Hal H. Bybee	Royce E. Schneider Dean Grafton	Jeffrey V. Morris	M. M. Osborne	Donald W. Lane
1975-76	Anthony Reso	Stewart Chuber Martha Lou Broussard	Cecil R. Rives	Dean Gratton	Donald W. Lane

**(Prior to 1991, the HGS Bulletin Editor position was not a member of the Executive Board of Directors.)*

YEAR	PRESIDENT	FIRST VICE-PRESIDENT SECOND VICE-PRESIDENT	SECRETARY	TREASURER	EDITOR
1974-75	Sabin W. Marshall	Anthony Reso Stewart Chuber	Wm. E. Dunaway	Jeffrey V Morris	Bob Harris
1973-74	Benjamin J. Sorrell	Sabin W. Marshall Anthony Reso	Gay C. Helm	Clyde G. Beckwith	Bob Harris
1972-73	John J. Amoruso	Benjamin J. Sorrell Sabin W. Marshall	Homer E. Olivier	Anthony Reso	Craig C. Barclay
1971-72	Mcinnis S. Newby	John J. Amoruso Brian E. O'Brien	Paul H. Dudley, Jr.	Sabin W. Marshall	Craig C. Barclay
1970-71	Robert L. Musselwhite	Mcinnis S. Newby John J. Amoruso	Charles L. Hicks	Curtis W. Burgess, Jr.	Forrest J. Fiedler
1969-70	Fred M. Schall, Jr.	Robert L. Musselwhite Rufus J. LeBlanc	Mcinnis S. Newby	Stewart H. Folk	John J. Amoruso
1968-69	James O. Lewis, Jr.	Fred M. Schall, Jr. Martin M. Cassidy	Robert L. Musselwhite	Robert R. Roady	Mcinnis S. Newby
1967-68	Fred L. Smith, Jr.	James O. Lewis, Jr. Fred M. Schall, Jr.	John B. Williams	Martin Cassidy	Mcinnis S. Newby
1966-67	Jesse L. George, Jr.	Fred L. Smith, Jr. Edward G. Lipp	D. C. Gilkison	James O. Lewis, Jr.	Fred M. Schall
1965-66	J. Ben Carsey	M. Stephen Kovac Thomas M. Burke	Fred L. Smith, Jr.	Jed B. Maebius	Fred M. Schall
1964-65	Hillord Hinson	Frank R. Hardin Charles D. McMurrey	Martha Lou Shirley	Jesse L. George, Jr.	Olin G. Bell
1963-64	Orville G. Lundstrom	Arthur S. Dickinson Charles W. Stuckey, Jr.	Frank R. Hardin	H. Grady Traylor	Stuart K. Clark
1962-63	Benjamin T. Simmons	Judd H. Oualline Raymond E. Fairchild Fred J. Paulus	Charles F. Ross	B. Otto Pixler	Stuart K. Clark
1961-62	George C. Hardin, Jr.	Benjamin T. Simmons E. H. Rainwater	Lewis J. Hubka, Jr.	Cecil R. Rives	Edd R. Turner, Jr.
1960-61	William A. Gorman	Philip R. Allin Benjamin T. Simmons	Clark Edgecomb, Jr.	Thomas M. Burke	W.R. Canada
1959-60	Edd R. Turner, Jr.	Ralph A. Davis Curtis C. Franks	Austin D. Brixey, Jr.	Henry C. Dean	Wm. A. Petersen
1958-59	Ralph E. Taylor	Jack W. Craig Edd R. Turner, Jr.	Curtis C. Franks	Austin D. Brixey, Jr.	Shirley L. Mason
YEAR	PRESIDENT	FIRST VICE-PRESIDENT SECOND VICE-PRESIDENT	SECRETARY	TREASURER	
1957	A.H. Rabensburg	Sam M. Udden Ralph E. Taylor	Richard B. Hohlt	Edd R. Turner, Jr.	
1956	Walter W. McMahan, Jr.	Wendell L. Lewis A. H. Rabensburg	James S. Critz	Sam M. Udden	
1955	Tom D. Hedley	Ben Elmdahl Walter W. McMahan, Jr.	Walton S. Launey	William A. Poe	
1954	Jack O. Colle	Hillord Hinson Ben Elmdahl	Walter McMahan, Jr.	Judd H. Oualline	
1953	Wayne Z. Burkhead	Tom D. Hedley David B. Remick	J. L. P. Campbell	John A. High	
1952	Ray C. Lewis	W. A. Gorman	Frank J. Gardner	David B. Remick	
1951	Ralph B. Cantrell	Jack O. Colle	William F. Cooke	Morris Halsted	
1950	Robert R. Rieke	Frank Reddy, Jr. Ralph B. Cantrell	Jack O. Colle	James A. Wheeler	

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HGS LEADERSHIP THROUGH THE YEARS *continued from page 95*

YEAR	PRESIDENT	FIRST VICE-PRESIDENT SECOND VICE-PRESIDENT	SECRETARY	TREASURER
1949	Hershal Ferguson	Robert R. Rieke	James H. McGuirt	Marjorie Fuqua
1948	A. F. Childers, Jr.	Hershal Ferguson	Robert R. Rieke	Mary Holland
1947	Charles H. Sample	A. F. Childers, Jr.	Hershal Ferguson	Eugene L. Earl
1946	Shapleigh G. Gray	Charles H. Sample	A. F. Childers, Jr.	Wayne Z. Burkhead
1945	Olin G. Bell	Shapleigh G. Gray	Harry Kilian	Martin Sheets
1944	Wm. B. Milton, Jr.	Wm. B. Moore	Charles H. Sample	Homer Noble
1943	Leslie Bowling	Wm. B. Milton, Jr.	Wm. B. Moore	Gerald J. Smith
1942	Donald M. Davis	C. B. Richardson	Wm L. Horner Hillard Carey	Wm. F. Calahan
1941	Carleton D. Speed, Jr.	Donald M. Davis	Wayne Z. Burkhead	James W. Kisling
1940	G. S. Buchanan	A. P. Allison	Leslie Bowling	Dugald Gordon
1939	W. C. Thompson	Carleton D. Speed, Jr.	Olin G. Bell	A. P. Allison
YEAR	PRESIDENT	VICE PRESIDENT	SECRETARY-TREASURER	
1938	Perry Olcott	R. A. Weingartner	Carleton D. Speed, Jr.	
1937	John C. Miller	Perry Olcott	Lon D. Cartwright, Jr.	
1936	Phil F. Martyn	O. L. Brace	W. C. Thompson	
1935	Merle C. Israelsky	Phil F. Martyn	O. L. Brace	
1934	Wayne F. Bowman	John C. Miller	Phil F. Martyn	
1933	Marcus A. Hanna	Wayne F. Bowman	John C. Miller	
1932	John M. Vetter	Sidney A. Judson	John C. Miller	
1931	A.G. Wolf	Grady Kirby	John F. Weinzierl	
1930	J. Brian Eby	Alva C. Ellisor	John F. Weinzierl	
1929	George Sawtelle	J. Brian Eby	John F. Weinzierl	
1928	Paul Weaver	John M. Vetter	Marcus A. Hanna	
1927	Frank W. DeWolf	Laura Lee Weinzierl	Marcus A. Hanna	
1926	Donald C. Barton	Elisabeth Stiles	John M. Vetter	
1925	Dilworth S. Hager	Elisabeth Stiles	John M. Vetter	
1924	John R. Suman	Alva C. Ellisor	David Donoghue W. D. Blackburn	
1923	John R. Suman	—	David Donoghue	



Alva Ellisor: Charter member, first vice president, and author of "Rockhounds of Houston: an Informal History of the Houston Geological Society" that covered the first 25 years.



Emma Jane Coffman Miller and John Miller, with son John C. Miller (circa 1930). The Millers were Charter members of the HGS and Mr. Miller served as president in 1937. Their son followed in the family footsteps and was a successful petroleum engineer. (Photo courtesy of Katherine King.)

HGS DIRECTORS				
2023-24	Sharma Dronamraju	Bill DeMis	Troy Meinen	Julie Schulenberg
2022-23	Lanette Marcha	Bill DeMis	Troy Meinen	Dianna Phu
2021-22	Lanette Marcha	Barbara Hill	Casey Langton	Dianna Phu
2020-21	Wayne Camp	Barbara Hill	Casey Langton	Bob Frykund
2019-20	Wayne Camp	Brent Boyd	Rachel Todkill	Bob Frykund
2018-19	Greg Halvatzis	Brent Boyd	Rachel Todkill	Steven Shirley
2017-18	Maggie Dalthorp	Dave Miller	Mike Erpenbeck	Steven Shirley
2016-17	Annie Walker	Dave Miller	Mike Erpenbeck	Justin Vandenbrink
2015-16	Annie Walker	Penny Patterson	Jim Grubb	Justin Vandenbrink
2014-15	Jim Beck	Penny Patterson	Jim Grubb	Allen Mattis
2013-14	Jim Beck	Beverly DeJarnett	John Dombrowski	Allen Mattis
2012-13	John Adamick	Beverly DeJarnett	John Dombrowski	Gary Coburn
2011-12	John Adamick	Jennifer L. Burton	Cecelia Baum Raborn	Gary Coburn
2010-11	John Adamick	Jennifer L. Burton	Robert Pledger	Tarek Ghazi
2009-10	Ianthe Sarrazin	Walter Light	Robert Pledger	Tarek Ghazi
2008-09	Ianthe Sarrazin	Walter Light	Alison Henning	Richard Howe
2007-08	Bob Merrill	Bonnie Milne-Andrews	Alison Henning	Richard Howe
2006-07	Bob Merrill	Bonnie Milne-Andrews	Jim Doyle	Erik Mason
2005-06	William Dupré	Elizabeth Fisher	Jim Doyle	Erik Mason
2004-05	William Dupré	Elizabeth Fisher	Marsha Bourque	Andrea Reynolds
2003-04	Janet M. Combes	Michael A. Barnes	Marsha Bourque	Andrea Reynolds
2002-03	Janet M. Combes	Michael A. Barnes	Susan Cunningham	Scott C. Sechrist
2001-02	Paul Babcock	Tom McCarroll	Susan Cunningham	Scott C. Sechrist
2000-01	Paul Babcock	Tom McCarroll	David A. Fontaine	Sharie Sartain
1999-00	John Jordan	Synthia Smith	David A. Fontaine	Sharie Sartain
1998-99	John Jordan	Bob West	Paul Britt	David Barrett
1997-98	Paul Hoffman	Craig Moore	Paul Britt	Bob West
1996-97	Paul Hoffman	Craig Moore	James V. Richards	Jo Ann Locklin
1995-96	Larry D. Bartell	Joe Eubanks	James V. Richards	Jo Ann Locklin
1994-95	Larry D. Bartell	Joe Eubanks	Sue Van Gelder	Jim Vance
1993-94	Jeffrey W. Lund	James Ragsdale	Sue M. Van Gelder	Bob B. Rieser
1992-93	Jeffrey W. Lund	James Ragsdale	William Dupré	Pinar Yilmaz
1991-92	Barbara P. Bentley	Sam H. Peppiatt	William Dupré	Frank D. Lovett
1990-91	Barbara P. Bentley	Sam H. Peppiatt	Richard R. (Dick) McLeod	Joseph S. (Scott) Laurent
1989-90	F. Kenneth Aitken	Richard R. (Dick) McLeod	David C. Callaway	Joseph S. (Scott) Laurent
1988-89	Lynn Williams	John Hefner	David C. Callaway	Robert L. Johnson
1987-88	Lynn Williams	John Hefner	E. Stuart Hastings	Jerry A. Watson
1986-87	E. Stuart Hastings	Jerry A. Watson	William L. Champion	Sam Evans
1985-86	Henry C. Dean	George W. Hinds	William L. Champion	Sam Evans
1984-85	Henry C. Dean	George W. Hinds	Clyde G. Beckwith	Scott J. Lysinger
1983-84	Clyde E. Harrison	Edward McFarlan, Jr.	Clyde G. Beckwith	Scott J. Lysinger
1982-83	George E. Gordon	Charles R. Noll, Jr.	Clyde E. Harrison	Edward McFarlan, Jr.

Continued on page 98

HGS DIRECTORS *continued from page 97*

1981-82	George E. Gordon	Charles R. Noll, Jr.	Wendell L. Lewis	Tommy M. Thompson
1980-81	Robert W. Bybee	James A. Ragadale	Wendell L. Lewis	Tommy M. Thompson
1979-80	Robert W. Bybee	James A. Ragadale	Carl E. Norman	Charles E. Trowbridge
1978-79	Donald H. Cummlngs	Howard W. Kiatta	M. M. (Ozzie) Osborne	Charles E. Trowbridge
1977-78	Robert A. Harris	Howard W. Kiatta	M. M. (Ozzie) Osbrne	Elgean C. Shield
1976-77	Robert A. Harris	Clyde G. Beckwlth	W. L. Tidwell	Elgean C. Shield
1975-76	Walter A. Boyd, Jr.	Clyde G. Beckwlth	W. L. Tidwell	B. C. Phillips
1974-75	Walter A. Boyd, Jr.	J. Denny Bartell	Martin M. Sheets	B. C. Phillips
1973-74	Rufus J. LeBlanc	J. Denny Bartell	Martin M. Sheets	Edward G. Lipp
1972-73	Rufus J. LeBlanc	Cyrus D. Cantrell	James T. Goodwyn	Edward G. Lipp
1971-72	James C. Barker	Cyrus D. Cantrell	James T. Goodwyn	Ben J. Sorrell
1970-71	James C. Barker	Harold E. Voigt	Alvin R. Winzeler	Ben J. Sorrell
1969-70	Robey H. Clark	Harold E. Voigt	Alvin R. Winzeler	John Loftis, Jr.
1968-69	Robey H. Clark	George E. Carver, Jr.	Floyd B. Wilcox	John Loftis, Jr.
1967-68	Hal H. Bybee	George E. Carver, Jr.	Floyd B. Wilcox	Lewis J. Hubka, Jr.
1966-67	Hal H. Bybee	E. H. Rainwater	Lawrence J. Vittrup	Lewis J. Hubka, Jr.
1965-66	Wendell L. Lewis	E. H. Rainwater	Lawrence J. Vittrup	DeWitt C. Van Siclen
1964-65	Wendell L. Lewis	Henry F. Fowler	Gentry Kidd	DeWitt C. Van Siclen
1963-64	W. Kenley Clark	Henry F. Fowler	Gentry Kidd	Elliott H. Powers
1962-63	W. Kenley Clark	J. Ben Carsey	William F. Cooke, Jr.	Elliott H. Powers
1961-62	W. R. Canada	Carey Croneis	William F. Cooke, Jr.	Ben F. Morgan
1960-61	Shirley L. Mason	Carey Croneis	Marion S. Roberts	Ben F. Morgan
1959-60*	Shirley L. Mason	Albert M. Tobert	Marion S. Roberts	James A. Wheeler
1958-59*	Orville G. Lundstrom	Albert M. Tobert	Henry S. McQueen	James A. Wheeler

*Prior to 1960, the Executive Board of Directors was the Advisory Committee.



Former presidents Barry Katz and James Ragsdale



Former presidents Jon Blickwede and Cheryl Desforges

Office Managers and Directors In Grateful Appreciation

By Charles Sternbach

We thank the HGS staff over many years for their cheerful demeanor with diligent efforts and for providing long-term continuity and balance to our organization.

During the last 25 years, many contributors like Annette Mather, Lilly Hargraves, Jackie Jordan, and Alyssa Cushing, to name a few, have contributed greatly to the success of HGS. We especially want to recognize our long-term office managers and directors who have anchored the society. We include previous write-ups about them in the *HGS Bulletin* and a few funny stories where available.

JOAN HENSHAW, 1997-2007

“Joan Henshaw is retiring this month after ten years of service to the HGS. Joan was born Joan Allen on October 1, 1936, in Georgetown, a little north of Austin, Texas. She was an only child raised by a father who tried his best not to spoil her. She grew up in Houston and Austin. Joan married in 1956 and had three girls: Debra, one of the top salespeople at Channel 11; Brenda, a marketing representative for Diamond Offshore Drilling; and Vicki, a home care specialist in Orlando, Florida. Joan has seven grandchildren. She continually worked while raising her children, first as a group secretary and then as a private secretary to one of the life insurance agents at Connecticut General Life Insurance Company. Joan then worked for Randall’s in the Group Insurance Department. She left there to work at Southern States Log Library



for eight years. When Southern States and Gulf Coast log libraries merged in 1996, she applied for the HGS/GSH Office Manager position, which had just become available.

The team hiring Joan was Jeff Lund, Jim Ragsdale, and Deborah Sacrey, then the Office Management Committee chair. You might call Joan a real “survivor” because her apartment building burned to the ground less than a year after coming to work for the HGS, and she lost virtually everything she owned. The HGS helped raise money and goods to make her world whole again. A year later, she was diagnosed with Hodgkin’s Lymphoma. She managed to get through the Chemo and radiation therapies and still does her job for the HGS/GSH. Her biggest challenge now is to sell her condo and move to Lake Jackson to be with her long-time friend, Jack, whom she has known for 45 years. Retirement will be difficult for Joan, a very active person who has loved working with many HGS members in various capacities during her ten years at the office helm. We will all miss her.” (Originally published in *HGS Bulletin* February 2007)

SANDRA BABCOCK 2007-2013

“The Houston Geological Society and the Geophysical Society of Houston welcome Mrs. Sandra Babcock as their new Office/Business Accounts Manager. Mrs. Babcock succeeds Joan Henshaw, who retired on February 15” (see February 2007 *Bulletin*).



“Sandra brings more than 16 years of experience, having worked as an administrative assistant in the Laredo Community College, the Alief School District, and the Pregnancy Help Center-Katy/West Houston. Her skills and experience with Microsoft Office

and QuickBooks will be put to use by both societies, as might her fluency in Spanish. In her “spare” time, Sandra has been extremely and actively involved as a volunteer in community and church functions.” (Originally published in *HGS Bulletin* April 2007)

Sandra has a daughter, a son and daughter-in-law, and one grandchild.

My funny story: When Charles Sternbach reached out to me and asked for a picture and a “funny story,” it was the funny story I struggled with. I have so many funny stories but one of my favorites is on my first day of work with HGS, I answered a phone call from a member that wanted me to help him with his login, certain event registration, and renewing his membership. Did I mention it was my first day of work (*smile*)? After completing each task, I asked the gentleman if I could further assist, and he said, “No, I just want to say your husband did well getting this job for you.” I said, “Excuse me, my husband?” He replied, “Yes, your husband, Paul,” to which I replied, “Sir, I don’t know who Paul is; my husband’s name is Jeffery.” The gentleman thought Paul Babcock was my husband. Paul has since become “my brother from another mother.” Thank you, HGS. I was very blessed and fortunate to have the privilege of serving such great people, many of which I get to call my friends. ■

**ANDREA (ANDI) PEOPLES, HGS EXECUTIVE OFFICE DIRECTOR,
SINCE OCT 2014**



Hometown: Juneau, Alaska

University: University of Alaska

Fun Facts: I used to “climb” rocks in Alaska...Does that make me a Geologist in training?

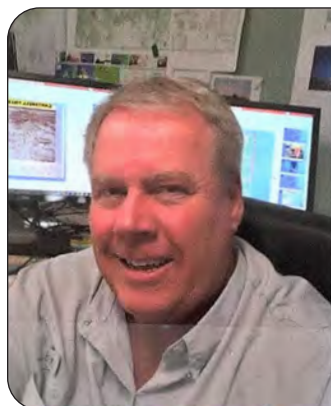
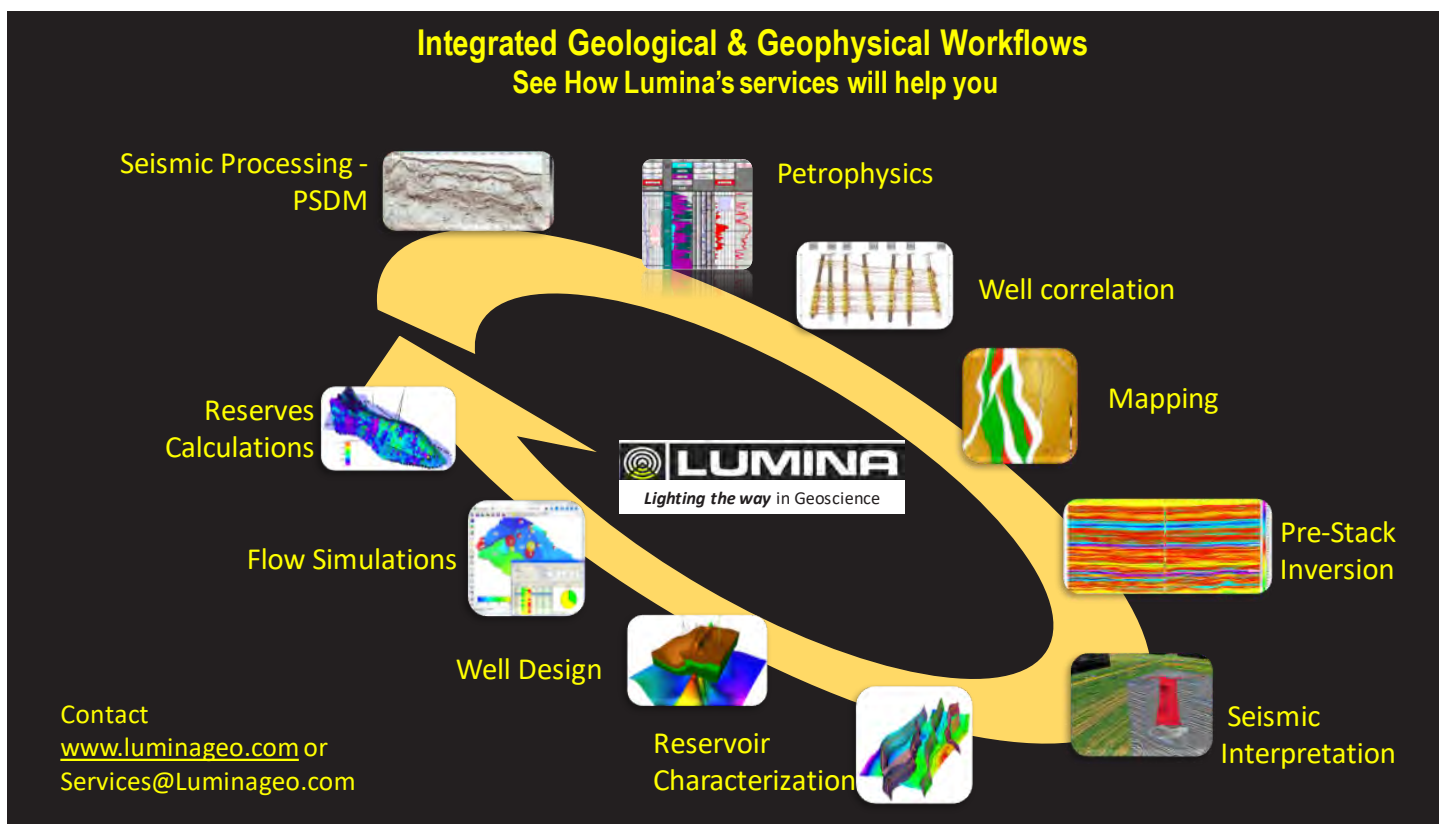
Quick Bio: I grew up in Juneau, Alaska, by way of Tennessee.

I met my husband of 31 years at the University of Alaska in Anchorage. We moved to Texas in 1992. I am an avid hunter with a great deal of experience with gun and bow hunting. On the weekends, you can

typically find me with my family at our deer lease—if you can find me in my camo ;). I have three daughters, including a chef who is a culinary instructor at a high school, a diesel mechanic turned mom, and a college senior at A&M. I am also very active with the Houston Livestock Show and Rodeo as a member of the Transportation Committee. You could say I am a very busy lady. (Originally published Oct 2014).

Andi says, “I have seen many changes over the past 9 years in the industry and in the HGS membership. I have grown fond of all of you.”

We thank the HGS staff over many years for their cheerful demeanor and diligent efforts and for providing long-term continuity and balance to our organization. ■



GREG HATCH

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What the Future of HGS May Look Like

By Lauren Seidman Robinson

In my final year of graduate school at Baylor University, I joined the American Associate of Petroleum Geologists student chapters and the Geological Society of America. When I started my oil and gas career in Fort Worth with EOG Resources in the summer of 2007, I continued my relationship with those organizations as a professional (memberships I continue to hold today). It was not until I moved to Houston four years later (2011) and started working for Marathon Oil that I joined the Houston Geological Society (HGS). My goal was to support this local professional geology chapter and gain access to their technical publications. At the time, Marathon was located in the Galleria. I was working on an exceptionally active asset, making it difficult to attend the downtown HGS meetings during the workday and the west side meetings after work hours.

It was not until 2015, while working downtown for EP Energy that I began being a truly active member of HGS by attending luncheon meetings and continuing education courses. Between HGS and the Society of Independent Professional Earth Scientists (SIPES) meetings (I mention SIPES because there is a substantial overlap between HGS and SIPES members), I have never met an assemblage of more friendly and supportive fellow geologists. The people are what kept me coming back.

As a result, I jumped at the opportunity to be a co-chair of the Social Media Committee in the fall of 2017. At the time, I intended to help the committee for a few months in their time of need. It is now the summer of 2023, and I am still going strong with Social Media. Additionally, I also volunteer on the Continuing Education committee. All in all, I never knew how rewarding it was to volunteer. I find giving back to HGS incredibly rewarding because of the caliber of its members. I have met some interesting people and made strong friendships since joining HGS. That is

what I enjoy the most—the people. At a job and in life, the people make it or break it for me.

It is important to examine what changes HGS has experienced throughout the years as we contemplate the future. After all, examining the history of the earth and the processes that continue to change it is part of what we are good at as geologists. Throughout the next 100 years, there will undoubtedly be lots of changes. And, as much as we might speculate, there is no way to know what they will be.

For HGS, let's blend what we have done successfully in the past and welcome the changes that technological advances will inevitably bring. It would be wonderful to continue having both in-person and virtual meetings. Virtual meetings are an effective way to get the technical information across to a large local group (especially given the traffic situation here in Houston) and engage with colleagues across the United States and globally. Even so, nothing can replace the excitement and energy of in-person meetings as they are not just about meeting people and “getting a job” but about continuing to build that supportive network for the rest of one's career. As we all can appreciate, a good mentor can mean everything and does not even need to be part of a formal program. Finally, in-person meetings are also a great way to engage volunteers.

In closing, we must change with the times (e.g., social media and apps). This change will make us attractive to younger prospective members and show that we are not a collection of “old and intimidating” professionals stuck in our ways but a young and vivacious group willing to lean into change. No matter what, let's continue to focus on what we are passionate about—geology. ■

...welcome the changes that technological advances will inevitably bring.

Charles A. Sternbach, Ph.D.
President

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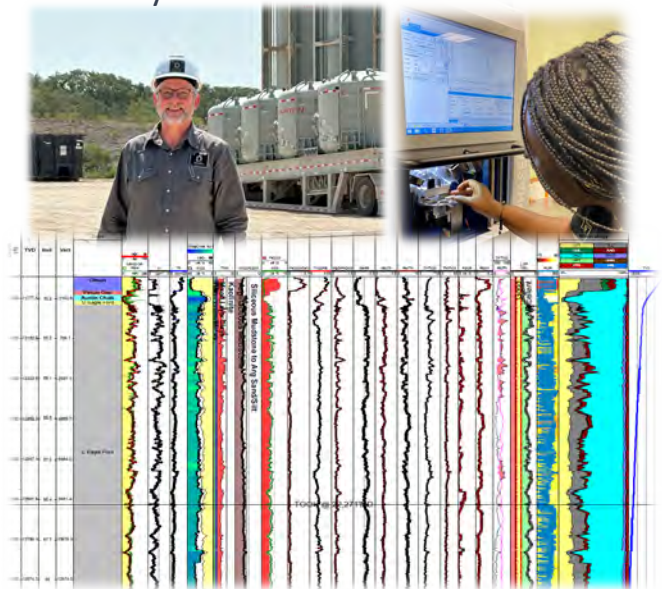
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Happy Centennial to HGS

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