



HGS Bulletin

Volume 62, Number 7

Houston Geological Society

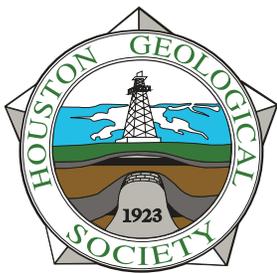
March 2020



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The Bulletin

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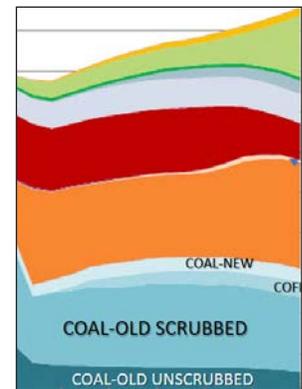
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About the Cover: Crater Lake in south-central Oregon, a lake partly fills a caldera that was formed 7,700 years ago by the collapse of the volcano Mount Mazama. With a depth of 1,949 ft, the lake is the deepest in the United States. The picture was photographed and provided by Michael F. Forlenza, P.G.

31st March 2020 • Houston, TX • 77055

AAPG

SPE International
Gulf Coast Section

UPSTREAM OIL & GAS
PROFESSIONALS HIRING EVENT

Trini Mendenhall Community Center 1414 Wirt Rd

For the people, by the people.
We Welcome All O&G Professionals - Engineers, Geologists, Geophysicists, Landmen & More!
Job-Seeker Registration Opens Feb 14th

Company Registration is OPEN!
Partner with SPE-GCS as:

- An Event Sponsor
- An Employer

Job-Seekers MUST:

- Pre-Register - **NO WALK-INS!**
- Hold Active Membership in a Collaborating Professional Organization

More Information At:
<https://spe-gcs-mit-hiringevent.org/>

After the successful introduction of Geo Trivia Night in 2019, the NeoGeos will be starting the Spring Season in March and continue through May for a total of four events. Geo Trivia Night was started to refresh the ever so common Happy Hour by introducing an event that brings together geoscientists for some good drinks, great conversations, and some healthy competition. The committee has viewed this event as a team-building opportunity for company geoscience departments as well as an opportunity for Houston geoscientists to network. Please come to join us on Wednesday, March 4th, 7pm – 9pm.

Geo Trivia

Trivia is back for 2020!

Liberty Station on Washington Ave
March 4th, 7-9pm

Season Sponsors

ExxonMobil

QUANTICO
Energy Solutions

GILLIS & COOK

NeoGeos

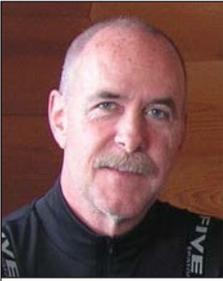
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Jon Blickwede
president@hgs.org

Updating HGS's Constitution/By-Laws

I'm taking another important detour from the exploration theme of my column to summarize the upcoming proposal to revise the HGS Constitution/By-laws. It may not be the most fascinating issue for everyone, but such revisions are a necessity from time-to-time in order to ensure that the HGS's governing documents conform with the most recent Texas state laws, and to allow the Society to employ the most modern and efficient practices in its official processes. For example, our current governing documents only allow for a quorum, when a vote is made by the Board, if a majority of Board members are physically present at a monthly Board meeting. That can be a real challenge for Board members who may live as far away as Kingwood – and nowadays, with all the easy and economical ways to hold an online videoconference, it's something of an anachronism. But any modifications to the HGS Constitution or By-laws must be approved by a two-thirds majority of the total number of HGS members voting. As such, the plan is to send out to all HGS members (during early April) a summary of the proposed changes to the combined Constitution/By-laws, and a paper ballot to vote on the proposed revisions, along with the ballots for the election of new Officers and Directors for the 2020-2021 HGS Executive Board. The full version of the proposed revised Constitution/By-laws will be made available to all members, by various means, in the near future. And the voting will of course be possible online, as it is with the election of new Board members.

So, here's a "heads-up" of the key proposed changes, put together by HGS Director and Chair of the By-laws Committee Wayne Camp, which was approved by the entire Board on 11 February 2020. Again, the full document will be accessible to all members in the coming weeks. The existing Constitution and By-laws can be found via a link at the bottom of the "About HGS- Overview" page (<https://www.hgs.org/objective-society>) on the HGS website.

Summary of Proposed Changes

Article III, Membership

Added a description of the Membership Chair who is responsible for preparing nominations for Active and Associate members. Reorganized former Article II that defines membership classes and qualifications to improve clarity. Member qualifications are unchanged.

Article IV, Composition of the Board of Directors

Revises former Article III to condense the description of the Board of Directors and added a Section to define voting by the Board.

Article V, Authority of the Board

Added Article V that defines the authority of the Board, governance of Board meetings, and justifications for termination. A new provision is added to allow for Board members to meet remotely via electronic meeting methods, rather than requiring in-person meetings to establish a quorum to conduct official business.

Article VI, Officers

Addresses lapses in the ability of Board members to serve and adds the responsibility for the Treasurer to prepare an annual budget.

Article VII, Meetings of the Members

Expands the rules governing General meetings that were previously contained in Article I.

Article VIII, Nominating Committee and Elections

Formalizes the role of the Nominating Committee in accordance with current practice that was not previously defined in Article II (Membership).

Article IX, Other Committees

Formalizes the role of the Audit Committee, Investment Committee, and the Finance Committee in accordance with current practice that were not previously defined in Article V (Committees).

Article XI, Dues

Eliminates the required annual dues amounts as previously specified in Article IV (Annual Dues) to allow flexibility of the Executive Board to make changes as may be necessary without requiring revising the By-laws and approval of the Membership. The restriction to limit any dues increase to no more than 20% during any consecutive two-year period is retained as previously defined in Article IV (Annual Dues).

From the President *continued on page 5*



GeoGulf 2020 Call for Papers

70th GCAGS/GCSSEPM Convention and Exposition
Sept. 30–Oct. 2, 2020 • Lafayette, Louisiana

Hosted by the Lafayette, Baton Rouge, and New Orleans Geological Societies

GeoGulf 2020 Session Themes

- “All Things Salt”—Tectonics, Oil and Gas, Seismic Acq., Proc., and Interp., Mining, etc.
- Machine Learning and Artificial Intelligence Applications
- GCSSEPM Special Session—Topic to be announced
- Gulf of Mexico Temperature and Pressure
- Smackover Session and Core Workshop
- GIS Technology and Applications
- Gulf Coast Environmental
- The Business Side—Legal, Unitization, Finance, Insurance, etc.
- Geoscience Applications of Drone Technology
- Geomechanics—Conventional and Unconventionals
- Carbon Capture / Underground Storage
- Shallow Hazards
- Success from Failure—Learning from our Mistakes
- And more—We are the place for Gulf Coast Geoactivities! We’ll fit you in! Got an idea for a theme session, please let us know!

Professionals and Students: We welcome you to submit an abstract for consideration of oral or poster presentation of 250–300 words by February 3, 2020.

Early abstract submissions will be reviewed within a day or two of receipt with acceptance/rejection notification. Submit via email, title, author(s) (with full contact information for each, including company or school, full address with zip code, email, and phone number), and abstract (preferably with 1–2 representative illustrations including reference from text and with captions) to General Chair, James J. Willis, james.willis@gcags.org.

All accepted presenters are expected to submit an initial draft of full paper or extended abstract for publication in the *GeoGulf Transactions* by April 1, 2020, to the *GeoGulf Transactions* Editor, James J. Willis, james.willis@gcags.org. Full information, instructions, size limitations, and helpful hints for abstracts, extended abstracts, and full papers will be posted soon at www.geogulf.org.

If you’d like to publish in the *GCAGS Journal*, the peer-reviewed journal of Gulf Coast geoscience, submit an extended abstract of at least 600 words, including 1–2 representative figures, to the *GCAGS Journal* Editor, Robert Merrill (rmerrill@catheart.com) by December 16, 2019. Once accepted for publication, the deadline for submitting a full manuscript is April 2, 2020. Full instructions for manuscript submissions will be posted online at <http://www.gcags.org>. Convention presentations of *Journal* submissions are encouraged, but not required.



Fang Lin
editor@hgs.org

Intersect Digital Innovation with Real-Life Challenges

Fellow HGS members: For those of you who work in the oil and gas industry, I am sure that digital innovation is not a strange term to you, as data analytics, machine learning and artificial intelligence have become the new buzz words in many E&P companies nowadays, with the hope that these technologies will bring revolutionary changes to how we work in the industry, and eventually to shorten the cycle time of projects, to facilitate more accurate prediction and to enhance overall capital efficiency.

Machine learning and artificial intelligence techniques have demonstrated tremendous success in e-commerce and other business sectors. Supported by large amount of quality data, they certainly have generated outcomes that traditional techniques can hardly compete with. When it comes to the oil and gas industry, it is relatively easy to envision how they can be applied to downstream and midstream business, even part of the upstream business (thinking of the hundreds and thousands of wells drilled in unconventional resource plays). However, for exploration and appraisal of many conventional plays, unique geologic conditions from place to place and often handful of wells drilled into those plays seem to make it difficult.

This month I had the opportunity to witness the power of digital innovation techniques at work. Although I cannot discuss the particular project and the technical challenge, it was a true eye-opener for me to see how some of the new technologies that my generation and prior generations of geologists did not have the opportunity to learn at school could change our day-to-day work.

It was an example of successful application of digital technologies to conventional E&P work, resulting in significantly reduced cycle time. Reflecting on why it was a success, I realized that it was because we had a very clearly defined problem and we talked with the individual who has the right skills and knowledge to help us. As a result, the problem was resolved in a way that I could not imagine on my own. So, my learnings this month? Intersecting digital innovation techniques with real-life challenges. If the traditional geologists can feed our digital innovation specialists with real-life challenges, instead of making assumptions about what they can or cannot do, and continuing on our old way of thinking, some of our technical challenges can be solved faster, leaving us more time to focus on tasks that machines cannot do for us yet. Until next month. ■

Reflecting on why it was a success, I realized that it was because we had a very clearly defined problem and we talked with the individual who has the right skills and knowledge to help us.

From the President continued from page 3

Article XII, Indemnification

Sets out the indemnification of Board Members in accordance with Texas law; a provision that is not specified in the existing By-laws.

Article XIV, Dissolution

Provision for donations of any remaining assets following dissolution of the Society as previously described in Article VI (Dissolution) is updated to conform with current IRS Tax Code.

Article XV, Conformity with Other Governing Documents

Expands description addressing any conflicts of these By-laws with any other governing documents that were previously defined in Article VII (Priority of Constitution).

I want to encourage all HGS members to engage in this effort by reviewing the existing governing documents, the proposed changes when all the details are published, and to participate during the voting process. ■

HGS Shrimp Peel & Crawfish Boil

Friday April 17, 2020 12:00 - 6:00pm

Bear Creek Pioneers Park, Pavilion 6

3535 War Memorial Street, Houston, TX 77084

(Pavilion #6 is located off Bear Creek Dr.)

**Boiled Shrimp
Cajun Crawfish
Corn & Potatoes
Beer & Beverages
DJ Music!**



Ticket Cost

HGS Member- \$30

Non-Member- \$35

Walk-Ups- \$45

Register online at WWW.HGS.org

www.hgs.org/shrimp_peel_2020

Sponsorship Opportunities

Shrimp Sponsor \$2000.00 - 6 Complimentary event tickets

Crawfish Sponsor \$2000.00 - 6 Complimentary event tickets

Beer & Beverage Sponsor \$1000.00 - 4 Complimentary event tickets

Music Sponsor \$1000.00 - 4 Complimentary event tickets

Platinum Corporate Sponsor \$1000.00 - 4 Complimentary tickets

Gold Corporate Sponsor \$750.00 - 2 Complimentary ticket

Silver Corporate Sponsor \$500.00 - 1 Complimentary ticket

Bronze Corporate Sponsor \$250.00

To be a Sponsor please call Andrea Peoples at the HGS Office 713-463-9476 or email andrea@hgs.org



Cost: \$40 Preregistered members; \$45 non-members/walk-ups

To guarantee a seat, pre-register on the HGS website & pre-pay by credit card.

Pre-registration without payment will not be accepted.

Walk-ups may pay at the door if extra seats are available.

If you are an Active or Associate Member who is unemployed and would like to attend this meeting, please call the HGS office for a discounted registration cost. We are also seeking members to volunteer at the registration desk for this and other events.

James (Jim) M. Rine

Wayne State University

How a Carbon Tax Could Benefit U.S. NG Producers, But for How Long?

The analyses presented show how a Federal carbon fee could benefit US natural gas (NG) producers while meeting the COP21 goal of avoiding an increase in global temperatures of +2°C (3.6°F) above pre-industrial levels (Rine, 2019a). Absent a Federally mandated carbon tax, however, unilateral reductions in production by petroleum companies could result in costly opposition from stockholders and investors. The basis of the analyses are modeled responses to a 25-year national carbon fee & dividend (CFD) program beginning in 2025 at \$10/metric ton (t) of CO₂ emissions and increasing annually by \$10/t. The CFD program, if enacted nationwide, would within a decade begin the elimination of coal usage for electrical power generation while incentivizing carbon

capture and storage (CCS) for NG. In theory, US NG producers with a CFD stimulated CCS program could not only attain an 80% drop in US carbon emissions by 2050 (for combined coal and NG usage), they could produce more NG than following a business as usual approach (BAU; Figure 1).

Also addressed are how growth rates of renewable energy and cost of commercial energy storage might impact US demand for NG (Rine, 2019b). Present day levelized costs of energy from new commercial-scale solar and wind powered facilities are already competitive with NG facilities. But growth of US renewable

HGS General Dinner continued on page 9

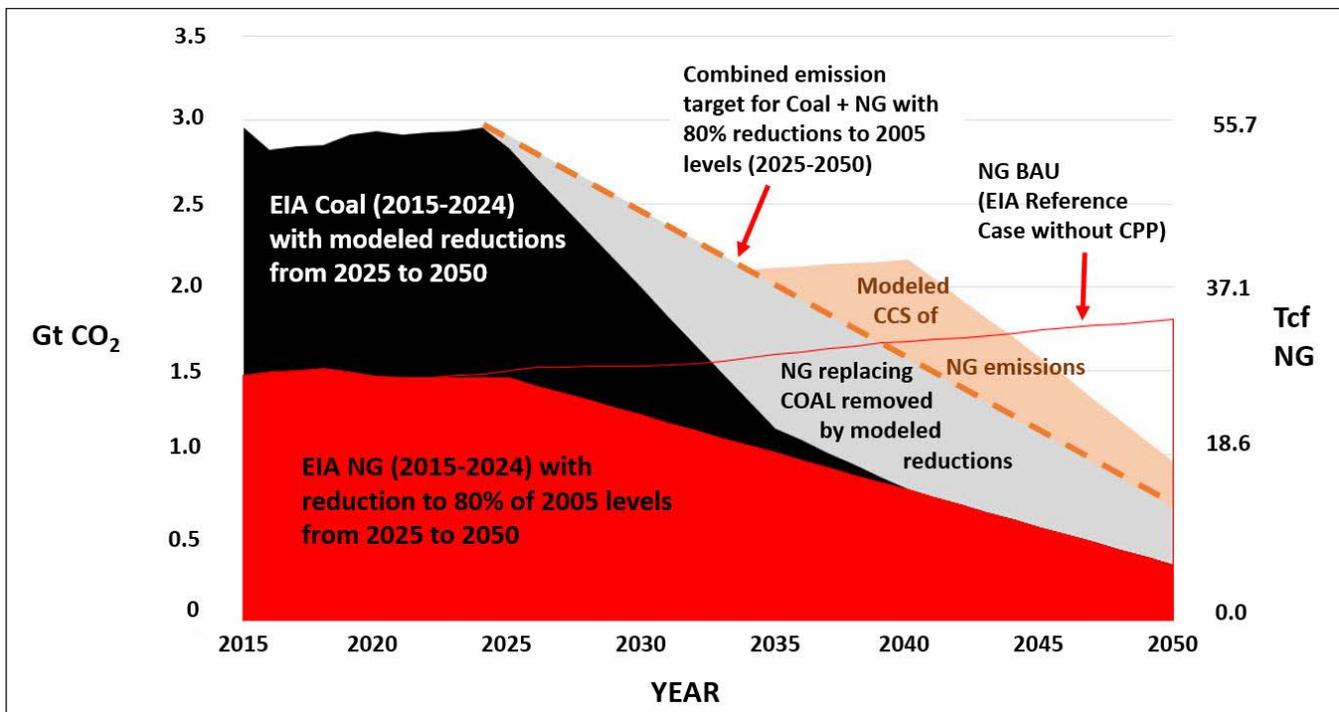
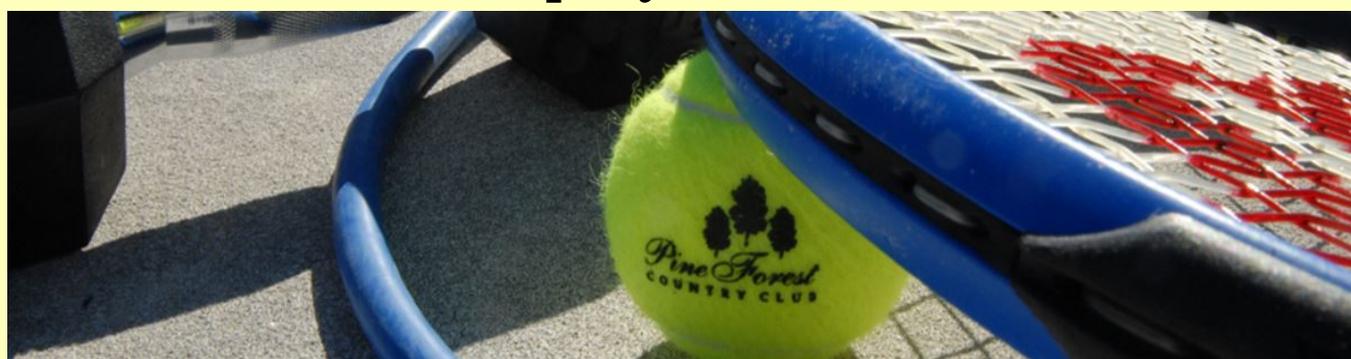


Figure 1. Figure graphically illustrates the relative CO₂ emissions (in gigatonnes [Gt]) and consumption of natural gas (NG) and coal within the United States from 2015 until 2050 under the scenario proposed in Rine (2019a). Emissions levels between 2015 to 2024 are based on US Energy Information Administration (2017) projections without the Clean Power Plan (CPP). Emission reductions starting in 2025 reach 20% of 2005 levels by 2050. This scenario incorporates early termination of coal usage and utilization of carbon capture and storage (CCS) based on the Citizens' Climate Lobby (2014) model (Figure 2) but extrapolated to 2050. The NG emissions sequestered by CCS (pale orange) are not tallied with the total allowable emissions. From Rine (2019a).

2020 HGS Tennis Tournament



players: \$65.00
non-players: \$20.00



Saturday, April 25, 2020

8:00 am - 12:00 pm

Pine Forest Country Club

18003 Clay Rd.

Houston, Texas, 77084

Sponsorship Opportunities:

The Big Four: \$1,000.00

GOAT: \$700.00

Grand Slam: \$500.00

ATP World Tour Finals:
\$300.00



For more information visit www.hgs.org/events

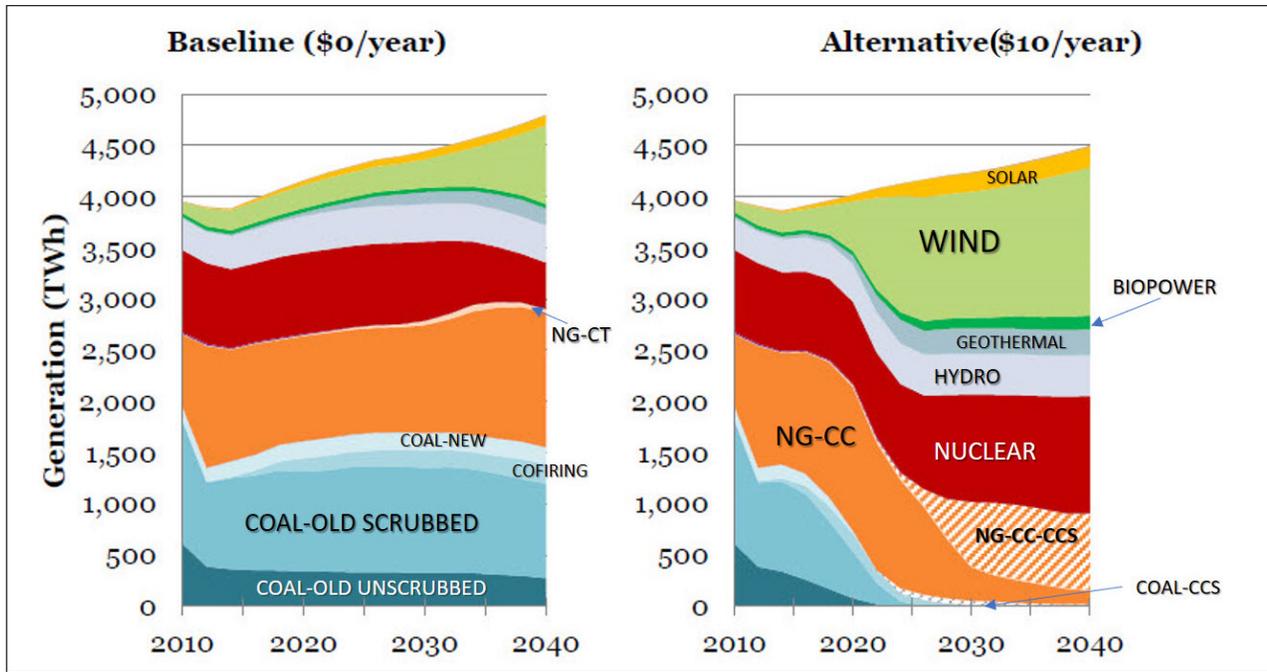


Figure 2. Citizens’ Climate Lobby (2014) modeled United States electrical power generation for the period between 2010 to 2040 without a carbon tax (baseline [\$0/yr]) and with a carbon tax (alternative [\$10/yr]). The alternative modeled a carbon tax starting at \$10/t CO₂ in 2015 and increasing \$10/t annually until 2035. The Citizens’ Climate Lobby (2014) model replaces NG combined cycle (NG-CC) with NG CCS. Figures are modified from Citizens’ Climate Lobby (2014). NG-CT = combustion turbine. From Rine (2019a).

energy projected by the Energy Information Administration (EIA) for 2025 to 2050 (~130%) is a fraction of the growth necessary to replace fossil fuel usage by 2050. Other studies of past growth in renewable energy calculated that between 2004 and 2010 there was a growth of approximately 300%. Assuming the EIA projected growth through 2024 is correct (~160% from 2015 to 2024), growth in renewable energy would have to exceed 700% from 2025 to 2050 to completely replace energy produced from NG and coal. This unprecedented growth requirement indicates there will be continued need for energy from NG during this period. The competitiveness of commercial- or municipal-scale battery storage versus NG powered peaking plants is difficult to predict because of the large variability in both the levelized costs of energy from gas peaking plants and storage costs for batteries. Present-day estimates for low-cost battery storage could replace high-cost NG peaking plants immediately after instituting a CFD plan. Whereas a low-cost NG peaking plant may still be competitive decades after the initiation of an annually increasing carbon fee. ■

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Biographical Sketch

JAMES (JIM) M. RINE earned a PhD in 1980 at the University of Miami where his research on modern shallow marine siliciclastic muds received the 1985 SEPM outstanding paper award with R. N. Ginsburg. Rine’s other published research includes shallow marine and deltaic sedimentation, groundwater hydrogeology, porosity characteristics



of siliciclastic mud rocks, and the relationship of the petroleum industry to climate change. Jim, who currently is an adjunct professor within the Department of Geology at Wayne State University, has spoken numerous times to HGS over the past three decades.

2020 HGS-PESGB Africa Conference



September 15-16, 2020

Norris Conference Centers | Houston, TX



Call for Abstracts Deadline:
April 1, 2020

HGS-PESGB Africa Conference 2020 Africa – New Ideas, Plays and Innovation

Exploration in Africa has undergone several exploration cycles throughout its history. In many places where giant discoveries have been made, production is in decline and investment has not sustained the growth of the industry. The theme for the 2020 Conference is focused on what can be and what has been done differently. What ideas should be tested? What has industry learned that should guide us toward new ways of thinking about exploration and development in Africa? What are the potential new areas with hydrocarbon potential? What technology(s) can help unlock additional reserves in existing basins and help find new reserves in unexplored areas? How government can attract and promote investment in new and existing areas.

Technical Session Themes

- 1) Africa – New ideas in an old area
 - a. Known plays to be tested in new areas
 - b. Mapping known plays across multiple basins
- 2) Applications of New Technology
 - a. Adding reserves in existing basins
 - b. Reducing cycle time and costs in exploration
 - c. Integration of multiple technologies to unlock future potential
- 3) Africa - New areas and ideas
 - a. Frontier exploration plays
 - b. New exploration plays in under explored areas
- 4) Africa – A new approach to increase investment
 - a. Government participation and cooperation
 - b. Corporate responsibility and ways to engage communities
 - c. Sustainable solutions to Africa's energy needs.

Submit abstracts - Africa2020@hgs.org

Wednesday, March 11, 2020

HGS Environmental & Engineering Dinner Meeting

New Location: Craft Republic Houston • 11470 Westheimer Rd.
Social Hour 5:30–6:30 p.m.
Dinner 6:30–7:30 p.m.

New Cost: \$35 Preregistered members; \$40 non-members/walk-ups

To guarantee a seat, pre-register on the HGS website & pre-pay by credit card.

Pre-registration without payment will not be accepted.

Walk-ups may pay at the door if extra seats are available.

If you are an Active or Associate Member who is unemployed and would like to attend this meeting, please call the HGS office for a discounted registration cost. We are also seeking members to volunteer at the registration desk for this and other events.

David Bardsley, PG

Ellingson-DTD

david@horizontaldrill.com

Horizontal Well Used for Coal Ash Basin Dewatering

Coal combustion residuals (CCRs), or coal ash, are a byproduct of burning coal. The ash has a variety of constituents including silicon, iron, and aluminum oxides along with trace amounts of heavy metals such as arsenic, selenium, mercury, boron, and chromium. Power plants are the main generator of CCRs and normally the ash is beneficially used or stored onsite in landfills or impoundments.

According to the Environmental Protection Agency, there are over 1,000 active coal ash sites in the United States. Many coal ash basins will require dewatering before remediation and/or closure activities can occur. This presentation details the design, construction, and results of a 650-foot long dewatering well installed in a 9-acre closed ash basin using horizontal directional drilling methods. The CCR materials at the site were characterized as fly ash (10 – 100 μm) and bottom ash (5 – 38 mm). Design challenges included well screen and casing selection and drilling/installation methodology. Well installation challenges included geometry of the landfill and unexpected site conditions encountered during well completion.

Once installed, the horizontal well performed better than anticipated. The level of water in the basin was drawn down by ~18 feet in less than four months and CCR-related constituents in the surrounding groundwater declined considerably. ■

Biographical Sketch

DAVID BARDSLEY P.G. has over thirty-five years of environmental drilling experience working in a variety of settings across the United States. Mr. Bardsley earned a Bachelor of Science degree in Geology and Geophysics along with a Communications Minor (1984) from the University of Missouri-Rolla. He started his career as a drill rig helper advancing through various technical and managerial positions in both small and large drilling companies. He was an early leader in the use of horizontal drilling to solve environmental and water supply challenges and has authored/co-authored over twenty papers on horizontal environmental drilling methodology. David has been directly involved in the design and oversight for the installation of hundreds of horizontal environmental and water supply wells.



He is a licensed well driller in Texas, Arizona and Louisiana and holds RG/PG certifications in Texas, Missouri, Louisiana and Tennessee. Mr. Bardsley is a strong proponent of education and has served as a short course instructor at Battelle environmental conferences and University of Wisconsin Madison along with presenting environmental drilling training to students at University of Arizona and University of Louisiana Lafayette.

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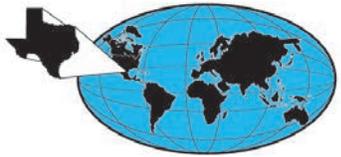
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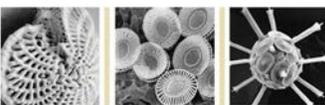
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Monday, March 23, 2020

Live Oak Room • Norris Conference Center • 816 Town and Country Blvd #210
Social Hour 5:30–6:30 p.m.
Dinner 6:30–7:30 p.m.

Cost: \$40 Preregistered members; \$45 non-members/walk-ups

To guarantee a seat, pre-register on the HGS website & pre-pay by credit card.

Pre-registration without payment will not be accepted.

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HGS North American Dinner Meeting

Andrew Pepper

This is Petroleum Systems LLC

Amalia Doebbert

This is Petroleum Systems LLC, Presently: Total

Jean-Marie Laigle and Laure Laigle

Belmont Technology Inc.

Greater Permian Basin Petroleum Systems – What are We Learning in the Transition from Conventional to Unconventional?

The early “conventional” exploration of the Permian Basin pre-dated many modern concepts in applied geoscience. Its subsequent development coincided with a growing understanding of the basic chemistry of oils, gases and of reservoir fluids in general (AAPG Volumes by Ley, 1935; Galley, 1965 and Beebe, 1968). Pioneering work on carbon isotopes of oils (Kvenvolden, 1967) and gases (Stahl, 1975) followed. However, during the 1980’s period when modern organic geochemistry expanded dramatically, accompanied by the advent of basin simulation the basin was already in a mature stage of production and saw relatively little application of these new ideas – integrated into what we now call Petroleum Systems Analysis. It seemed enough to know that the basin had many source rocks ranging in age from Ordovician to Middle Permian, leading to the assumption that every effective trap would be charged with petroleum one way or the other.

During the last decade, the industry’s return to the basin for exploration and development of unconventional reservoirs has been accompanied by an illumination of the Petroleum Systems, revealing how the basin fluid system actually works. A range of approaches have been applied: from regional burial and exhumation history and its impact on pressure and maturity/fluid distribution; to analysis at the pore scale of saturation patterns, relative permeability and of mudrock reservoirs. Recent geochemical studies include diamondoid compounds in high maturity samples where oil-to-gas cracking has destroyed many or all classical biomarker compounds.

Returning with this modern toolkit and with the aim of understanding the organic-rich mudrocks not just as source rocks but also as reservoirs, a number of traditional misapprehensions can be redressed:

1. The appreciation of a Cretaceous-Tertiary burial and exhumation history results in an appreciation of the high thermal stress levels attained in the past, before erosion and cooling, leading to a prediction from first principles of GOR and fluid phase properties such as viscosity in the organic-rich source rock reservoirs.
2. The more recent burial and shorter time for dissipation of overpressures explains the extremely high overpressures encountered in the mudstone-rich basinal facies – a key to the prolific production rates obtained from the basin center mudrock reservoirs.
3. When dips are relatively flat, lateral changes in heat flow induced by changing crust composition can generate local maturity “sweet spots” that do not simply follow burial depth.
4. Re-assessment of oil-oil and oil-source correlations shows that the platform carbonate conventional reservoir fluids are not low mature equivalents of the lighter oil in the basins, as traditionally thought, but often belong to a completely different petroleum system driven by a high sulfur (Organofacies A) organic matter apron on the edges of the Midland and Delaware Basins. Low sulfur, more clay-rich source rocks (Organofacies B and intermediate A/B) drive mainly the basinal unconventional petroleum systems.
5. Mudstone reservoirs vary in saturation, not as a function of height, but as a function of the layering of “reservoir” and “seal” lithologies inside the source beds. The source beds are not closed systems, and to differing degrees have charged conventional reservoir systems with early-expelled fluid while retaining latest-expelled fluids within the source bed itself.

HGS North American Dinner Meeting *continued on page 15*



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

April 4, University of Houston Student Center Theater
9am-noon

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

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

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



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6. New saturation and relative permeability approaches explain how mudstone reservoirs, notably the Wolfcamp, can at high water saturation produce significant petroleum and significant amounts of water.

The talk is based on a major compilation of public data sources and uses standard as well as AI-assisted basin modeling approaches to demonstrate basin burial and thermal history and the resulting fluid distribution. ■

Biographical Sketch

This year **ANDY PEPPER** will celebrate 39 years' experience as a geologist and petroleum systems analyst: at BP as leader of the Petroleum Systems Network; at Hess as Chief Geologist and then Director of New Ventures; and at BHP as VP Geoscience and VP Unconventional Exploration. He founded This is Petroleum Systems LLC in 2015 as a vehicle to collaborate and innovate in Petroleum Systems concepts, modeling and training.



Nomination for HGS Teacher of the Year Award is Open

The HGS Teacher of the Year has been established to honor individuals whose extraordinary efforts or unique contributions are in earth science education. The selected Teacher will be given a \$500 cash award along with a plaque presented at a HGS Event. The HGS Teacher of the Year will be encouraged to apply for the GCAGS and AAPG Teacher of the Year Programs which offer greater cash bonuses (\$1500 and \$5000 respectfully). If you know of a Teacher who might be interested have them contact the HGS Awards Chairman at mike.deming.HGS@gmail.com for requirements and procedures.

March 2020



Sunday

Monday

Tuesday

Wednesday

1	<p>2</p> <p>HGS General Dinner Meeting <i>"How a Carbon Tax Could Benefit U.S. NG Producers, But for How Long?,"</i> James (Jim) M. Rine, Page 7</p>	3	<p>4</p> <p>NeoGeos GeoTrivia Night Liberty Station, 7 p.m., Page 2</p>
8	9	<p>10</p> <p>HGS Board Meeting 6 p.m.</p>	<p>11</p> <p>HGS Environmental & Engineering Dinner Meeting <i>"Horizontal Well Used for Coal Ash Basin Dewatering,"</i> David Bardsley, PG, Page 11</p>
15	16	17	18
22	<p>23</p> <p>HGS North American Dinner Meeting <i>"Greater Permian Basin Petroleum Systems - What are We Learning in the Transition from Conventional to Unconventional?,"</i> Andrew Pepper Page 13</p>	24	<p>25</p> <p>HGS General Luncheon Meeting Tentative</p>
29	30	<p>31</p> <p>AAPG-HGS-GHS-SIPES Spring Hiring Event Trini Mendenhall Community Center 1414 Wirt Road, Houston Page 2</p>	

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GEOEVENTS

Thursday

Friday

Saturday



5	6 Don't wait, make your reservations online at hgs.org	7
12	13	14
19	20	21
26	27	28

Reservations:

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

Members Pre-registered Prices:

Dinner Meetings members.....	\$40
Emeritus/Honorary members.....	\$40
Student members	\$10
Nonmembers & walk-ups	\$45
Except - Env. & Eng.	\$30
Nonmembers & walk-ups	\$35
Emeritus/Honorary members.....	\$15

March 5, 2020
Norwegian Energy Day
Norris Conference Center,
Houston, Texas, USA

March 9 – 13, 2020
CERAWeek
Houston, Texas, USA

April 16 – 17, 2020
SPWLA 2020 Spring Topical
Conference on Unconventional
Petrophysics
Haliburton Main Campus
Houston, Texas, USA

April 17, 2020
HGS Shrimp Peel & Crawfish Boil
Houston, Texas, USA, Page 6

April 25, 2020
HGS Tennis Tournament
Houston, Texas, USA, Page 8

May 4 – 7, 2020
Offshore Technology Conference
Houston, Texas, USA

June 7 – 10, 2020
AAPG 2020 Annual Convention
& Exhibition
Houston, Texas, USA

June 8 – 11, 2020
EAGE Annual Conference &
Exhibition
Amsterdam, The Netherlands

September 15-16, 2020
2020 HGS-PESGB Africa
Conference
Houston, Texas, USA, Page 10

November 19-20, 2020
Second EAGE/HGS Conference on
Latin America
Cartagena, Colombia, Page 14

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Candidates for the 2020–2021 Executive Board

Houston Geological Society Officer Election

The candidates put forth by the Nominations Committee are:

- President - Elect:** Mike Erpenbeck, Joe Lynch
- Vice President:** Bryan Guzman, Fang Lin
- Secretary:** Dianna Phu, Ryan Yarrington
- Treasurer-elect:** Brent Boyd, William Gough
- Editor-elect:** Angela Hammond, Scott Sechrist
- Directors (2 positions):**
Bryan Flynn, Barbara Hill, Casey Langdon, Troy Meinen

HGS Election Voting Instructions

Members will be able to vote in one of two ways:

1. Return the paper ballot that will be delivered in the mail,
OR
2. Vote online following instructions that will be delivered by e-mail.

PLEASE VOTE – Upon receiving the paper ballot or the e-mailed instructions!

The voting period opens April 10, 2020 and continues to May 10, 2020.

President-elect (two candidates)



Mike Erpenbeck

Education

BS Geology, San Diego State University 1977
MS Geology, Texas Tech University 1979
MBA, Finance, University of Houston 1989

Professional Experience

- 2012-present Upstream Advisors Group – General Manager
- 1997-2012 Ziff Energy Group – Senior Analyst; Project Manager; Director, U.S. Studies
- 1990-1997 UMC Petroleum – Revenue/Gas Balancing Accountant; Production Accountant, Take- or-Pay Project Leader
- 1987-1990 Various Firms – Consulting Geologist
- 1983-1987 Hemus Oil & Gas – Manager of Geology
- 1981-1983 Pilgrim Exploration – Geologist
- 1979-1981 Texas Oil & Gas (TXO) – Geologist

Professional Activities

- AAPG Member since 1980, DPA, House of Delegates
- HGS Member since 1980, Board of Directors positions: Treasurer (2012-2013); Director (2015-2016). Chair positions: Office Management Committee (2009-2012); Science and Engineering Fair Committee (2016-present); member of committees: Engineering Council of Houston, Mudrocks
- GeoGulf/GCAGS Organizing Committee: General Chair (2019); Treasurer (2015, 2020)
- SIPES – Member 2019

Mike Erpenbeck continued on page 25



Joe Lynch

Education

University of Nottingham (UK). BSc Geology 1976
University of Warwick (UK). MBA 1994

Professional Experience

- 2017-Present Rock Flow Dynamics – Senior Advisor
- 2013-2017 Landmark – Director, Reservoir Management
- 2007-2013 SPT Group Inc – VP, Reservoir Optimization
- 2003-2007 Landmark – Product Manager
- 1996-2003 Roxar – Regional Manager, Americas
- 1984-1996 Development & Operations Geologist
- 1980-1984 Anadrill – Mud Logging

Professional Affiliations

- HGS
- AAPG
- SPE
- TBPG (#6262)

Professional Activities

- 2002-2006 HGS Vendor Corner Chair
- 2006-2013 HGS Finance Chair
- 2009 & 2010 HGS President’s Award
- 2013-2014 HGS Treasurer Elect
- 2014-2015 HGS Treasurer
- 2016-2017 HGS Foundation Trustee
- 2017-present HGS Foundation Treasurer
- 2019-present SPE GCS Reservoir Group Treasurer

Joe Lynch continued on page 25



Candidates for the 2020–2021 Executive Board *(continued)*

Vice President (two candidates)



Bryan Guzman

Education

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

Professional Experience

2008-2011 Geologist – Ingrain Inc.
2011-2013 Geoscientist – Ingrain Inc.
2014-2015 Product Champion – Drill Cutting Technologies – Ingrain Inc.
2015-2017 Senior Technical Sales Advisor – Ingrain a Halliburton Service.
2017-2018 Senior Technical Sales Advisor – Halliburton
2018-Present Senior Account Manager – TGS
2019-Present Veilvox LLC - Founder
2020-Present Senior Account Manager – Premier Oilfield Group

Professional Affiliations

HGS, AAPG, SPE, SPWLA, GCAGS

Professional Activities

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

Statement

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

When I served as HGS Secretary, it afforded me the opportunity to learn more about the many functions of the HGS. I was also exposed to the duties as the HGS Treasurer-Elect and Treasurer where I witnessed the society’s dedication to the various efforts through the annual budget. It has been a pleasure meeting many

Bryan Guzman *continued on page 25*



Fang Lin

Education

BS – Geology, Chengdu University of Technology, 1991 – 1995
MS – Ore Deposit Geology, Chengdu University of Technology, 1995 – 1998
PhD – Geosciences, Virginia Tech University, 2000 – 2005

Professional Experience

2005 – present Chevron Corporation, Integrated Exploration Research Team Lead
2000-2005 Virginia Tech University, Graduate Assistant
1998-2000 Chengdu University of Technology, Instructor

Professional Activities and Awards

2019-2020 Editor of the Houston Geological Society Bulletin
2018-2019 Editor-Elect of the Houston Geological Society Bulletin
2009-2014 Index Editor for HGS Bulletin
2011-2012 Houston Geological Society Editor’s Award
Active member of AAPG, HGS and HOGS.
Reviewer of *AAPG Bulletin, Marine and Petroleum Geology, Organic Geochemistry* etc.
Judge of AAPG Student Poster Sessions, AAPG ACE/ICE abstracts and presentations.

Statement

I am honored to run for Vice President of the Houston Geological Society (HGS). I am a mid-career geologist who have worked in the energy industry for fifteen years. My work has primarily focused on providing technical support for oil and gas exploration in both onshore and offshore, domestic and international plays.

My involvement in HGS began when I attended a professional training course organized by HGS 10+ years ago, since then I have become an active member of the HGS. Among the several roles that I have served in our community, my most recent experience as the Editor of the HGS *Bulletin* has particularly helped me to gain a comprehensive understanding of how the HGS operates and why we need people from diverse background to represent the wide mix of our membership body. I am confident, with the help of my colleagues including many of you, that I can align a series of excellent presentations for the geoscientists in the Greater Houston area in the year to come. I pledge that I will do my best on the Board to represent our members with an open and inclusive mind. ■



Candidates for the 2020–2021 Executive Board *(continued)*

Secretary (two candidates)



Dianna Phu

Education

University of Houston, BSc Geology and Geophysics, Cum Laude

Professional Experience

2011 – Present Senior Geologist, Intecsea
 2008-2011 Project Manager/Senior Geologist, Geoscience Earth & Marine Services, Inc. (GEMS)
 2006-2008 Geologist, GEMS
 2000-2006 Associate Geologist/Geological IT Specialist, GEMS
 1999-2000 Geoscience Assistant, GEMS
 1997-1999 Thermochronology Laboratory Assistant, University of Houston – Dr. Peter Copeland

Professional Affiliations

Certified Petroleum Geologist (CPG), AAPG Division of Professional Affairs, No. 6147
 Licensed Professional Geoscientist (PG), Texas: Geology, License No. 4237
 Gulf Coast Association of Geological Societies (GCAGS)
 2019 Convention Website Manager
 2014-Present Social Media Chair
 2015 Convention Secretary & Website Manager
 Active Member of Houston Geological Society (HGS)
 2017-Present Communications Co-Chair
 2010-Present Social Media Chair
 2006-Present Website Committee
 2006-Present Continuing Education Committee
 2007-2012 Geoscience Day Planning Committee
 2005-2007 NeoGeos Chair
 Offshore Technology Conference (OTC)
 2014-2017 Program Committee
 2017 Networking Committee Mentor
 2016 Networking Committee Chair
 2015 Networking Committee Vice-Chair
 OTC The Next Wave (TNW)
 2006-2014 Planning Committee
 2014 TNW Mentor
 2013 Chair
 2012 Chair-Elect
 2011 Social Media Sub-Committee Chair

Dianna Phu *continued on page 26*



Ryan Yarrington

Ryan recently worked for Cleargistix as a Sales Director until February 2020. He is currently looking for professional opportunities in Oil and Gas Software Sales. Prior to working at Cleargistix Ryan has also had experience in fields ranging from 2D and 3D Onshore and Offshore

Seismic Acquisition, Microseismic, Data Processing and HSE. He has spent the last four years volunteering for the HGS International Committee where he is currently the Treasurer. Ryan looks forward to working with the HGS and serving in many different roles in the future. ■



Treasurer-elect (two candidates)



Brent Boyd

Brent Boyd is currently a Director on the Houston Geological Society Board of Directors. He has spent the past two years seeing HGS from behind the scenes. He is now running for the position of HGS Treasurer-Elect to try and continue the good work begun this year by the current

Treasurer and Office Manager. An outside consultant was brought in by the Board to streamline and better manage the HGS finances through QuickBooks. Working with this consultant, Annie and Andi have made the job of Treasurer much easier. Brent will try and continue this good stewardship and make the job even easier for the next person.

Brent has spent his career in the oil exploration business. Starting with Arco Oil and Gas in 1985 after graduation from Texas A&M, he has since worked for Vastar Resources, Anadarko Petroleum, and is now at Occidental Petroleum. His current role at Oxy is Director of Geophysics for International Exploration. Brent has spent most of his career in international exploration as an individual contributor and manager. He also spent five years starting in 2012 as the in-country G&G Manager of the Anadarko producing assets in the Berkine Basin of Algeria.

Brent will bring to the role of Treasurer at HGS the same things he brings to all his team assignments – dedication, reliability, and servant leadership. He will work to see that HGS remains the best place in Houston for exchanging ideas and business cards with other people in the petroleum exploration industry. ■



William Gough

William Gough is a Geoscientist with 15 years of experience in the upstream oil & gas industry. He worked as a Senior Geologist for Unit Petroleum Company (2005 – 2016). In this role he worked the Gulf Coast basin and was instrumental in the discovery and development of multiple

fields. Gough is currently in contract business development roles with two different O&G service companies: Cordax, an innovative open-hole logging company and MadMackenzie Solutions an environmentally friendly EOR start-up company. These positions allow him to share his geologic knowledge, advising clients in best practices, and have given him the opportunity to expand his knowledge of basins in the US and globally. William's varied experience has given him a well-rounded knowledge of not only the science but also the business side of the industry.

William holds a degree in Geology from Texas A&M University 2004, and continues his education through industry forums, talks, conferences and short courses. He resides in the Houston Heights with his wife and baby daughter.

Statement

It would be an honor and privilege to serve the HGS as Treasurer-Elect in the 2020-2021 HGS Board. Over the past couple years, I have been very active in HGS, AAPG, and multiple other organizations in the Gulf Coast area. These organizations have been instrumental in keeping me in tune with this ever-evolving industry, increasing my geologic knowledge and providing unparalleled networking. If elected, it would be my pleasure to give back to the geoscience community. ■



Candidates for the 2020–2021 Executive Board *(continued)*

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



Bryan Flynn

Education

University of Houston, Houston, TX.
Masters of Science Degree 2008-2010,
Petroleum Geophysics
Texas A&M University, College Station,
TX. Baccalaureate Courses, 2003-2006,
Petroleum Geology & Geophysics

Millsaps College, Jackson, MS. Bachelor of Science Degree 1998-2002, Environmental Geology

Professional Experience

2019-2020 Greenhead Consulting Services
2018-2019 IkonScience
2016 Sharp Reflections – Geophysical Consultant
2015 Petrobras Americas
2010-2014 Nexen Petroleum USA/CNOOC
2006-2009 Petroleum Geo Services

Professional Affiliations

American Association of Petroleum Geologists
Society of Exploration Geophysicists
Society of Independent Professional Earth Scientists
Houston Geological Society – Continuing Education Committee
Geophysical Society of Houston

Statement

During my 14 years of experience, the HGS has always been there to support me in my career. While the technical meetings and short courses have been helpful in broadening my technical skills, the opportunity to build lasting relationships with other geoscientists has been invaluable.

As an HGS member, I have volunteered through the years in a wide range of events: working at the registration table for technical meetings, setting up workshops, giving presentations for youth education outreach, and volunteering at the golf tournaments. I was, at first, hesitant to serve on the Continuing Education Committee, but it has given me great personal satisfaction to provide opportunities for fellow geoscientists to learn new skills. For this work, I was honored and humbled to be recognized in 2019 with the HGS Rising Star Award.

Bryan Flynn continued on page 26



Barbara Hill

Education

Oklahoma State University, BS, Geology
California State University, Long Beach,
MS, Geology
Syracuse University, PhD, Geology

Professional Experience

2020-present Rock Domain Champion, Western Hemisphere, Schlumberger, Houston, TX
2014-2020 Technical Sales Engineer, Schlumberger Reservoir Laboratory, Houston, TX
2013-2014 Petrologist, Schlumberger Reservoir Laboratory, Houston, TX
2010-2012 Lecturer, Geology, Iowa State University, Ames, Iowa
2007-2010 Consultant, Zenith Minerals (uranium exploration and production), Oklahoma City, OK
2006-2007 Hydrogeologist/Project Manager, SWRNA, Syracuse, NY
1989-2012 College professor, Geology, Iowa State University (Ames, Iowa), Syracuse University (Syracuse, NY), Onondaga Community College (Syracuse, NY)
1986 Soil Scientist, Department of Defense, US Marine Corps, Camp Pendleton, CA
1982-1985 Senior Geologist, Exxon Production Company, USA, Oklahoma City, OK

Professional Affiliations

American Association of Petroleum Geologist (1989-present):
2018-2020: Technical Planning Committee, Session Co-chair;
2010-2019: Judge for oral and poster sessions
Unconventional Resources Technical Conference (2016-present):
Technical Committee, Session Co-chair
Houston Geological Society (2014-present): Technical Planning Committee and Session Co-chair for Applied Geoscience Conferences: Mudrocks, Subsurface Intelligence and Analytics, and Applied Geomechanics; President's award, 2017; Sponsorship award on behalf of Schlumberger, 2019
Houston Gem and Mineral Society (2014-present): Education chair (2015-2016) for annual gem and mineral show
Association of Women Geoscientists (1996-present): Lone Star Chapter scholarship committee (2015-2018)
Geological Society of America (1988-present)

Barbara Hill continued on page 26



Candidates for the 2020–2021 Executive Board *(continued)*

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



Casey Langdon

Casey Langdon is a Geoscience Analyst with Concho Resources for the Business Development/A&D team. He has been with Concho since March of 2019, primarily working on developing analytics tools for geoscientists, engineers, and business development analysts to evaluate

acquisitions, trades, and divestitures in the Permian Basin. Prior to working at Concho, Casey worked for IHS Markit on the Asset Valuation team (Vantage) and Latin America research team (EDIN/GEPS) as well as interning at Freeport-McMoRan O&G in their Bakersfield, CA office. Casey received his Master’s in Geology from Fort Hays State University in 2016 and his Bachelors in Geology from West Virginia University in 2014. He has shown leadership by serving as President of the FHSU AAPG and SEG student chapters, lead FHSU IBA team, Committee member of the SPE Data Analytics Study Group, Chairman of the HGS NeoGeos, Short Course Lead for the AAPG Student Expo, and serves on the AAPG Gulf Coast Section House of Delegates. He has also received several awards and honors for his research in seismic interpretation, student leadership, and volunteering.

Experience

- 2019 - Present Geoscience Analyst II, Concho Resources (Permian Basin)
- 2018 - 2019 Asset Valuation Analyst, IHS Markit (Permian Basin and Haynesville)
- 2016 - 2018 Field Researcher/Data Analyst, IHS Markit (South American Atlantic Margin)
- 2015 Geologist Intern, Freeport-McMoRan O&G (LA Basin)

Leadership & Volunteer Roles

- 2019-Present Delegate, AAPG Gulf Coast Section
- 2019 – Present Committee Member, SPE Data Analytics Study Group
- 2018 – Present Chairman, HGS NeoGeos
- 2017 - Present Committee/Short Course Lead (2020), AAPG Student Expo
- 2015-2016 President, AAPG and SEG Student Chapter

Casey Langdon continued on page 27



Troy W. Meinen

Education

- MS Geology, Baylor University, 1996
- BS Geology, Baylor University, 1993

Professional Affiliations and Registrations

- Registered Professional Geologist in the States of Texas and Tennessee
- Associate Safety Professional (ASP-25540)
- American Society of Safety Engineers
- Houston Geological Society

Statement

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

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

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

Troy W. Meinen continued on page 27



Candidates for the 2020–2021 Executive Board *(continued)*

Editor-elect (two candidates)



Angela Hammond

As a front-end development manager for Shell, Angela does more than manage. With more than 17 years of experience as a production geologist and development planner, she strives to inspire and develop others. She has worked closely with partners and co-owners, development managers and vice presidents on balancing risk and value tradeoffs, competitively scoping developments, integration, and strategy initiatives. She has enjoyed and had fun working on numerous Deepwater projects (and one unconventional EOR project) over the years from exploration through to first oil. She sees herself as a student of leadership, always working to better herself and others. Angela has been a member of HGS for 17 years, a Trustee on the Undergraduate Student Scholarship Committee for 6 years, is a current member of AAPG, SEG, and a past co-editor of the GCAGS. She has also been the treasurer and current leads her daughter's Girl Scout troop. ■



Scott Sechrist

Education

Houston Community College,
Houston, TX. – Post Baccalaureate
Courses 1985-86, for University of
Houston/MS Geology program.
S. F. Austin State Univ., Nacogdoches, TX.
– Bachelor of Arts Degree 1975- 1977

Electronic Communication R-T-F / Marketing
Southwest TX State Univ., San Marcos, TX. –Bachelor of Arts
Degree 1972-1974 Geography/Remote Sensing
Trinity University, San Antonio, TX. – Baccalaureate Courses,
1970-1972 Geology/Geography

Professional Affiliations:

American Association of Petroleum Geologists
DPA C.P. Geologist #6065
C.P. Geophysicist #90
House of Delegates Member, 2019-2021
Society of Exploration Geophysicists
SEG / OTC Oral & Poster Session Judge
Society of Independent Professional Earth Scientists
Continuing Education Committee, Houston
Houston Geological Society
Vice President 2019-2020
Board of Directors
Shrimp Peel Committee
Geophysical Society of Houston
Electronic Publications, Publicity Committees

Experience:

2015-present Acoustic Geoscience Consulting – Multiple
Clients in the Gulf Coast and Permian Basin
2014-2015 Grand Gulf Energy Geophysical Consultant
2012-2014 Subsurface Consultants / Noble Energy
Deepwater Geophysical Consultant
2006-2011 Subsurface Consultants / Knowledge Reservoir
Multiple Clients – Domestic and International
2002-2005 Calpine Natural Gas – Senior Geophysicist
2002-2002 JM Huber Geophysical Consultant
1997-2001 Panaco, Inc. Chief Geophysicist
1985-1996 Acoustic Exploration, Inc
1980-1984 Seiscom Delta United, Petty-Ray Geophysical
1978-1979 Bendix Field Engineering / DOE NURE Program

Scott Sechrist *continued on page 27*



Candidates for the 2020–2021 Executive Board *(continued)*

continued from page 18

Mike Erpenbeck—*Candidate for President-elect*

Awards

HGS: Rising Star (2011), President’s Award (2015)

Statement

I am honored to be invited to stand for election for President of HGS. In my later professional career, I have become passionate in the activities, governance and even the ultimate purpose of HGS. We need to enhance and sustain its standing in the oil and gas industry, among its peer associations, and even in the general public, within which there is a desperate need to be educated in workings of science in finding truth.

I regret not being involved much in HGS activities in the middle

part of my career. But I think it has put me in a good position to inspire and relate to the inheritors of our great organization and industry. Especially those who don’t yet understand how important their involvement is to the Society and how powerful the face to face interaction can be in their networking efforts. We are in a tough industry and HGS has and will continue to provide the opportunity to meet and benefit from the peer interactions necessary to thrive.

I believe my experience in HGS governance in the last 10 years, as well as my 40 years spent in learning the industry in its broad aspects – technical, planning, management, and commercial-financial experience – will be important and useful if you vote to elect me as President. ■

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Joe Lynch—*Candidate for President-elect*

Statement

I am honored and delighted to have been nominated as a candidate for President-Elect of the Houston Geological Society. I joined the HGS shortly after arriving in Houston in 1999 and I have valued my membership ever since. For most of this time I have participated in a HGS committee or on the HGS Board. This has given me a broad understanding of how the HGS organization functions, and of the importance of the part played by all volunteers and by the office staff.

My work experience has been almost entirely in the oil & gas industry. I have benefited from a variety of jobs and from working in diverse teams. Prior to my transfer to Houston, I worked various reservoirs in the North Sea and some interesting exploration and development prospects in Russia. Since arriving in Houston, I have

worked in commercial, R&D and technical roles.

Although I work in the oil & gas industry, my son works in the environmental industry. In order to thrive, our HGS organization must adapt to broader changes in society. This is guiding some of the ideas I would like to implement if I become President-Elect. My objectives are:

- To make the HGS more relevant to the younger generation
- To widen the footprint of the HGS outside our core area of the oil & gas industry
- To develop and further our educational mission
- To maximize the efficiency and effectiveness of the HGS

I will welcome your vote. ■

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Bryan Guzman—*Candidate for Vice President*

people along the way and I am thankful to the opportunities that the HGS has provided me while serving as a chairman, secretary and treasurer. It would be my great pleasure to serve in the capacity of HGS Vice President. ■



Candidates for the 2020–2021 Executive Board *(continued)*

continued continued from page 20

Dianna Phu—Candidate for Secretary

American Association of Petroleum Geologists (AAPG)
 AAPG Division of Professional Affairs (DPA)
 2015-2016 Gulf Coast Section Councilor
 2013-2015 Gulf Coast Section Councilor Alternate
 2013-2016 DPA Website/Social Media Chair
 SEG, AGU, GSH, SEPM, GSA, UHGAA, SUT, MIMarEST
 SUT-US Offshore Site Investigations & Geotechnics (OSIG)
 Committee, Associate Member

Awards & Recognition

2016 Gulf Coast Association of Geological Societies (GCAGS)
 Special Commendation Award
 2014 Houston Geological Society (HGS) Distinguished Service
 Award
 2011 HGS President's Award
 2007 HGS Rising Star Award
 2000-2001 BP-Amoco Academic Scholarship
 2000-2001 University of Houston Geoscience Alumni
 Association (UHGAA) Academic Scholarship
 2000 UHGAA Field Camp Scholarship
 1999-2000 Outstanding Junior Award
 1998-1999 Phillips Petroleum Scholarship
 1998-1999 UHGAA Dalton Null Memorial Scholarship
 1999 HGS Undergraduate Scholarship

Statement

The Houston Geological Society is an important cornerstone for the geo-professionals in the Houston area and a critical hub of knowledge-sharing for our global profession. I have enjoyed every opportunity to serve the society and participate in the broad range of learning, networking, and outreach events that are coordinated by this amazing group of volunteers. It would be my honor to serve the society as Secretary for the 2020-2021 season and I look forward to an engaging year of continued growth and development, for both myself and the HGS. ■

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Bryan Flynn—Candidate for Director

Apart from my work with HGS, I also volunteer with the Dachshund Rescue of Houston, the Houston Livestock and Rodeo Show Winery Relations Committee, and Between Job Ministry.

I would be honored to serve on the HGS Board of Directors and help continue the tradition providing outstanding speakers to benefit the HGS membership.

I thank you for your consideration and would appreciate your vote. ■

continued from page 22

Barbara Hill—Candidate for Director

Statement

I have had a varied career as a geologist and have enjoyed each aspect of this fascinating field of science. I have been a petroleum production geologist, a hydrogeologist, a uranium exploration geologist, a soil scientist, a sedimentary petrologist, a researcher, and a college professor of geology. I have also enjoyed branching into sales for technical services related to geology.

Given the twists and turns of my geological career, I am very honored to be nominated as a Director on the Executive Board of the Houston Geological Society. I moved to Houston in 2013 and became involved in the Houston Geological Society after attending the 2014 Mudrocks Conference. Since that first conference, I have been active in the subsequent Applied Geoscience Conferences for Mudrocks (unconventional reservoirs), Subsurface Intelligence, and Applied Geomechanics. HGS provided me with my first professional encounters in Houston outside of work and since that first dinner and conference, it has been a pleasure to have come to know and learn from so many distinguished individuals through the mutual association with HGS. ■



Candidates for the 2020–2021 Executive Board *(continued)*

continued from page 23

Casey Langdon—*Candidate for Director*

Statement

Throughout my early career as a geoscientist I have worn many different hats. Serving HGS and geoscience community has been a rewarding experience filled with thought-provoking conversations, technical challenges, and most of all, friendly faces. I attended my first HGS event back in 2016 when I was interning with IHS Markit. It was a geosteering course hosted by the NeoGeos at the Black Labrador Pub in Montrose where I and 30 other motivated young professionals sought to develop our skills to be competitive in O&G workforce during a downturn. After attending this event, I knew I found an organization I could be a part of and make a difference. Eventually in 2018 I was able to take over as Chairman of the NeoGeos as my first official role in the Houston Geological Society. Since then, the committee and I have hosted many events and added a new spin to networking with the addition of Geoscience Trivia Nights.

Now that I am about to enter my 3rd year as Chairman of the NeoGeos, running for a Board position is the next step in contributing to the Houston Geological Society. If elected to the board, I hope to make an impact by infusing a fresh take on the direction of the geoscience community as a young professional and provide new ideas to progress the organization through the early 2020s. ■

continued from page 23

Troy W. Meinen—*Candidate for Director*

support teams globally in improving health and safety performance primarily within global oil and gas companies.

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

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

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Scott Sechrist—*Candidate for Editor-elect*

Statement:

During more than 40 years of industry experience, the HGS has always been there to support me in my career. For Geoscientists of all ages and skill levels, I have observed the HGS to always be the Number One source for Networking; with the highest quality Technical Meetings and Continuing Education presentations in the industry.

As an HGS member, I have volunteered through the years in a wide range of events: working at the registration table for Luncheon and Dinner meetings, stuffed convention bags, participated in Science Fair judging, volunteered at Shrimp Peels and Golf Tournaments, learned how to shoot Skeet and helped to promote the HGS Fishing Tournament, provided liaison with other local geoscience societies, was honored to serve on the HGS Board of Directors and serve as Vice President this year.

As an Emeritus member of HGS, I am convinced that it is my duty to contribute further to the ongoing success of the Houston Geological Society. In humble recognition of all the benefits HGS membership has provided to me, I would be honored to serve my fellow Houston Geological Society members as Editor-Elect. My first priority will always be to continue the HGS tradition of providing outstanding technical and editorial content, to benefit the entire HGS membership. I thank you for your consideration and would appreciate your vote. ■



Houston Geological Society Presents
SCHOLARSHIP Night 2020

Monday February 10, 2020

Opening Remarks: *Jon Blickwede, HGS President 2019-2020*

Introductions of HGS Board Candidates for 2020-2021: *Jon Blickwede, HGS President 2019-2020*

Thank you to our Sponsors: Another record year!

Scholarship Night Chairman: *Charles Sternbach, AAPG President 2017-2018 and HGS Scholarship Night Chairman*

HGS Foundation Fund Committee: *Evelyn Medvin, Chairwoman; Shannon Lemke, Paul Hoffman, Sameer Baral, Angela Hammond, Scott Krueger, Joe Lynch, Jacob Umbriaco, Kristin Burns, Jim Tucker, President-Elect*

HGS Foundation Scholarship Recipients

Jonathan Adams, Sam Houston State

**Alexi Allen, Texas A&M*

Page Given, University of Houston - Maby Scholarship

Rosalind Moreman, University of Texas Austin

Jared Nirenberg, Rice University

Olivia Rigsby, Lamar University

Chance Robinson, Stephen F. Austin

Calvert Memorial Scholarship Committee: *Jeff Lund, Chairman; Richard Bishop, Judy Schulenberg, Nicole Villarreal, Jim Tucker, President-Elect*

Calvert Memorial Scholarship Recipients

Matthew Sexton, University of Houston

Allison Barbato, LSU

**Edgar Contraras, University of Houston*

Connor Matherne, LSU

Eric Peavey, Texas A&M

**Ryan Rosol, University of Oklahoma*

Alex Washburn, Texas Tech

Melanie Adelman, University of Houston

Brianna Crenshaw, University of Montana

Scott Gifford, Texas A&M

Taylor Newton, Texas Tech

Ben Richards, Texas A&M

Andrew Stearns, University of Houston

Alexandra Warren, University of Mississippi

J.H. "Jake" Alexander III, University of Tennessee, Knoxville

Introduction of Speaker: *Jeff Lund, Calvert memorial Scholarship Committee Chairman*

Jessica Watkins, Astronaut

Closing Remarks: *Charles Sternbach, AAPG President 2017-2018 and HGS Scholarship Night Chairman*

*Not in attendance

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Bronze \$1,000

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SAExploration

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Jeff & Marti Lund

Staurolite Consulting, LLC

Subsurface Consultants & Associates





HGS Undergraduate Scholarship Foundation Presents Seven Scholarships



Page Given
Maby Scholarship Recipient
University of Houston

the coast of New Zealand. In her free time, she enjoys drawing and playing board games. Following her graduation in May, she intends to pursue a master's degree in Geotechnical Engineering.



Jonathan Adams
Sam Houston State University

Jonathan Adams is a senior Geology Student from Katy, Texas. Growing up, Jonathan had a fascination for rocks. At 8-years-old, he smuggled 40 lbs. of chert on his suitcase from a summer visit in New Mexico with hopes to smash them open and reveal dinosaur fossils. No fossils, he learned of overweight baggage fees. Since then, Jonathan's interests in rocks has grown more sophisticated, but the urge to smash chert with a hammer is still strong. Once he completes his undergraduate degree, Jonathan plans on attending graduate school with potential focus in clay mineral diagenesis or isotope geochemistry and its applications in mantle interactions and igneous petrology. He aspires to complete a doctorate degree and to teach and research at a collegiate level.



Rosalind Moreman
The University of Texas at Austin

Rosalind Moreman is a junior at the University of Texas at Austin where she studies general geosciences. She is the Student Government Representative for the Jackson School of Geosciences and also serves as the Outreach Coordinator for the Geosciences Leadership Organization for Women. In this position she organizes events that connect kids, especially girls, with women in the sciences to encourage a love for the sciences that will stay with them throughout life. She works with GeoFORCE, a UT outreach program that aims to increase number and diversity of students pursuing STEM degrees. She hopes to participate in the National Parks Service internship Geoscientists-in-the-Parks after graduation and continue on to foster a love for the sciences in the future generation.



Alexi Allen
Texas A&M University

Alexi Allen is a senior at Texas A&M University and is pursuing a degree in Geophysics. She is the President of the Geology & Geophysics Society as well as a member of the Sigma Gamma Epsilon Honors Society. This past summer, she interned at the Texas Commission on Environmental Quality where she accompanied investigators on complaints and permit reviews. Right now, she is working on an undergraduate thesis with Dr. Hiroko Kitajima on how sediment heterogeneity affects slip mechanics in the Hikurangi Subduction Zone off



Jared Nirenberg
Rice University

Jared Nirenberg is a senior at Rice University, where he is completing a dual-degree in Earth Sciences, with a concentration in geochemistry, and in Chemistry. He has served as the Vice President of the Rice Undergraduate Geosciences Society, and he is currently working on an honors thesis with Dr. Jeanine Ash and Dr. Carrie Masiello researching the Plio-Pleistocene paleoclimate of the Ross Sea through analyzing the organic matter in deep-sea sediment cores. He has previously conducted summer research projects at George Mason University and at the University of Münster. In his free time, he enjoys swimming, ballroom dancing and travelling. After graduating in May, Jared looks forward to pursuing a PhD in Geoscience studying organic geochemistry, paleoclimate, and integrating these fields with numerical modeling.



Olivia Rigsby
Lamar University

Olivia Rigsby is a senior at Lamar University pursuing a B.S. in Geology with a minor in Biology. As president of the Lamar University Geological Society, she helps organize community events to drive public interest in learning about the wonders of geology. Olivia is active in the geology department and can often be found helping younger students study or in class as a TA. In her free time, Olivia likes to kayak and hike around the Big Thicket. She will graduate in the winter of 2020 and is looking forward to graduate school.



Chance Robinson
Stephen F. Austin State University

Chance Robinson is a Senior at Stephen F. Austin State University and is pursuing a degree in Environmental Geology and Environmental Science. He was treasurer and then president of the Geologic Association of Students and a current member of University's geologic honor society Sigma Gamma Epsilon. Chance is working on research over the contents of the salts in the Appalachian Basin under Dr. Bloxson. Chance graduates in the Fall of 2020 and plans a career in petroleum geology and in time, space resources after graduate schools.

Calvert Memorial Scholarship Presents Fifteen Scholarships



Jake Alexander
University of Tennessee

Jake (J.H.) Alexander earned his BS in Geology summa cum laude at Texas A&M University – Corpus Christi in December 2017. His undergraduate research focused on geochemical analysis of sediment from southern Corpus Christi Bay to better understand episodic water column hypoxia. He began his studies at the University of Tennessee in August 2018 and interned at ExxonMobil Upstream in the summer of 2019 where he worked on the Central Basin Platform of the Permian Basin. In September 2019, he completed his graduate field work in the Transvaal Basin (South Africa) where he measured and studied sections of the Campbellrand carbonate platform to evaluate cyclicity from proximal to distal facies. After completing his Master's thesis this summer, Jake plans to return to Texas and pursue a career in geoscience.



Allison Barbato
Louisiana State University

Allison Barbato was born in Lafayette, Louisiana, but was raised overseas in Indonesia, Brazil, the Netherlands and Egypt. Upon graduating high-school in Egypt, Allison returned to Louisiana to pursue a degree in geology

at Louisiana State University. Between 2013 and 2018, Allison worked in three research laboratories studying: Martian surface geochemistry, internal architecture and reservoir potential of large-scale point bars, and metamorphic reactions in sillimanite using cathodoluminescent and EMPA microscopy. As an undergraduate, Allison was published in 10 abstract publications, co-authored in one peer-reviewed paper, and gave oral and poster presentations at multiple international conferences around the country. Additionally, she graduated with a Distinguished Communicator certification and was nominated for outstanding senior in geology in 2018. Currently, Allison is a first-year PhD student at LSU working under Dr. Sophie Warny on a project led by Dr. John Armentrout. Her project will integrate biostratigraphy, geochemistry, organic petrography and thermal maturity to reconstruct the environment of an Eocene-aged deltaic system and characterize the hydrocarbons associated with such an environment. She will be giving a talk on her research at the AAPG ACE conference in Houston in June 2020 while completing her summer internship at Hess in downtown Houston. Aside from school, Allison frequently volunteers at STEM outreach events for K-12 students in the greater Baton Rouge area and co-mentors underprivileged high-school students in a year-long research project through the LSU "Environ-Mentors" program.

Calvert Memorial Scholarship *continued on page 34*

Calvert Memorial Scholarships continued from page 33



Brianna Crenshaw
University of Montana

I completed my undergrad degree in geology at LSU in 2018. While there I worked in a coastal sedimentology lab for three years and was involved in several projects located in the Gulf of Mexico. The projects ranged from the discovery of an ancient bald cypress forest off the coast of Orange Beach, Alabama to examining the impact of the Deepwater Horizon spill on sediment dynamics surrounding sunken WWII ships. My undergraduate thesis focused on using radio isotopes to look at sedimentation rates within Barataria Basin (coastal LA), where sea level rise and coastal erosion are critical concerns. We were particularly interested in the sediment deposited from hurricanes and its role in the long-term sustainability of back marsh, deltaic environments like Barataria. After graduating, I moved north and began my master's at the University of Montana in Missoula. My field area here is a series of mountain ranges along the margins of the Archean-aged Wyoming Province in southwest Montana. The focus of my research is a unique type of metamorphic lithology that we hypothesize represents ~2 Ga oceanic crust that has potentially preserved a mineralogic record of the fundamental tectonics that led to assembly of continental crust for this part of Laurentia.



Scott Gifford
Texas A&M University

Scott is a hard-working, dedicated student pursuing a career in the geosciences. He is a second-year master's student studying geology at Texas A&M University. His research is focused on reconciling the ages and stratigraphic position of the Eagle Ford and Woodbine groups in the East Texas Basin by integrating sequence-stratigraphic, and chemical/isotope data. Scott enjoys spending his free time rock climbing, photographing, and cooking with his wife and three-month-old son.



Connor Matherne
Louisiana State University

I am a recent MSc graduate in Geology from Louisiana State University. During my undergraduate, I worked on the sedimentology of False River, an oxbow lake in Louisiana, observing grain size variation throughout the structure and

the implications this may have for oil and gas production. When continuing my education in graduate school, my research took a very challenging turn – studying the ancient Martian climate using remote sensing techniques near the landing site of the next Martian rover from NASA. This work was published in early 2020 within the journal *Icarus*. With the desire for an actual field site however, I helped lead a project investigating a possible impact crater located in Louisiana with a team of international scientists. Outside of academia, you can find me taking pictures of nebulae and galaxies to create images that have been published within countless books, magazines, websites, and more recently, the Louisiana Art and Science Museum. In addition to these publications, I was shortlisted as the *Insight Astronomy Photographer* of the Year for 2018 and 2019. My work within and outside of academia has focused on data visualization techniques while also doing what I can to get the public engaged in science through volunteer efforts around the city combined with many public lectures on both planetary science and my photography. Now that I have graduated, my plans are to pursue a career in oil and gas exploration to utilize my skills in data visualization and remote sensing.



Taylor Newton
Texas Tech University

I am a second year MSc student studying Geology at Texas Tech University. My passion is in striving to understand how the natural world works, which has inspired me to pursue field geology experiences across much of the western U.S. and Texas. Currently, my research focuses on unraveling fascinating and unique crystallographic relationships and textures in early Cambrian intrusive rocks in south-central Colorado. As an undergraduate, I completed a project which included the geologic mapping and structural analysis of spectacularly exposed polydeformational rocks associated with the Great Basin in the northern Sand Springs Range and southern Stillwater Range, NV. One of my biggest honors has been my experience with the TTU 2019 AAPG Imperial Barrel Award team. My job was to risk magmatic history and to utilize Petrel and 132 2D lines to correlate multiple surfaces and to model the complex structural regime of the Bight Basin, located offshore southern Australia. We placed third amidst some of the toughest competition in the world in the Southwest Section. I have been fortunate to engage in a wide variety of geologic training both in hard- and soft-rock which has served to deepen my love and passion for this science. Upon graduation, I hope to apply skills honed in academic research, industry training, and experience as a former Division 1 athlete and Navy Midshipman. In my free time, I am a dog trainer, avid hunter and fly fisherman, and outdoorsman.



Eric Peavey

Texas A&M University

Eric Peavey is a PhD Geology student at Texas A&M University who specializes in unconventional resources and applied geosciences. He holds a BS Earth Science from Southern Connecticut State University and MS Geology from Texas A&M University. Eric previously worked at WDVG Laboratories, LLC in Houston, TX, where he spearheaded efforts in the development and use of chemostratigraphic techniques for more effective, efficient and cheaper resource play analysis. Eric held his role as Geologist at WDVG for over a year before returning to Texas A&M to pursue his Ph.D in February 2019.

For Citation he correlated wells, identified major faults and created fault plane maps for numerous sand units and was able to predict the potential for enhanced recovery of petroleum from these formations. He also created net pay maps by applying observed oil/water contacts. At Pioneer Natural Resources, Ryan conducted a geomechanical fracture study in the Midland Basin and integrated the results into a petromechanical facies model for fracture prediction from electrofacies and provided an actionable proposal for improved drilling practices. Ryan works full time for the Oklahoma Geological Survey where he manages and maintains Devon Energy assets, analyzes cores for accuracy against the drilling record, prepares cutting, cores, and samples for clients and works with survey geologist to orient and plug cores. These experiences have helped to hone a strong skillset revolving around the geology, petrophysics, and seismic stratigraphy of conventional and unconventional resources.

Ben Richards

Texas A&M University



Ben Richards is a third year PhD candidate at Texas A&M University working on the stratigraphy of the Wolfcamp Group in outcrop, core and well logs. He looks forward to publishing his results (hopefully soon!).



Matthew Sexton

University of Houston

Matthew Sexton is working on completing a Master's in Geophysics at University of Houston. My research is in marine exploration and submarine volcanism. My thesis involves using seismic, magnetic, and bathymetry

Ryan Rosol

University of Oklahoma



Ryan took a different path to geology. He began his education at the US Naval Academy in Annapolis where he played varsity football and later graduated with a degree in finance from the University of Toledo. He discovered geology while working as a bank examiner for the

data to characterize the Cretaceous intraplate volcanism in the oldest part of the Pacific plate. I have also been involved in marine surveys to study the effects of Hurricane Harvey on Galveston Bay sediments, and in the last year was a part of 2 NSF cruises to the South Atlantic to study the large igneous provinces of Rio Grande Rise and Walvis Ridge. In addition to research I have been working in industry doing seismic attribute analysis for reservoir characterization.

United States Federal Reserve and as an accountant for Chesapeake Energy in Oklahoma City, and decided to pursue a degree in geology at the University of Oklahoma. He is working towards his M.S. in Geology and has gained practical experience working for Citation Oil & Gas, Pioneer Natural Resources and for the Oklahoma Geological Survey. Ryan will intern at ConocoPhillips in the Subsurface Technology group this summer and graduate in December 2020. His thesis research focuses on the sedimentology of shale units in Oklahoma. He participates in Pick & Hammer as well as AAPG where he served as treasurer for several years. Ryan has consistently been on the Dean's and President's honor rolls throughout his academic career at The University of Oklahoma.



Andrew Stearns

University of Houston

Andrew Stearns earned his BS in geology from the University of Texas at Austin in 2018. He is currently a second-year MS geology student at the University of Houston under Dr. Julia Wellner. His research focuses

on quantifying sediment transport in the Houston-Galveston region during Hurricane Harvey in August 2017. During his time at UH he has been part of the 2019 UH IBA world championship team, the AAPG executive council, and is the committee chair for 33rd annual EAS student research conference. He will intern at Shell Houston this coming summer, looking to graduate in December 2020.

Calvert Memorial Scholarship *continued on page 36*



Alexandra Warren
University of Mississippi

Alexandra Warren is a Master's student in Geology at the University of Mississippi, graduating in May 2020. She received a Bachelor of Science in Geological Engineering from the University of Mississippi in 2018.

Since 2018, Alex has been a Research Assistant for the Mississippi Mineral Resources Institute, responsible for evaluating rare earth elements in coal and oil field prospects in Mississippi. Her thesis research involves investigating the origin and stratigraphic position of the Frisco City sand in the Conecuh embayment in southwest Alabama. With limited published research on the Frisco City sand in the Conecuh embayment, geologists have debated if it is a member of the Jurassic Haynesville or Smackover Formation. Her research utilizes core descriptions and thin section petrography to determine the stratigraphic position and depositional environment of this sand. This past summer, Alex interned with Schlumberger/

WesternGeco as an Interpretation Geophysicist in Houston, working on a project in the Perdido fold belt located in the Gulf of Mexico. Alex is excited to graduate in May and looks forward to starting a career in the oil and gas industry.



Alex Washburn
Texas Tech University

Alex is a geoscience doctoral student at Texas Tech University researching problems related to diagenesis in shale reservoirs. Alex has interned at the Department of Energy and at Chevron and is planning on continuing on to pursue a career in the energy industry. Alex is married and has a nine-year-old daughter. Alex's favorite thing to do is to go on adventures with his family, whether it be mountain biking, obstacle course races, camping, hiking, eating at weird restaurants, or exploring museums.



HGS Welcomes New Members

New Members Effective February 2020

ACTIVE MEMBERS

- Sandra Arevalo
- Kelli Dover
- Lauren Guidry
- Steve Ladner
- Alex MacNeil
- Daniel Russell

STUDENT MEMBERS

- Maria Pinzon
- Zachary Williams
- Chance Robinson

ASSOCIATE MEMBER

- Janet Verret

Welcome New Members



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GIVING BACK

Annual Volunteer Day at YMCA Camp Cullen

Geological Society Members and friends are needed for our Annual Volunteer day at YMCA Camp Cullen!

February 15, 2020

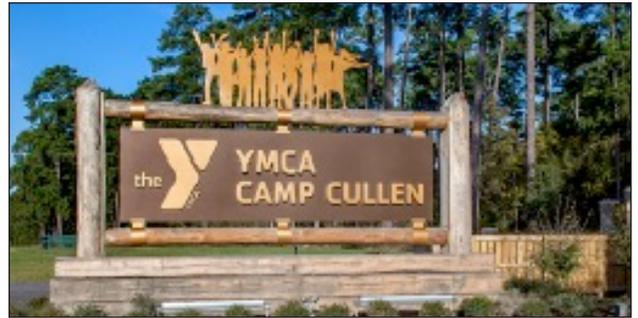
Do you have a burning desire to give back?

The HGS is teaming up with the YMCA to have a Volunteer Day on Saturday February 15th, 2020. The volunteer work we do that day will be at Camp Cullen, a YMCA summer camp located near Trinity, Texas.

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

The work planned for our group this year is to work with other volunteers in the gold panning area to build a Saloon Façade, a Jail Façade, a Mine Shaft Entrance, and a Water Tower to complete the Old West look and feel of the area.

So, if you would like to do a good deed, spend a nice day in the Piney Woods, and perhaps help get kids interested in geoscience, please consider donating part of a Saturday to this effort. You don't need any special skills, just a willingness to help. Depending on where you are located in the Houston area, it takes about 1 to 1 ½ hours to get to the camp. We plan to start work at ~9am and will conclude by mid-to-late afternoon. Lunch, snacks and refreshments will be provided.



The YMCA has also agreed to provide a bus to transport our volunteers if we get a good crowd. If you want to help, please contact HGS member John Adamick at jadamick@stauroliteconsulting.com at your earliest convenience.

HGS Volunteer Day

By John Adamick

On Saturday February 15th, HGS volunteers convened at the YMCA Camp Cullen to continue geo-projects for the youth camp development. Past efforts have focused on the geological quarry exhibit, this time the group focused on construction of the “mining camp” youth activity area. Work focused on Prospectors’ Ridge where kids pan for pyrite “gold” in an Old West setting. During this volunteer day, HGS members built a “Boot Hill” Cemetery, a water well, and horseshoe pits. In the future, we plan to build an Assay Office, a jailhouse “Escape Room”, a mine shaft and a saloon.

The volunteers got a lot of satisfaction for helping out. The YMCA staff fed them and took them on a tour of the quarry geology exhibit site, constructed earlier with HGS help, and the onsite TGS geology lab. Camp Cullen works hard to help local kids learn about the outdoors and geology is part of the curriculum. Many of the campers are from underprivileged families and Camp Cullen provides an eye-opening experience for all. If you’d like to learn more about the Camp Cullen program and perhaps volunteer in the future, please contact me at jadamick@stauroliteconsulting.com. ■





HGS Bulletin Instructions to Authors

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

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

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

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

HGS Bulletin Advertising

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

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

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

Website Advertising Opportunities

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

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



Application to Become a Member of the Houston Geological Society

Qualifications for Active Membership

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

Qualifications for Associate Membership (including students)

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

Apply online at www.hgs.org and click on Join HGS
Annual Dues Expire Each June 30. (Late renewals - \$5 re-instatement fee)
Annual dues are \$30.00; emeritus members pay \$15.00; students are free.

Mail this application and payment to:

Houston Geological Society

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

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

Payment method:

Check, VISA, MasterCard, American Express, Discover

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

Name: _____

Address: _____

Home Phone: _____ Spouse's Name: _____

Email: _____

Job Title: _____

Company: _____

Company Address: _____

Work Phone: _____ Fax Number: _____

Circle Preferred Mailing Address: Home Office

Professional Affiliations: _____

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Professional Interest:

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

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Applicant's Signature _____ Date _____

Endorsement by HGS member (not required if active AAPG member)

Name: _____

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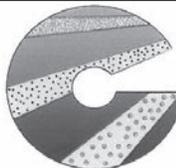


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