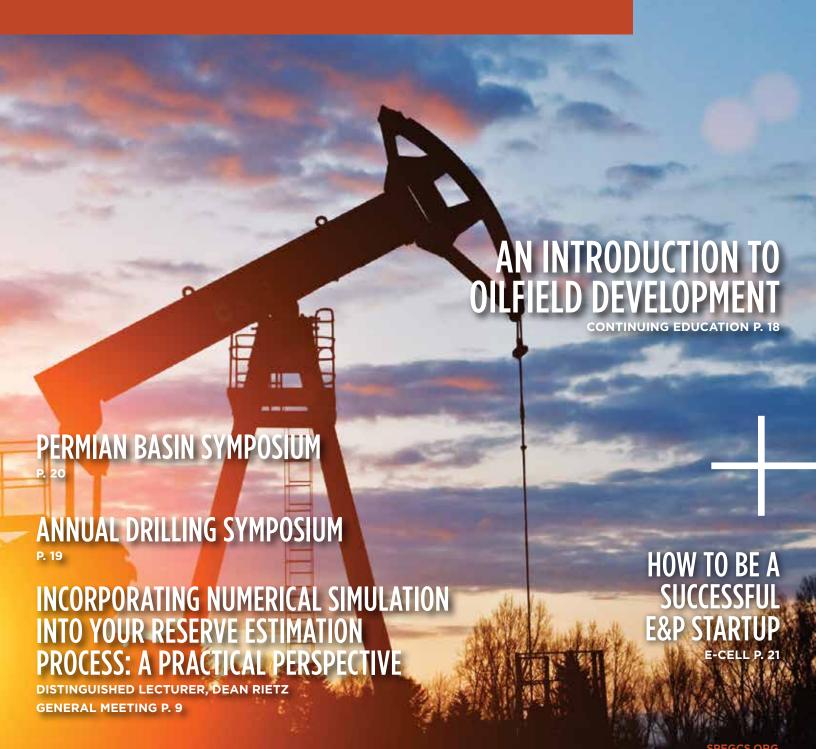




CONNECT

SPE GULF COAST SECTION NEWSLETTER





CHAIR'S CORNER DEEPAK M. GALA, SHELL 2016-2017 SPE-GCS Chair

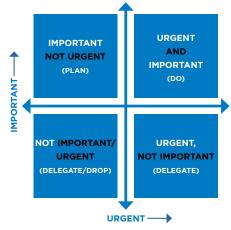


TIME MANAGEMENT

We all aim to be more productive and eliminate time-consuming activities that don't add value at work. I am often asked how I manage a full-time workload, my SPE chair role, and a busy family life. My quick answer is I love what I do and don't mind putting in long hours every week. One method that really helps me manage my time is based on the "Eisenhower Box." Dwight D. Eisenhower served as US President from 1953 to 1961. He once said: "The most urgent decisions are rarely the most important ones." During President Eisenhower's era, there were no emails, smartphones, and other devices demanding urgent attention and trying to take over people's lives. However, he needed an efficient time management strategy so he could focus on important as well as urgent issues. A master of time management, he had the ability to do everything when it needed to be done.

Below is the matrix developed based on Eisenhower's strategy. The first step in following this approach is to distinguish between what is important and what is urgent. Urgent matters can seem important or vice versa, and we get overwhelmed by trying to attack all kinds of work at once, which can affect overall productivity. Sometimes it's not obvious what's important and maybe some direction from your supervisor or manager can be helpful. Some issues — like safety emergencies — are urgent and important, so they can't be put off. Tasks that are important but don't need immediate attention — like preparing a budget or proposal — merit serious planning and thought, so you can decide on when to tackle them. Minor crises that are urgent but not important — like making last-minute travel reservations — can be delegated

to others where possible, so you can spend your time on things that have more impact on the organization. Work that's neither urgent nor important can be delayed to a point in time when you're not so busy. I have found this tool to be very effective in prioritizing or categorizing tasks. You'll find that most aspects of your work and personal life can be placed in one of Eisenhower's box. The great thing about this strategy is that it can be used for daily tasks as well as long-range/weekly tasks hence can be easily scaled up.



SPE-GCS Update

As part of the SPE Gulf Coast Section action plan for 2016-2017, the Board has completed a review and update of the **Gulf Coast Section Bylaws**. The current bylaws were originally published September 13, 2001, and have been updated twice – most recently on October 13, 2011.

During the review, input was solicited from three prior section chairs as well as the current chair and vice chair. In addition, SPE International was consulted and the recommended boilerplate language was considered and integrated where appropriate. Draft versions of the revised bylaws were debated during the 2016-2017 December and February Board meetings.

At the February 16 Board meeting, the Board voted to approve presentation of the revised bylaws to the SPE Gulf Coast Section members and to put them to a vote by the general membership at the April 20 Gulf Coast Section Board meeting. The bylaws are listed on spegcs.org website under **Committees, Board of Directors**.

I would like to recognize Trey Shaffer (Vice Chair) for leading this important initiative. Please direct any questions to the Section Chair or Vice Chair.

It's no secret our society has fully embraced the digital era and the everchanging technology that defines it. SPE-GCS is committed to remaining current & relevant in this age and with that comes change. As you flip through the current issue of Connect, you will notice changes in our layout, design, page count & paper quality; all of which are more cost-effective and set us up for a digital newsletter in the future. As we continue to evolve, you will see more event details published on our website. Online accessibility gives us the ability to make changes to information in real time and streamlines processes such as registration and fundraising. We hope you enjoy the new streamlined look and welcome your feedback.

Stay engaged, stay safe,

Deepak M. Gala

April 2017

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(unless specified separately)

MEMBERS

\$40/\$55 Walk-In

NON-MEMBERS

\$55

STUDENTS/MIT/RETIRED SPE

\$15

BOARD OF DIRECTORS MEETING

THURSDAY, APRIL 20 | 7:30 TO 10:30 AM HOUSTON SPE OFFICE



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8AM-5PM, MAY 4TH, 2017

AT THE

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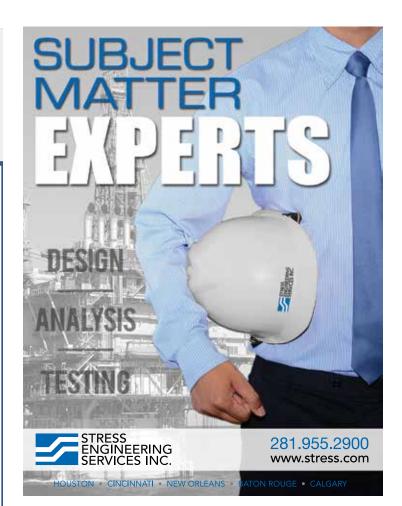


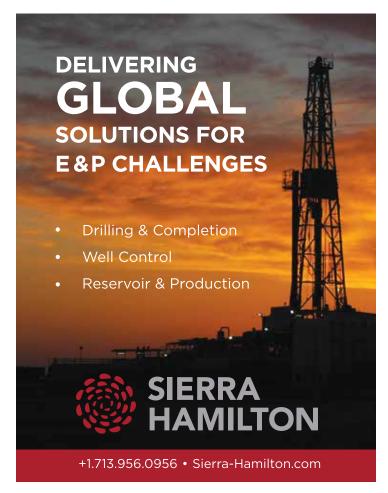


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This month the SPE Gulf Coast Section is excited to feature George E. King and Rich Haut as Volunteers of the Month.



GEORGE E. KING

G

eorge joined SPE in Tulsa while working for Amoco in the 1970s. The group he worked with at the time got him involved in the organization. We're glad they did! Since then, George has contributed in so many ways. He has served on dozens of organizing

committees for SPE Applied Technical Workshops, SPE Forums, Technical Meetings, and work groups.

George is a registered Professional Engineer with over 45 years of oilfield experience. His technical background includes basic research on energized fracturing, production and fracturing chemicals, acidizing, asphaltenes, perforating cleanup, well integrity and completions, complex formations, sand control, and low-pressure gas well operations, and applications work on coiled tubing, cutoff, formation damage, and well-repair operations.

His technical accomplishments include 75 papers as well as a book on completions and workovers. He received the Amoco Vice President's Award for technology in 1997, the API service award in 1994, the SPE Production Operations Award in 2004, and the Engineer of the Year award from the Society of Professional Engineers, Houston Region, in 2012.

George is an engineering advisor for Apache Corporation working on issues including stimulation, repair and production. He holds degrees in chemistry, chemical engineering, and petroleum engineering.

George comes from a family of teachers. He believes teaching is the fastest way to learn a subject. It can also be a humbling experience, but that is part of the learning opportunity. Volunteering with SPE gives him a wide field of contacts through teaching and attending technical events, and he enjoys passing along learnings and then seeing where and how well they work.



RICH HAUT

ich got involved with SPE early in his career when he joined the Editorial Committee. Soon after, he volunteered for several technical committees for the fall technical program (ATCE), including chairing the well completions and the HSE committees. When the

SPE Research Forums began in the early 1980s, Rich volunteered for the cementing forum's steering committee. He has also helped out on the Enhanced Oil Recovery, Deepwater, and Quest to Reduce the Environmental Footprint Forums.

Rich is the Director of Energy Production at the Houston Advanced Research Center. He leads the Environmentally Friendly Drilling program that he helped to found in 2005 in partnership with various universities, industry, and environmental organizations. The program provides unbiased science concerning environmental and societal aspects of petroleum and natural gas drilling and production operations. Rich has a master's degree from the University of Tennessee and a PhD from Old Dominion University in engineering.

Rich's volunteer activities go beyond SPE. He has been chairman of three API committees (cement rheology, cement bond logs, and casing centralizers). For over 10 years, he has been a board member of the Research Partnership to Secure Energy for America. In 2012, he helped to start the Consumer Energy Education Foundation, where he serves as chairman.

In 2002, Rich was instrumental in founding the Houston chapter of the US Green Building Council (USGBC). He is a member of the Interstate Oil and Gas Compact Commission's Public Outreach Committee and is active in volunteer roles throughout his community. "Volunteering feeds my soul," says Rich. "It offers a channel for passion, working with other members of a living organism dedicated to having a positive impact. SPE involvement provides a means to stay current on technology and to interact with others that want to do the right thing."

THANK YOU BOTH FOR ALL THAT YOU DO FOR SPE!

COLUMN BY BUDDY WOODROOF

APRIL 1947

A series of explosions at chemical plants and refineries devastates the waterfront and portions of the industrial areas of Texas City, TX, killing about 600 people and causing property damage exceeding \$100 million.

In Cut Bank, MT, operators begin moving rigs across the prairie using steel-wheeled dollies as opposed to skidding them. (I was threatened with being sent to Cut Bank by a couple of former supervisors.)

East Texas crude oil - \$1.95/bbl

APRIL 1977

Amoco makes the news by leasing a large area in New Mexico containing carbon dioxide to supply its enhanced-recovery project in West Texas, with its estimated 1 billion bbl of additional oil that may be recoverable by EOR methods employing carbon dioxide.

With coffee wholesaling for about \$4/
lb, the American homemaker is spending
about \$1.25/gal to brew and serve it,
compared to regular-grade gasoline selling
at a nationwide average of about 60 cents/
gal. (How many of you "boomers" can
remember the first time you paid a \$1/gal
for gasoline?)

US rig count - 1,906

APRIL 2007

Brazil reports plans to step up its purchase of palm oil from Malaysia to meet a government mandate for a 2% biodiesel content in diesel starting January 1, 2008, a diversion from its current program of producing soya oilbased biodiesel.

Meanwhile, Chevron and Weyerhaeuser agree to jointly assess the feasibility of commercializing biofuels produced from wood fiber and other nonfood sources of cellulose for use in cars and trucks.

Light sweet crude oil - \$64.51/bbl; Natural gas - \$7.54/MMbtu; US active rig count - 1,726

THE REST OF THE YARN

This month we continue our look back at the rise and fall of wildcatter Glenn McCarthy, as the legend begins to take shape.



cCarthy's legend began, fittingly, near the first great Texas gusher, the Spindletop field, outside Beaumont, where he was born on Christmas Day 1907. His father, an itinerant oilfield worker and plumber, shuttled the family between Beaumont and Houston's rough Third Ward; at one point, young Glenn was the Howard Hughes family's paperboy. A scrappy teenager, he

worked odd jobs in the oilfields and became a standout youth football player and amateur boxer. He dropped out of high school, but later leveraged his gridiron prowess into brief stays at Rice Institute (now Rice University) and Texas A&M, where he was expelled for hazing. By 1930, though nominally still enrolled at Rice, he was pumping gas at a Houston service station. (How many of you remember "service stations"?)

McCarthy was 22, handsome with dark eyes and an Errol Flynn mustache, a kid on the make—with a temper to match—known for slugging just about anyone if he'd had enough to drink. His life changed one night that spring when a girl he knew stopped for gas and brought along a pretty 16-year-old friend named Faustine Lee, daughter of the wealthy oilman Thomas Lee. Shortly thereafter, Glenn took Faustine to a dance, then another, at which point, within weeks of meeting, they eloped. Her father was understandably not happy. McCarthy told him not to worry. He refused to take a penny of Lee money. In fact, he swore to Lee that he too would become an oilman. For now, however, the only oil McCarthy saw on a daily basis came in cans.

Next month, McCarthy entrepreneurship kicks in.

If you would like to participate in this month's quiz, e-mail your answer to contest@spe.org by noon April 15. The winner, who will be chosen randomly from all correct answers, will receive a \$50 gift card to a nice restaurant.



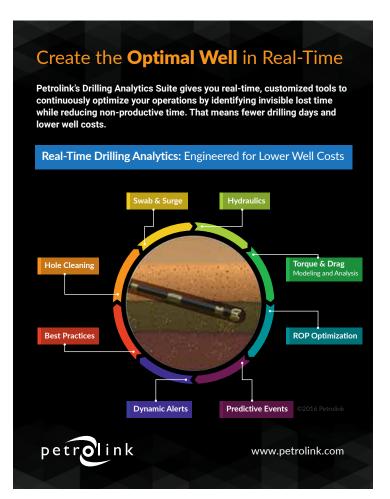
What state celebrated its 50th year of commercial oil production in 1947?

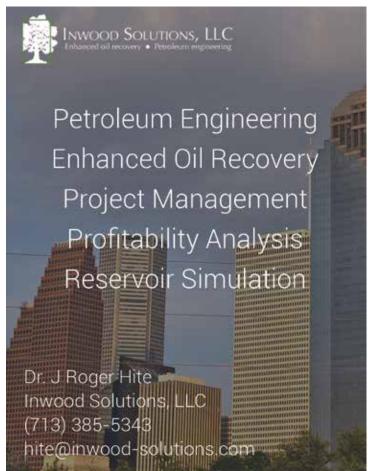
ANSWER TO MARCH'S QUIZ

Other states excluded from consideration, the following is the order of increasing average daily oil production by state (from lowest to highest) circa 1st Quarter 1946: Colorado < Arkansas < New Mexico < Illinois < Kansas

FEBRUARY'S WINNER

William Miller (actually born in Huntington Beach, CA)





WORTHWHILE CONVERSATIONS

ARE YOU PAYING "STEALTH TAXES" ON YOUR INVESTMENTS?

Phillip: Explain this term, "Stealth Tax?"
Heidi: After a good 2016 year, many families will overpay their income taxes because advisors are not managing investments in a tax-friendly way. We've learned in 45 years of talking to families that they often pay "stealth taxes" – more than they need to be paying. It's "stealth" because it's not obvious. Investors pay extra tax because investment professionals do not tax-optimize decisions in building and managing the portfolio.

Phillip: Give us an example of one of the decisions to be "tax-optimized."

Ryan: A big one is "Asset Location" (contrasted to "Asset Allocation"). Asset location is making the right choice for placing each investment asset in specific buckets of the client's portfolio. Some assets produce the best result in a retirement account (IRA, etc.) while others work better in a taxable account. In giving families second opinions on their portfolio strategy, asset location errors are one of the most frequent mistakes we see.

Phillip: Are there other examples of these "tax-optimized" decisions?

Carolyn: Systematic "tax loss harvesting"

is one. This should be applied all year, not just in December. Another is investment selection. Many investment advisors create a portfolio using investments recommended by their sponsoring firm. These may be motivated by the firm's interest, without considering the optimal after-tax result for the client. We recommend families only use advisers 100% committed to the fiduciary standard, rather than selling products. This fiduciary model has worked well for us and our gulf coast clients.

Phillip: Does L&W find this makes a big difference over time?

Harold: Yes. Our professionals span multiple disciplines – attorneys, CPAs, CFA® charterholders and CFP® practitioners. We recently presented a case study to a CPA group that considered two couples, each retiring with \$2 million at age 60. Over 30 years, tax-optimization saved \$300,000 in federal income taxes and left an ending portfolio that was \$600,000 larger. Obviously, each family's situation is unique, but this is worth an exploratory conversation. We have the right team to explore that in our Galleria and Woodlands offices.



(Left to right: Phillip Hamman, CFA, CFP®; Ryan Patterson, CFA CFP®; J. Harold Williams, CPA/PFS, CFP®, Carolyn Galfione, CPA, CFP®; Heidi Davis, CPA/PFS, CFP®)

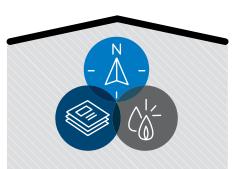
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Tuesday 4.4.17

SPEAKER

Rowlan Greaves
Strategic Solutions
Engineering Manager
Southwestern Energy Company

LOCATION

Southwestern Energy Company 10000 Energy Dr Spring, TX 77389

EVENT CONTACT

Jon Spencer jon.spencer@tracerco.com

NORTHSIDE

Freshwater Neutral: Operational Water Use and Giving Back to the Environment

Southwestern Energy (SWN) is committed to offsetting our freshwater footprint by reducing our freshwater usage and replenishing any freshwater that we do use, barrel for barrel, through conservation projects. In 2013, our CEO issued the imperative that we would be freshwater neutral in all operations within three years. SWN achieved a freshwater neutral status in 2016 within each operating division in a manner that is operationally and economically feasible and that provides value to our neighboring communities and environment.

This presentation will cover SWN's approach to water management, how we offset the freshwater that we do use, and challenges that we overcame along the way.

ROWLAN GREAVES



Rowlan Greaves is a manager with Southwestern Energy's Strategic Solutions team. Strategic Solutions is a small corporate team tasked with developing operational opportunities that find the balance between community, economy, and the environment. Greaves joined SWN in 2010 as a Facilities Engineer assigned to the Fayetteville Shale Division before moving to Strategic Solutions in 2013. He serves as Co-

chair of the Energy Water Initiative, a collaborative effort among oil and gas operators to study and improve water use and management across the industry. He holds a bachelor's degree in civil engineering from Texas A&M University.

ONLINE REGISTRATION: spegcs.org/events/3227/



Thusday 4.6.17

SPEAKER

John Macpherson Sr. Technical Advisor Baker Hughes

LOCATION

Norris Center - Westchase 9990 Richmond Ave, Ste 102 Houston, TX 77042

EVENT CONTACT

Kitty Harvey kharvey4@cameron.slb.com

RESEARCH & DEVELOPMENT

Automation of the Drilling System: What Has Been Done, What Is Being Done, and Why It Is Important

Drilling systems automation is the real-time reliance on digital technology in creating a wellbore. It encompasses downhole tools and systems, surface drilling equipment, remote monitoring, and the use of models and simulations while drilling. While its scope is large, its potential benefits are impressive. Among them: fewer workers exposed to rig-floor hazards, the ability to realize repeatable performance drilling, and lower drilling risk. While drilling systems automation includes a new drilling technology, it is most importantly a collaborative infrastructure for performance drilling. To successfully automate drilling, it will take an open collaborative digital environment at the wellsite, an openness of mind to digital technologies, and modified or new business practices.

JOHN MACPHERSON

John Macpherson holds a BS in geology from the University of Glasgow. During his 40 years in the oil industry, he has participated in exploratory drilling operations and held various positions in drilling R&D. His focus has been on exploration and drilling, starting with geology, through geo-mechanics, drilling modeling, drilling dynamics, and drilling automation. He has published about 40 papers and has more than 25 granted patents. He was the chairman of the SPE Drilling Systems Automation Technical Section (2014 and 2015) and a member of the Drilling Systems Automation Roadmap initiative. He is a member of the JPT editorial committee.

HSSE-SR

Emerging Occupational Health Issues in Unconventional Oil and Gas Exploration and Production

In 2010, the Centers for Disease Control's National Institute for Occupational Safety and Health (NIOSH) initiated the Field Effort to Assess Chemical Exposures in Oil and Gas Workers to determine if chemical exposure risks were present for workers during drilling, completions, and servicing operations. This presentation describes continuing field research focusing on a number of compounds identified as significant exposure risks to extraction workers. Specifically, exposure assessments have been done for respirable crystalline silica (quartz). Full-shift exposures were found to exceed occupational exposure criteria set or recommended by OSHA, NIOSH, or ACGIH. Exposures to hydrocarbon gases/vapors associated with fracturing/flowback operations and during manual tank gauging/sampling activities were also studied. These studies identified significant risks for over-exposures to these gases as well as low oxygen concentrations while gauging and sampling. The study identified worker deaths related to these exposures. Improved controls and worker protections for the identified risks have been recommended as a result of research findings and will be discussed.

BRADLEY KING



Bradley King is a certified industrial hygienist in NIOSH's Western States Division in Denver, CO. His research interests include evaluating occupational exposures in the upstream oil and gas industry. King joined NIOSH in 1999 as an industrial hygienist in the Health Hazard Evaluation program, responding to requests from workers, employers, and union officials to investigate occupational exposures at worksites

throughout the country. He earned his PhD in environmental health sciences from Johns Hopkins University.



Tuesday 4.11.17

SPEAKER

Dr. Bradley King Industrial Hygienist NIOSH Western States Division

LOCATION

Marathon Oil Tower 5555 San Felipe St, Ste P1021 Houston, TX 77042

EVENT CONTACT

Kathleen Antoine kathleencantoine@gmail.com

GENERAL MEETING

Incorporating Numerical Simulation Into Your Reserve Estimation Process

This presentation will highlight important facets one should consider when applying numerical simulation methods to use for, or augment, oil and gas reserve estimates. The main takeaway will be an appreciation of the areas in which to focus to arrive at meaningful and defendable estimates of oil and gas reserves that are based on reservoir models.

Reservoir simulation is a sophisticated technique of forecasting future recoverable volumes and production rates. It is becoming commonplace in the management and development of oil and gas reservoirs, small and large. Increasingly, the simulation tool is being incorporated into the reserves process. However, as with any reservoir engineering technique, certain precautions must be taken when relying on reservoir simulation as the means for estimating reserves.

DEAN C. RIETZ



Dean C. Rietz is President and a member of the board of directors at Ryder Scott Company. He has over 30 years of diverse experience in evaluating oil and gas properties, including more than 25 years applying numerical modeling approaches to these evaluations.

Previously, he managed the Ryder Scott Reservoir Simulation Group for 15 years. He received a BS in petroleum engineering from

the University of Oklahoma and an MS in petroleum engineering from the University of Houston.

ONLINE REGISTRATION: spegcs.org/events/3561/



Thursday 4.13.17

SPEAKER

Dean C. Rietz

2016-17 SPE Distinguised Lecturer

President

Ryder Scott Company

LOCATION

Petroleum Club of Houston 1201 Louisiana St Houston, TX 77002

EVENT CONTACT

Barry Faulkner barryf1944@gmail.com





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RESERVOIR

Performance-Based Reservoir Characterization of Unconventional Reservoir Systems

Model-based well performance analysis and forecasting has become quite popular in recent years; however it is a challenging task due to the low/ultra-low permeability nature of unconventional reservoirs as well as to the complexity (e.g., geology, PVT, etc.). Advanced models, which could account for non-linearities such as multi-phase flow/complex PVT, stress dependent properties, are required for more robust analysis and forecasting. However, it is practically impossible to analyze and forecast each well using the advanced models in a developed field due to time constraints. The focus of this presentation is to demonstrate a practical methodology, which is efficient in terms of time constraints, and sufficient to incorporate complex flow behavior, for the analysis and forecasting of producing wells in a particular area/field in an unconventional reservoir. Results of this workflow could provide insights in terms of establishing reservoir management strategies and provide recommendations on field development.

DR. DILHAN ILK



Dr. Dilhan Ilk is a vice president and staff engineer at DeGolyer and MacNaughton in Dallas, Texas. He holds B.Sc. degree from Istanbul Technical University, M.Sc. and Ph.D. degrees from Texas A&M University — all in Petroleum Engineering. At DeGolyer and MacNaughton, he coordinates projects related to integrated assessments of unconventional reservoirs. He has made several contributions to

petroleum engineering literature. Ilk is a member of SPE Reservoir Description and Dynamics advisory committee. He is a contributing author of the SPEE Monograph IV Estimating Ultimate Recovery of Developed Wells in Unconventional Reservoirs and SPE digital publication series Performance Forecasting in Shale Reservoirs.



Tuesday 4.18.17

SPEAKER

Dr. Dilhan Ilk
Vice President and Staff Engineer
DeGolyer and MacNaughton

LOCATION

Sullivan's Steakhouse 4608 Westheimer Rd Houston, TX 77027

EVENT CONTACT

Alexsandra Martinez adinorah.martinez@gmail.com

WESTSIDE

Challenges and Contradictions in Horizontal Well Fracturing

Trial-and-error is the most popular tool for the design of fracturing treatments in horizontal wells in unconventional reservoirs. The technique has resulted in substantially better production than one would expect based on the permeability of these reservoirs. What is interesting is that the direction of some of these changes appears to contradict some of our general beliefs about fracture growth patterns in these reservoirs. Does a step increase in well productivity require revisiting our accepted beliefs?

ALI DANESHY



Ali Daneshy is president of Daneshy Consultants International and Adjunct Professor in the petroleum engineering department at the University of Houston. His fracturing experience spans 45 years, during which he has also published over 50 technical papers related to the subject. Active in SPE, he is an SPE/AIME Honorary Member and has received the SPE Distinguished Member and Distinguished Service

awards. In addition to providing consulting services related to completion of fractured oil and gas wells, he also teaches several short courses related to hydraulic fracturing. Daneshy is co-editor-in-chief of the *Hydraulic Fracturing Journal*.



Wednesday 4.19.17

SPEAKER

Ali Daneshy
President
Daneshy Consultants International

LOCATION

Norris Center - Westchase 9990 Richmond Ave, Ste 102 Houston, TX 77042

EVENT CONTACT

Stephen Loving
Stephen.loving@corelab.com



SPEAKERS

Timothy Sullivan
Tom Yelich
Apache

LOCATION

Four Seasons Hotel 1300 Lamar St Houston, TX 77010

EVENT CONTACT

Cody Felton cody.Felton@energynet.com

BUSINESS DEVELOPMENT

Apache - Alpine High and Business Development Activities

Apache Corporation's VP of Business Development, Tom Yelich, and EVP of Operations Support, Timoth Sullivan, will share Apache's experiences capturing Alpine High in Southern Reeves County and other business development opportunities.

TIMOTHY SULLIVAN

Timothy Sullivan was appointed Executive Vice President - Operations Support effective January 1, 2016, having been Senior Vice President - Operations Support since June 2015. He supports the CEO in operational strategy, goal setting, capital allocation, market intelligence, and marketing.

TOM YELICH

Tom Yelich joined Apache in 2006 as Manager of Business Development. In 2010, he led commercial efforts for Apache's worldwide exploration group before being promoted to Director of Business Development in 2013. Previously, he worked in business development positions at Burlington Resources, Vintage Petroleum, Vastar Resources, Amoco Corporation, and Mirant Americas Energy Capital. He holds a bachelor's degree in petroleum engineering from The University of Texas at Austin and master's degrees in business administration and accounting from UT-Dallas.

MEMBERS

\$40/\$55 Walk-In

NON-MEMBERS

\$45/ \$55 Walk-In

STUDENTS/MIT/RETIRED SPE

\$10 Pre-Registered

DATA ANALYTICS

Data Analytics Speaker Series



The Data Analytics Speaker Series will focus on case studies and application of analytics in oil and gas. Omar A. Abou-Sayed, President of Advantek International, will present a case study on using data mining to identify development best practices in the deepwater Gulf of Mexico. Dr. Vinod Veedu, Director of Strategic Initiatives at Oceanit, will discuss disruptive technologies such as smart cement and streaming image analytics incorporating deep learning technology.

DATE

Thursday, 4.20.17

TIME

5:30 PM - 7:30 PM

SPEAKERS

Omar A. Abou-Sayed President Advantek International Corporation Vinod Veedu, PHD Director of Strategic Initiatives Oceanit

LOCATION

see website

EVENT CONTACT

Supriya Gupta supriya026@gmail.com

INTERNATIONAL

Latin America: The E&P Market and Privatization Trends

Two energy experts will present on the current state of the Latin American E&P market, as global markets recover from the global downturn, and the political-economic conditions that either foster or disincentivize private foreign investment in the region. The discussion will include a special focus on Mexico and Venezuela.

To register and to learn more about this event and its speakers, visit spegcs.org/events/3572/ $\,$

DATE

Thursday, 4.20.17

TIME

11:30 AM - 1:00 PM

SPEAKERS

Jeff Quigley Director, Energy Markets Stratas Advisors Francisco Monaldi, PhD Baker Institute Fellow Rice University

LOCATION

The Whitehall Houston 1700 Smith St Houston TX 77002

EVENT CONTACT

Mary Beth Snodgrass mbs@localcontenect.com

COMPLETIONS AND PRODUCTION

The Myth and Facts About Diversion

Fluids introduced into a wellbore for stimulation applications typically take the path of least resistance and therefore frequently go into areas where there are open flow paths. In many cases, these are neither areas you want to stimulate to enhance production by using a re-fracturing operation in unconventional reservoirs, nor areas from which formation damage needs to be removed by using an acidizing operation in carbonate reservoirs. Recently developed solid particulate degradable diverters promote efficient plugging, which helps to create nearly impermeable seals and aids fluid diversion. Although several field applications exist for this technology, less attention has been paid to the underlying physics and controlling parameters. This presentation describes how different advanced modeling, experimental, and field data mining approaches can be used to design and optimize different stages of fluid diversion. Application of lessons learned and engineered design key practices are shown by means of case studies.

MOJTABA P. SHAHRI

Mojtaba P. Shahri is a Senior Geoscientist in the Weatherford RD&E department in Houston. His research interests include hydraulic fracturing and re-fracturing design and optimization. Shahri has been selected as SPE Distinguished Lecturer for 2017-2018. He has authored more than 35 technical papers and holds seven pending US patent applications. Shahri received SPE Star, SPE Henry DeWitt Smith, SPE Nico van Wingen, SPE-GCS Exemplary Volunteer, and SPE Regional Young Member Outstanding Service Awards. He holds a PhD in petroleum engineering from The University of Tulsa and is a registered Professional Engineer.



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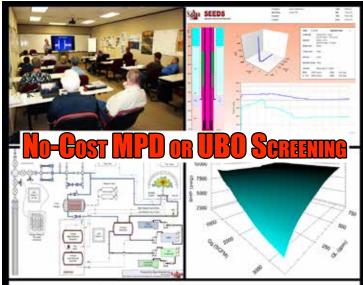
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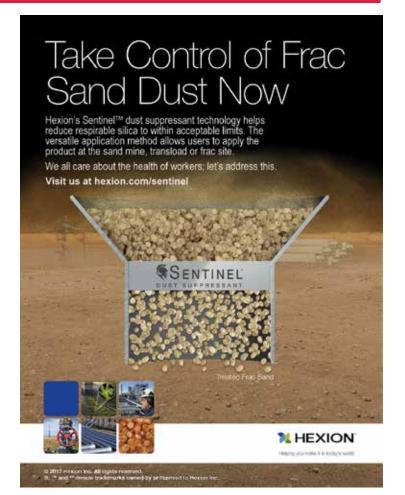
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281.774.3116
snauduri@signa.net



Where Are They Now?

PAST SCHOLARSHIP WINNERS

The Scholarship Committee conducted a survey of past recipients of the SPE-GCS scholarship. If you're considering donating to the SPE-GCS scholarship fund or hiring an SPE-GCS scholarship winner, you'll be glad to know that the program has enjoyed considerable success over the past six decades. Here's Jenny Diane Cronlund's story:

By receiving the SPE-GCS scholarship, I was offered an internship with BP the summer after I graduated high school. Working at BP's Houston office gave me experience in the industry before I even started college.

After my freshman year at Texas A&M, I took an internship as an offshore drilling engineer on a jackup rig in the Gulf of Mexico. The following summer, I was offered an internship as a production engineer, working the giant oilfield of Prudhoe Bay from BP's office in Anchorage, AK. The summer after my junior year, I went back to Anchorage for a reservoir engineering internship.

Because of my internships, I was able to make a more informed decision on how I wanted to focus my career. I've spent 10 years with BP working in the world-class oil field of Prudhoe Bay and in challenging plays like viscous oil and tight sands. My career has been very rewarding. I've tackled challenging problems with innovation and gained knowledge through cutting-edge technology.

I've served as secretary and treasurer for the SPE Alaska Section Board and chaired several committees. I've also served as a director on the Gulf Coast Section board. My advice to current students is do not take this scholarship for granted; continue to earn it. Work hard and learn as much as you can. When you feel like you've made it, give back - volunteer with SPE, donate to the very scholarship fund that supported you, or mentor students or young professionals.

JENNY DIANE CRONLUND



CAREER OVERVIEW Reservoir Engineer at BP

- Cinco Ranch High School, 2003
- Texas A&M University, BS in petroleum engineering

CONTACT: jenny.cronlund@bp.com

SPONSORSHIP

spegcs.org/sponsorship-opportunity/

DONATION INFO

spegcs.org/spegcs-scholarship-fund/

Committee: Education

SPE-GCS Scholarship Fund Update

We are excited to announce the status update for our fundraising efforts. As of March 1, 2017, we have raised \$133,693* to support our scholarship program! So far, we have received donations from past scholarship recipients who wanted to give back, SPE-GCS Board of Directors, SPE-GCS Study Group and Committee Leaders, SPE-GCS event attendees, SPE-GCS members and associates, SPEi leaders, and company donations.

For more information about our scholarship fund, scholarship program or our current donor list, please visit www.spegcs.org/spegcs-scholarship-fund/. You will find testimonials from past scholarship recipients and learn about the impact that SPE-GCS scholarships had on their lives and professional careers. If you have not yet donated, we invite you to visit our website and support our efforts as a member of the SPE-GCS family and fellow industry professional. As a reminder, all donations are tax-deductible. We also encourage you to find out if your company has a matching program that could make your individual donation go even further!

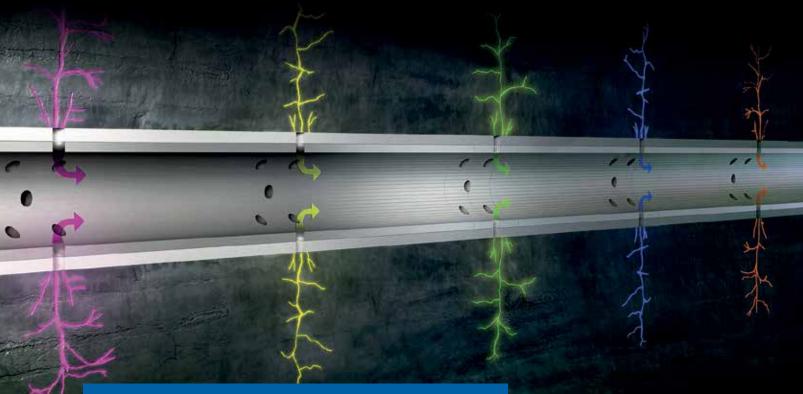
FUND STATUS



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Volunteering at The Beacon

Please join SPE-GCS Young Professionals in their support of The Beacon, a nonprofit organization helping the poor and homeless populations of the Houston area. Since opening in 2007, the Beacon has grown from serving 80 clients per day to serving 600-800 clients daily in four core programs: The Beacon Day Center, Cathedral Clinic at The Beacon, Brigid's Hope at The Beacon, and Cathedral Justice Project at The Beacon. These four programs come together under one roof to provide meals, showers, laundry service, case management, medical and psychiatric care, pro bono legal services, and pastoral care. More than 85% of the services of The Beacon are operated by volunteers.

This time, The Boston Consulting Group (BCG) has joined our effort to make a greater impact in our community. BCG is a global management consulting firm with 12,000 employees and 82 offices in 46 countries. The firm advises clients in the private, public, and non-profit sectors, including more than two-thirds of the Fortune 500. BCG was ranked second in Fortune's "100 Best Companies to Work For" in 2016.

Please have a good breakfast to stay energized throughout the event, which extends beyond the regular lunchtime and involves some physical activity. Donations of gently used or new items are appreciated.

Spots will be limited for this event, so register as soon as possible!





Committee: Young Professionals

EVENT INFO

SUNDAY

4.9.17

10:45 AM - 2:00 PM

LOCATION

The Beacon John S. Dunn Outreach Center 1212 Prairie St Houston, TX 77002

EVENT CONTACT

Catalina Leal 832-729-5462 catalina.leal@bakerhughes.com

REGISTRATION LINK

spegcs.org/events/3511/

Managing Project Complexity

Most major projects fail. The average major project overruns budget by 33%. The average schedule overrun is 25% (about one year), and the average achieved production < 80% of nameplate. Why does this happen? Major projects are more complex than we are capable of managing — both technically and, especially, politically and socially. We are fortunate that the science of complexity is well-developed. This presentation will cover the basics of the science of complexity and identify ways to combat complexity and make our projects more manageable.

HOWARD DUHON



Howard Duhon is a Principal Engineering Advisor and a founder of GATE in Houston. He has 43 years of experience in the petrochemical and oil and gas industries, mainly in process design, project design, and project management roles.

For the past 15 years, that work has mainly involved deepwater developments and has been focused on managing the interfaces

between topsides and other disciplines. He has a chemical engineering degree from the University of Louisiana at Lafayette.

Throughout his career, he has had a particular interest in the study of decision theory and in the application of that knowledge to improve project execution.

ONLINE REGISTRATION spegcs.org/events/3568/

LOCATION

Please see website for details

EVENT INFO

THURSDAY

4.13.17

6:30 PM - 8:00 PM

SPEAKER

Howard Duhon
Principle Engineering Advisor
Gibson Applied Technology and
Engineering (GATE)

EVENT CONTACT

Eric Kinsey Regel 504-920-8392 eregel@gateinc.com

MEMBERS/NON-MEMBERS \$25/\$30

MIT/RETIRED \$15

Rebuilding Together Houston

Rebuilding Together - Houston (RT-H) is Houston's largest community outreach organization working to preserve affordable homeownership and revitalize neighborhoods. They provide home repair and renovation services at no cost to low-income homeowners in need, such as the elderly, individuals with disabilities, veterans, and people impacted by natural disasters.

RT-H constructs wheelchair ramps, installs handrails, installs doors with peepholes and security locks, and makes many other improvements that help make homes safe, warm and dry.

RT-H needs volunteers of all experience levels to help their Spring 2017 Home Repair Program. The YP group will be leading a team. Please join us in using our handy engineering skills to give back to the community.

The YP team will work at a Houston home on April 22. If work isn't completed, an April 29 workday will be scheduled.

ONLINE REGISTRATION: spegcs.org/events/3559/



EVENT INFO

SATURDAY

4.22.17

7:30 AM - 5:00 PM

LOCATION

Details & address will be provide to registered attendees

EVENT CONTACTS

Catalina Leal 832-729-5462 catalina.leal@bakerhughes.com

Leonard Johnson leonard.johnson@swiftenergy.com

Committee: Continuing Education & Career Management

An Introduction to Oilfield Development

This course is an introduction to the oilfield development process. It will provide an introduction to field lifecycle:

1. Exploration

3. Production

2. Field development

4. Abandonment

The course starts after the discovery is made and goes through the process of bringing hydrocarbons to market, focusing on the development of the system to get the product to midstream. It explores design, evaluation and decisions for the project at various levels of the organization.

The course considers the field as the system to be developed. We will explore the different subsystems and components that influence the decision made. In addition, we will look at some of the current practices through participants' experience.

KHEDHER MELLAH



Khedher Mellah holds a master's degree in mechanical engineering from the University of Minnesota. He worked for oilfield service companies in directional drilling, surveying, LWD, wireline, product development, and training. He also chaired the API HT/HP validation subcommittee and was part of the development stages of various deepwater, high-pressure fields with Chevron and Shell. Mellah oversaw the development

of new technologies and holds two patents. He has significant exposure to system development and design, reliability, and Six Sigma, in addition to engineering disciplines such as fluid and solid mechanics, FEA analysis, statistics, estimation, and operational design and management. He is pursuing an Executive MBA from Texas A&M University.

ONLINE REGISTRATION: spegcs.org/events/3569/ Registration ends 4.27.2017

EVENT INFO

FRIDAY

4.28.17

8:30 AM - 4:30 PM

SPEAKERS

Khedher Mellah Well Engineering and Technology Development Consultant Ingenious Well Systems

LOCATION

SPEI Houston Training Center 10777 Westheimer Rd Houston, TX 77042

EVENT CONTACTS

Sunil Lakshminarayanan sunil_lakshminarayanan@oxy.com

Najaf Dostaliyev dnajaf22@yahoo.com

MEMBERS/NON-MEMBERS \$350

MIT/STUDENTS \$175/\$100

SPE-GCS EOR Forum

The EOR Forum brings together seasoned EOR practitioners with EOR newcomers to share experiences, new ideas, and lessons learned. The format focuses on topics of interest to those who work with EOR technology development and implementation.

There are many senior experts with experience that often go unpublished, and who are also able to reflect upon their experience to offer sound advice. Unfortunately, some of these individuals are leaving the industry. This could create a widening gap in the EOR knowledge base, similar to that experienced in the '90s. Moreover, capturing different opinions in this forum could provide new perspectives. Our intention is to accomplish these goals at the first GCS EOR Forum.

This event was created by the following organizing committee: Dr. Birol Dindoruk, Dr. Reza Fassihi, Dr. Dimitrios Hatzignatiou, Dr. George Hirasaki, Dr. Konstantinos Kostarelos, Dr. José Luis Mogollón, Dr. Mohammad Tabatabaei, and Dr. Ganesh Thakur.

AGENDA:

8:00 - 9:00 AM	Registration
9:00 - 9:10 AM	Welcome and safety moment
9:10 - 10:40 AM	Session 1: What Are the Key Data/Parameters Needed to Plan a
	Successful EOR Project?
10:40 - 11:00 AM	Student poster session and coffee break
11:00 - 12:30 PM	Session 2: Why Don't We See More Pilot and Full-Scale EOR
	Projects - Other Than CO2 Flooding?
12:30 - 1:30 PM	Lunch
1:30 - 3:00 PM	Session 3: EOR for Unconventionals
3:00 - 3:20 PM	Student poster session and coffee break
3:20 - 4:50 PM	Session 4: Is a New Chemical EOR Paradigm Needed?
5:00 - 6:00 PM	Networking event

A limited number of student seats are available - please contact for more information.

EVENT INFO

THURSDAY

4.13.17

8:00 AM - 6:00 PM

LOCATION

Ballroom at the University of Houston (Main Campus) 4455 University Dr. Houston, TX 77204

EVENT CONTACT

Konstantinos Kostarelos 832-842-4857 kkostarelos@uh.edu

MEMBERS/NON-MEMBERS \$90/\$110

MIT/RETIRED SPE \$70

ONLINE REGISTRATION spegcs.org/events/3566/

Special Events & Announcements

SPE-GCS Annual Drilling Symposium

The SPE Gulf Coast Section Drilling Study Group hosts the Annual Drilling Symposium to disseminate knowledge and technology needed to achieve the many objectives of drilling operations.

Key themes include understanding risk and hazard mitigation, real-time monitoring, drilling automation, and new technologies driving efficiencies. Likely to sell out, this year's symposium features well-known industry experts presenting the latest technological developments and case studies.

TOPICS & SPEAKERS:

- Digitalisation, Simplification, Performance and Disruption, *Jonathan Crane* (VP Wells Technology, Shell)
- Drilling Automation in Industry and Academia, Fred Florence (RigOps)
- Why Would an Operator Build an EDR System? To Get Better Data-Driven Decisions, *Michael Behounek (Apache)*
- The Evolution of Applied Back Pressure Systems for Offshore Drilling, Neal Richard (Weatherford)
- Downhole Flow Assurance, Ferhat Erdal (Chevron)
- Mechanical Bit Features that Improve Stability and Dynamics, Dan Scott (Baker Hughes)
- A Call to Modernize the Drilling Industry's Methods of Calculating Circulating Hydraulics, Terry Hemphill (Halliburton)
- Complex Downhole Optimization in Permian Delaware Basin, John Willis (OXY)
- Mitigating Salt and Sub-salt Drilling Challenges Using Hybrid Bit Technology in Deepwater Gulf of Mexico, Mark Anderson (Chevron)
- What Exactly is Machine Learning, and What are the Considerations for Using it in a Drilling Operation, *Joe Indelicato (SAS)*

EVENT INFO

THURSDAY

4.13.17

8:00 AM - 5:00 PM

LOCATION

Southwestern Energy Office 10000 Energy Dr Spring, TX 77389

EVENT CONTACT

Mojtaba P. Shahri 832-249-2618

MEMBERS/NON-MEMBERS \$80/\$115

STUDENTS/MIT/RETIRED SPE \$25

2017 Permian Basin Symposium

This symposium presents an objective view of the current state of the Permian Basin. Topics include financial, completion designs and technologies, water management, production optimization, and employment perspectives and will include a panel discussion.

TOPICS & SPEAKERS:

- Keynote: Occidental Petroleum in the Permian, Jody Elliott (President, Occidental Petroleum)
- Pushing the Boundaries of the Sweet Spot of the Delaware Basin, Zach Fenton (COO, UpCurve Energy)
- M&A Activity in the Permian, Laura Freeman (Reservoir Engineer, Laura Freeman Consulting)
- Enhancing Your Permian Basin E&P Technical Professional Workforce, Ron Hinn (Executive VP, PetroSkills)
- Factors Impacting the Cost of the Learning Curve in HZ Wolfbone and Wolfbone Development, Doug Walser (Technology Manager, Pinnacle)
- Completion Technologies in the Permian Basin, John Ndungu (Staff Completion Engineer, Pioneer Natural Resources)
- Evaluating Refrac Potential in the Wolfcamp Formation, Bob Barba (Completions Consultant, Independent Energy Services)
- Luncheon Speaker: Larger Pads and Two-Mile Laterals Bring Supply Chain Demands, Todd Bush (Principal, Energent Group)
- Determining Optimal Artificial Lift Solutions, Yogashri Pradhan (Production Engineer, Texas Oil & Gas Institute)
- Production Optimization Case Histories, Rakesh Rai (Global Manager Production Optimization, Weatherford)
- Oilfield Water Management, Doug Park (University Lands)

EVENT INFO

TUESDAY

4.18.17

8:00 AM - 5:00 PM

LOCATION

Norris Center - Westchase 9990 Richmond Ave, Ste 102 Houston, TX 77042

EVENT CONTACT

Amy Timmons atimmons1114@gmail.com

MEMBERS \$100

NON-MEMBERS \$125

MITS \$25

Special Events & Announcements

SPE Gulf Coast Section Committee Update

It is with great sadness that the SPE Auxiliary has decided to disband after being part of SPE-GCS for many years. Our main goal was to raise money for the scholarship program, which we have been very successful doing over the years. SPEA formed in 1977 and provided 269 scholarship grants totaling \$300,000 to deserving high school students throughout the area.

In raising money, we have been active in OTC, the Golf Tournaments, and scholarship interviews, and we helped with numerous SPE meetings in the Houston area. We also held fundraisers raffling off many items, including quilts made by our members.

Special thanks to the SPEA Board: Nancy Giffhorn, Karen Mermis, Lorie Coffelt, Darlene Ayoub, Darlene Hirasaki, Evelyn Earlougher, Sharon Fox, Frances Fidler, and Nancy Hill.

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How to Be a Successful E&P Startup

This workshop will provide attendees the information they need to start and operate a successful E&P startup. Each of the three sessions will focus on different aspects of E&P startups and feature successful E&P entrepreneurs sharing their experiences.



SESSION 1: AARON DAVIS

Co-founder, President & CEO, Fortuna Resources

Aaron Davis is co-founder, President, and Chief Executive Officer of Fortuna Resources LLC, established in January 2016. Davis has worked basins including Permian, Mid-Continent, Yemen, Qatar, and Oman. He

is a graduate of Rice University and The University of Texas at Austin with an MBA and a BS in petroleum engineering. He is a registered Professional Engineer in Texas.



SESSION 2: VIGNESH PRODDATURI, P.E.

Co-founder & Managing Partner, Glendale Energy Capital

Vignesh Proddaturi is co-founder and Managing Partner at Glendale Energy Capital. He has more than a decade of experience in business development, strategic planning, field operations, and

asset evaluations. Proddaturi earned a BS in mechanical engineering from Osmania University, an MS in petroleum engineering from New Mexico Tech, and an MBA with specialization in energy investment and finance from the University of Houston. He is a registered Professional Engineer in Texas and was one of *Oil and Gas Investor's* Top 30 Under 40 Leaders in 2015.



SESSION 3: ZACH FENTON

Co-founder & COO, UpCurve Energy

Zach Fenton is a co-founder and COO of UpCurve Energy, a private, equity-backed company with an over-7,000-acre position in the Southern Delaware Basin. He previously worked as a Senior Reservoir

Engineer in ConocoPhillips' Eagle Ford Development organization. Fenton received an MBA from the Wharton School and a Certificate in Petroleum Engineering from Texas A&M. He holds a BA in economics from Duke University and is a member of the Society of Petroleum Engineers.

REGISTRATION LINK spegcs.org/events/3557/

EVENT INFO

TUESDAY

4.25.17

4:00 PM - 8:00 PM

SPEAKERS

Aaron Davis Co-founder, President & CEO Fortuna Resources

Vignesh Proddaturi, P.E. Co-founder & Managing Partner Glendale Energy Capital

Zach Fenton Co-founder & COO UpCurve Energy

LOCATION

Station Houston 1301 Fannin St, Ste 2440 Houston, TX 77002

EVENT CONTACT

Aniket Kumar 832-386-9940 aniket.av5@gmail.com

MEMBERS/NON-MEMBERS \$25

STUDENTS/MITS/RETIRED SPE \$15 (15 seat limit at this price)

Young Engineer of the Year

SPE-GCS Young Engineer of the Year

The Houston Engineers Week Committee hosted the Young Engineer of the Year Awards Banquet on February 20 to recognize outstanding young engineers from the Houston area. The awardee for SPE-GCS is Aniket Kumar with Halliburton. Aniket has been an active volunteer with the Young Professionals Committee and Drilling Study Group. He has applied for 15 patents and published 17 technical articles in peer-review journals and technical conferences.



Members in Transition Initiative

15TH SEMINAR SERIES

The SPE Members in Transition Seminar Series includes topics of interest to SPE members who are between jobs during the current industry downturn or who are looking for new career opportunities. The 15th seminar in the series will include: "Sourcing and Investing In Oil and Gas Startup Companies," "Day in the Life of a Digital Engineer," "Investment Banking vs. Consulting vs. Working in Industry vs. Starting a Company: Perspectives from Someone Who's Done It All," and a discussion of resources for SPE members.

Program 1: Sourcing and Investing in Oil and Gas Startup Companies

Many oil and gas companies are increasing their corporate venture activities and investing in small, innovative technology startups that could advance their company's new product and/or technology development efforts. Christina Karapataki will discuss how oil and gas corporate venture capital groups find, evaluate and invest in startup companies with unique technology. She will also talk about positioning your startup for venture investment and discuss lessons learned from her interactions with early-stage entrepreneurs.



CHRISTINA KARAPATAKI

Christina Karapataki is a Venture Principal in the Early Stage Technology Investments group at Schlumberger Technology Corporation. She works closely with Schlumberger Business Units and Engineering Centers to assess joint development opportunities and lead investments in startup

companies. She specializes in investments in energy, advanced materials, industrial software solutions, and sustainability technologies.

PROGRAM 2: Day in the Life of a Digital Engineer

Engineering technology, operational technology, and information technology are converging in the workspace, reshaping our workflows. How do we adopt and adapt into the new environment? This discussion will cover different technologies and evolutions that are happening today to help get ready for tomorrow.



CAROL PIOVESAN

Carol Piovesan develops strategy to increase market growth implementing digital technology. She designed and implemented the first "Real-Time Chemical Monitoring Solution" for the offshore production industry. She has authored 10 papers on equipment

monitoring, predictive analysis, networking and computer sciences, data information, and knowledge management.

PROGRAM 3: Investment Banking vs. Consulting vs. Working in Industry vs. Starting a Company: Perspectives From Someone Who's Done It All

Learn the pros and cons of several very different careers: working for an energy bank, being an independent consultant, working for an oil and gas company, and starting a company. You'll get info on how to get started in each field — and some hard lessons that will hopefully save you time, money, sweat, or tears.



GEOFF ROBERTS

Geoff Roberts serves as a Managing Director and Head of US A&D for BMO Capital. He founded Roberts & Associates, Madison Energy Advisors, and Roberts Energy Advisors and co-founded Centurion Exploration Company. He built A&D divisions for Randall & Dewey

(Jeffries) and The Oil & Gas Asset Clearinghouse. He's a member of SPE and chaired the Business Development Group. He was the co-founder and Treasurer of ADAM Houston and is a registered PE.

EVENT INFO

FRIDAY

4.28.17

10:00 AM - 3:00 PM

SPEAKERS

Christina Karapataki Venture Principal Schlumberger Technology Investments

Carol Piovesan CEO, Founder APO Offshore

Geoff Roberts Managing Director and Head of US A&D BMO Capital

LOCATION

Houston Technology Center 410 Pierce St Houston, TX 77002

EVENT CONTACT

Susan Howes 713-553-5020 c.susan.howes@gmail.com

Ashish Fatnani 832.415.6835 ashish.fatnani@halliburton.com

MEMBERS \$40/\$50 Walk-In

NON-MEMBERS \$50

STUDENTS/MIT/RETIRED SPE \$15

Registration capped at 70

SPE Electric Submersible Pumps Symposium

24-28 April 2017

The Woodlands Waterway Marriott Hotel & Convention Center
The Woodlands, Texas, USA





REGISTRATION NOW OPEN

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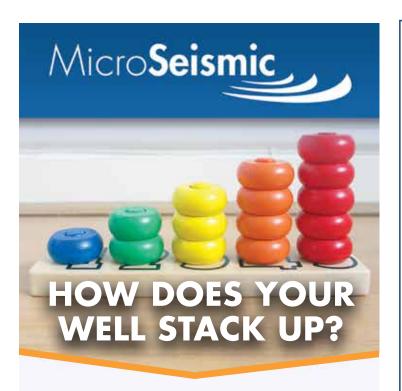
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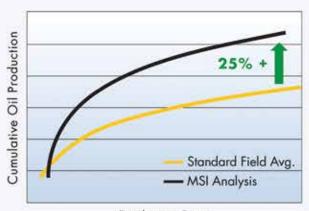
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TEXAS A&M UNIVERSITY

Officer Elections

Elections for next year's leadership team are underway! Having won the SPE Outstanding Student Chapter Award for two years in a row, the chapter's prestige is not something the officer candidates take lightly. Board chairs, committee directors, co-chairs, and members are all eligible to run for office, and these dedicated individuals represent the heart and soul of TAMU-SPE. The candidate profiles of all officer positions can be found on the TAMU-SPE website. We're excited to see how this election turns out and what these candidates have in store for us!



SPE presidential candidates Jordan Argamany (left) and William Nelson



U of H at SPE North American Student Symposium





Rice at SPE Presidential Presentation

UNIVERSITY OF HOUSTON

UH Attends SPE North American Student Symposium

UHSPE was excited to attend the annual SPE North American Student Symposium in Denver. The event, which takes place over three days in February, allowed our members to learn, compete, and network with other student chapters around the country.

Additionally, UHSPE was proud to place sixth in the PetroBowl competition after competing against Tulsa in our last round. Our participating members made many lasting connections as well as picked up some crucial skills in the wide selection of workshops. We are proud of our PetroBowl competitors and excited to attend further conferences in the future.

RICE UNIVERSITY

SPE Presidential Presentation

On January 31, we were honored to have Janeen Judah, the 2017 President of the Society of Petroleum Engineers, give a presentation at Rice University. She showed her passion and why she loves the oil business. As she concluded, the oil business is currently characterized by big risk, big reward, big money, high tech, geopolitics, and complex economics. The big, messy, politically incorrect oil business is what she loves. This insightful presentation attracted lots of students and faculty members interested in oil and gas. Thanks to the Rice Center for Career Development for co-hosting this event.

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April 2017

CALENDAR

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY SPE-GCS Office Closed	SATURDAY
						1
		Northside		Research & Development		
2	3	4	5	6	7	8
Young Professionals		HSSE-SR		General Meeting Young Professionals EOR Forum	SPE-GCS Office Closed	
9	10	11	12	Drilling Symposium 13	14	15
16	17	Reservoir Permian Basin Symposium	Westside 19	International Board of Directors Meeting Data Analytics 20	21	Young Professionals
23	Permian Basin	Entrepreneurship Cell	Business Development Completions & Production		SPE-GCS Office Closed Members in Transition (MiT)	Young Professionals
30	24	25	26	27	Continuing Education 28	29