



ONNECT

SPE GULF COAST SECTION NEWSLETTER



PERMIAN BASIN P. 25

YOUNG PROFESSIONALS P. 27

CHAIR'S CORNER



DR. IVOR ELLUL 2015 - 2016 SPE-GCS Chair

e are four months into the SPE-GCS year, and our GCS Energy Ticker is still not delivering excitement of the right kind. Maybe T. Boone Pickens called it wrong after all. Whatever your perspective, if you consult with anyone who has been in the industry for a while, you will likely hear something to the effect of, "The oil price has gone down before, and it eventually will come up again—as sure as we are of death and taxes!"

As we go to print with this month's Connect, we have seen an excellent turnout at the SPE ATCE here in town and, although the current condition of the market was a prevalent topic, there was sufficient optimism for all to be betting on oil reaching into the sixties. Helge Haldorsen, outgoing SPE President, provided guidance that the commodity price may stay "lower for longer" while also presenting a pragmatic realization of the tension between oil production and consumption as shown in the figure on the right (Figure 1). So, while one can discuss the current over-supply, the global thirst for oil will not be going away any time soon.

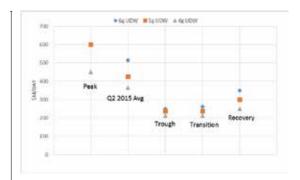
In the meantime, we have a job to do, and, by golly, we will go about doing it. With this spirit well embraced, I attended the opening of a highly successful ultra-deepwater conference organized recently in Houston by the Research Partnership to Secure Energy for America (RPSEA) and the SPE-GCS. I would like to share with you excerpts of what I presented in my opening remarks.

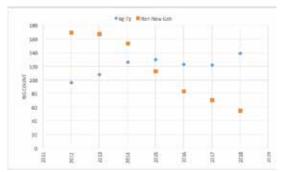
In searching for a current update on the state-of-play of deepwater activities, I benefited from a research article published in September by Simmons and Company International. In many ways it was an update to Simmons' July article that proclaimed a "glass half-full" perspective and predicted a trough period followed by a transition and recovery. The two charts on the right summarize the essence and timeline of the prediction. The forecast shows a pickup in newer generation rig-count starting in 2017 (Figure 2) with rates gradually following (Figure 3).

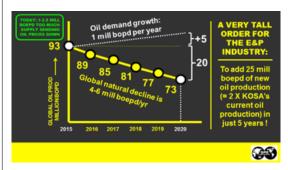
As with every endeavor, it all comes down to economics, with major NOCs and IOCs taking up the urgency to attack all elements of the current cost structure. We have seen two major Gulf of Mexico deepwater projects redesigned to deliver cost reductions of between 20% and 60%, thus making them feasible and sanctionable.

In summary, although we have no choice but to progress through the trough of a cycle to get to the peak, we should be taking the long view and plan for the future with, as we saw at the ATCE, continuing technology advancement – after all, that is what we are all about.



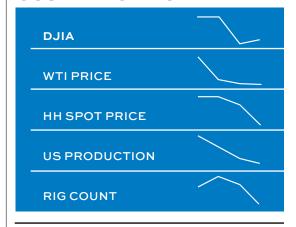






1 "Perspectives on Offshore Drillers & Service," Ian Macpherson, Simmons & Company International, September 14, 2015

GCS ENERGY TICKER



Please visit **spegcs.org** for more information!

November

CONTENTS

STUDY GROUPS

Research & Development 11.5.15

> Innovation Performance in the Oilfield

Northside 11.10.15

> Lessons Learned From Data Mining in Unconventional Reservoirs

Project. Facilities & Construction 11 11.10.15

> A 50-Year History of Safety Awareness in the US Gulf of Mexico

Water & Waste Management 11.10.15

> Beneficial Reuse of Oilfield Byproducts - Opportunities and Challenges

Drilling 11.11.15

> Dilution Based Dual Gradient Drilling

Reservoir 11.12.15

> Reservoir Evaluations in the Eagle Ford Shale

General Meeting 11.16.15

Advances and Challenges in Dynamic Characterization of Naturally Fractured Reservoirs

HSSE-SR 19 11.17.15

> Increasing Operational Integrity Through Optimized HSE Processes & Systems Integration

International 20 11 17 15

> Mexico Series: The Pros and Cons of Operating in Mexico

Business Development 21 11.18.15

> **Enhanced Completions** - E&P Case Studies

Digital Energy 11.18.15

> The Rising Threat - Guarding Against the New Generation of Cyber-Attacks

Westside 11.18.15

> Unconventional Well Refracturing: Where Is the Industry Heading?

Permian Basin 25 11.19.15

> What's Old Is New Again: A Minifrac Perspective

COMMITTEES

Young Professionals

11.2.15

The Role of Mergers & Acquisitions in Resetting the Energy Landscape

Young Professionals 11.8.15

Volunteering at The Beacon

Career Management & Continuing Education 11.5.15

Accelerated Learning Tutorial: Introduction to Gas Lift Systems

Auxiliarv

11.13.15

Informal Lunch: Bistro le Cep

Technology Transfer 31 11.12.15

> Thermal Recovery of Bitumen Resources: Oil and Gas Firms Find New Solutions in the Aerospace and Defense Industry

33 Education 11 18 15

2015 Annual SPE-GCS Petroleum **Engineering High School** Recruiting Fair

Oilfield Games (Formerly OilSim Competition) Spring 2016

MORE

2015-16 SPE-GCS Sponsorship 4 Opportunities

2016-17 SPE-GCS Scholarships

IN EVERY ISSUE

SPE-GCS Membership Report September 2015

> **Volunteer Spotlight** Ernie Prochaska

6 Then & Now **Buddy Woodroof**

Event Recap Young Professionals & International Study Group

Student Chapter Section TAMU-SPE

SPE Gulf Coast Section Directory

BOARD OF DIRECTORS MEETING

THURSDAY, NOVEMBER 19TH / 7:30 TO 10:30 AM

Location SPE HOUSTON OFFICE

10777 Westheimer Rd, Ste 1075, Houston, TX 77042

Event Contact SHARON HARRIS

713-457-6821 / 713-779-4216 FAX / sharris@spe.org



Entero MOSAIC Reserves, Economics, and Declines Software

Isn't it time to stop manipulating data though the backend, creating manual queries to report in Excel, questioning your application security, getting frustrated with poor scenario comparisons, or using 3rd party tools to enter and edit data?

Entero Mosaic's ASSET INTELLIGENCE lets you do your work faster, with less effort. It provides one comprehensive solution that supports corporate, project, and well level processes for reserves, economics, and declines.

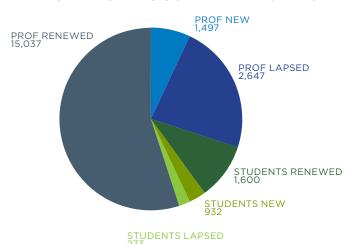
- SPEED: Go from weeks to hours in entry, editing, evaluating, reconciling, and reporting
- **EFFICIENCY:** Experience up to 50% in productivity gains
- INTEGRITY: Have confidence in your data with better visibility
- TRUST: Improve security through role based user/data management
- INSIGHT: Built-in stored results with scenario comparisons at the portfolio level

energy software

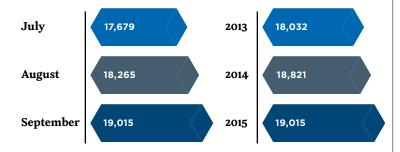
Learn more at www.entero.com/mosaic, or call 713.446.4633.

SPE-GCS MEMBERSHIP REPORT September 2015

TOTAL SPE-GCS MEMBERSHIPS



CURRENT MEMBERSHIP TRENDS



STUDENT MEMBERSHIPS

STUDENTS	RENEWED	NEW	TOTAL	
НСС	74	126	200	
Rice	59 34		93	
Texas A&M	1090	438	1528	
UH	360	288	648	
Unassigned	17	46	63	
TOTALS	1600	932	2532	

DON'T MISS OUT
RENEW YOUR DUES TODAY!



VOLUNTEER

SPOTLIGHT

ERNIE PROCHASKA

his month, SPE-Gulf Coast Section is thrilled to feature Ernie Prochaska as the Volunteer of the Month. Ernie is a longtime member of SPE. He serves as the SPE-GCS Drilling Study Group Chair and has served on the committee in different capacities in the past. Before his positions in the SPE-Gulf Coast Section, Ernie worked in Singapore, where he was the Secretary of the section and Chair of the annual SPE Southeast Asia golf tournament, one of the largest oilfield tournaments in the area.

Ernie is the Business Development Manager for NOV's Drilling and Intervention division. He graduated with a bachelor's degree from the University of Texas at Arlington. He began his career in the Rockies, South Louisiana, and the Texas Gulf Coast, before transferring to the Far East. He worked in Singapore, Bangkok and Jakarta before moving to the Middle East, working in Dubai, Abu Dhabi and Saudi Arabia.

He has co-written two SPE papers and written an industry article. Ernie is also a member of API, AADE, IADC, and IADD. He has been married to his wife, Lynn, for 35 years, and they have one daughter. He enjoys volunteering for SPE-GCS and really likes the interaction with the staff, various committee members, speakers, and meeting attendees.

Thank you, Ernie!



COLUMN BY BUDDY WOODROOF

NOVEMBER

1950

The oil industry is being pressed to develop the petrochemical capacity to meet the country's postwar industrial alcohol requirements for the manufacturing of synthetic rubber. If the oil industry can't handle the 112-milliongallon annual demand, it will be necessary to continue to purchase from the French. (How about recruiting the corn farmers, potato farmers, and moonshiners to cover the oil industry's underage?)

Concurrent with the alcohol requirements, the military is pressing the oil industry to meet its needs for aviation gasoline, motor gasoline, and diesel fuel. (It's unfortunate that shale oil production had not yet come along.)

Israelis protest US sales of pipeline tubulars to Iraq for use in constructing a pipeline from the Kirkuk field to the eastern Mediterranean. The Israelis claim that this sale will support Iraq's economic blockade of Israel. (When it comes to the Middle East, somebody is always blockading somebody.)

North-central Pennsylvania, where the production possibilities have long been considered remote, is beginning to draw attention to the Oriskany sand and possibly deeper formations, and with lease prices as low as 240 acres for \$30, how can a wildcatter refuse?

East Texas crude oil - \$2.65/bbl

NOVEMBER

1975

From the "If Only Now Department"...
Increases in drilling activity are
exacerbating manpower problems for
drilling contractors, with reports of drilling
crewmen quitting their jobs just to get some
time off, and immediately hiring on with
another contractor after their time off.

Creative naming here ... The Rocky
Mountain depth record is surpassed by
a Union of California wildcat in the Wind
River basin of Wyoming. The well is the
1-K11 Hell's Half Acre Unit II, which drilled
down below 21,769 feed into the Permian
Goose Egg formation.

Some of the East Coast states are changing their minds about oil exploration off their coasts. Massachusetts, for example, now is openly welcoming oil development in the Atlantic, where once state officials were fiercely opposed. (Could it have something to do with Massachusetts' 14% unemployment rate and its desperate need for new business and the energy to make it run?)

Deepwater ports are about to start through the federal licensing mill, as the US Coast Guard is now ready to accept applications to build such ports. Louisiana Offshore Oil Port Inc. (LOOP) and Seadock (Texas port) will likely be the first two applicants.

US active rig count - 1,741

NOVEMBER

2000

US oil and gas company third-quarter earnings, especially by "supermajors" ExxonMobil and newly formed ChevronTexaco, are fueling merger-and-acquisition mania. (Can Conoco and Phillips be far behind?)

Global operators are lauded for their efforts to not just "do no harm to environment, personnel, and communities" during their forays into new international operating areas, but also for building clinics and schools, training local residents to develop new livelihoods unrelated to petroleum, and taking an active role in community development.

California begins a study of the feasibility of creating a state-owned strategic gasoline reserve and the possibility of importing more gasoline from the Gulf Coast via pipeline.

Statoil and MAN B&W report the development of a prototype engine that can run on volatile organic compounds (VOCs) recovered during tanker loading.

The environmental aspects of this development could be highly significant in the future, according to North Sea environmental authorities.

Light sweet crude oil - \$33.49/bbl;

Natural gas - \$5.23/MMbtu; US active rig count - 1,067

THE REST OF THE YARN

This month TR takes on J.P. Morgan

oosevelt's outlook on the economy was not entirely different from Morgan's. He didn't dispute the benefits of large-scale capitalism, and he thought of huge enterprises as an inevitable development of the Industrial Age. Some politicians of the time wanted to dismantle everything bigger than a hardware store. What Roosevelt wanted was

simply to regulate the big outfits. For starters, he wanted them to open their books. Quarterly reporting in the corporate world was still a novelty and always voluntary. He wanted the government to see into companies' workings so it could judge which combinations were tolerable and which were illegal restraints of trade. "We draw the line against misconduct," he said. "Not against wealth."

Morgan was a man accustomed to handling things personally. One of his biggest objections to the way that Roosevelt had sprung the Northern Securities suit was that the president had not quietly tipped him off in advance. Large sums of borrowed money were at stake, and the abrupt attack by the Justice Department had rattled the markets. In Morgan style, he went to Washington himself to meet with Roosevelt and Attorney General Philander Knox.

Roosevelt left a recollection of the meeting, which remains a classic moment in the history of dealings between business and government. In that account, Morgan asks why the president had not allowed him to take care of the problem without resorting to the courts.

Morgan: "If we have done anything wrong, send your man to my man and they can fix it up."

Roosevelt: "That can't be done."

Knox: "We don't want to fix it up; we want to stop it."

There in brief, was the divide between the new president who had a whip in his hand and the veteran financier who could barely imagine that whips could be wielded by anyone in Washington. After Morgan departed, Roosevelt confided to Knox his bemusement at the financier's manner. Morgan, TR said, had acted as though the president was just "a big rival operator."

Next month, the suits are on!



QUIZ

The oldest oil company in California, circa 1950, was the subject of a book about oil in the West and the history of the oil industry in general. What was the name of that book and what was the oil company that it featured?

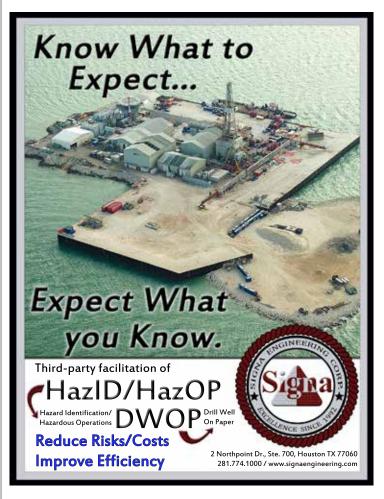
ANSWER TO OCTOBER'S QUIZ

The Granite Wash formation was the foremost source of oil in the Texas Panhandle circa 1925, although there was evidence at the time that it was not the original source of that oil.

> congratulations to september's winner Irv Smith

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







Accurately pinpoint the optimum productive zone and land your well efficiently and effectively.

Our unrivaled drilling technologies and expertise help you minimize risk and maximize reservoir payout.

Call us or visit <u>BakerHughes.com/GoMdrilling</u> to learn how we can help you hit the target. Again. And again. And again...



RESEARCH & DEVELOPMENT

Innovation Performance in the Oilfield

Over the past seven years, Schlumberger has undergone an in-depth transformation of its R&D organization to drive business results in terms of innovation, time-to-market, and product performance. Jan Wouter Smits will speak about Schlumberger's approach to innovation and about some of the focus elements and methodologies that were key ingredients of this transformation. He will include new technology development examples as illustration and conclude the talk with a O&A.

JAN WOUTER SMITS

Jan Wouter Smits has worked at Schlumberger for 24 years, focusing most of this time on engineering and technology development. He is currently Vice President of Engineering, responsible for the new product development organization and methodologies across the Schlumberger business groups.

Smits obtained his MS in electrical engineering from Delft University in the Netherlands in 1990, and then joined Schlumberger in Clamart, France, to work on the design of electronics, sensors, and signal processing for wireline open-hole logging tools. He subsequently held various project management and line management positions in France and the US, concentrating mostly on the development of new LWD and Wireline formation evaluation tools.

Before taking his current role, he held positions as NPD Portfolio Manager for the Wireline segment and then Technology Center Manager of the Houston Center of Formation Evaluation.





EVENT INFO

Thursday

11.5.15

11:30 AM - 1:00 PM

SPEAKER

Jan Wouter Smits VP of Engineering Schlumberger

LOCATION

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

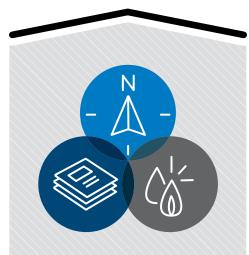
EVENT CONTACT

Kitty Harvey 281-901-3245 Kitty.harvey@c-a-m.com

MEMBERS

\$40

NON-MEMBERS \$45



EVENT INFO

Tuesday 11.10.15

12:00 PM - 1:30 PM

SPEAKER

Randy LaFollette Director, Applied Reservoir Technology Baker Hughes

LOCATION

The Greenspoint Club 16925 Northchase Dr Houston, TX 77060

EVENT CONTACT

Sumitra Mukhopadhyay 281-784-5742 smukhopadhyay @superiorenergy.com

MEMBERS

\$35/\$50 Walk-In

NON-MEMBERS

\$40/\$50 Walk-In

NORTHSIDE

Lessons Learned From Data Mining in Unconventional Reservoirs

Identifying key production drivers in unconventional reservoirs remains challenging, even after decades of exploration and production in North America and tens of thousands of horizontal unconventional wells drilled and completed. Tens to hundreds of variables — categorized as reservoir quality, well architecture, completion, stimulation, and production metrics — are involved, and there are many interrelationships among the variables. Further, formation evaluation is typically minimal, and there are unknown variables in the system that can only be guessed at, ignored, or proxied.

The author's team has combined Geographical Information Systems (GIS) analysis and multivariate analysis using boosted regression trees for improved data-mining results as compared with univariate methods. This lecture will discuss key elements of data mining in unconventional reservoirs, in order to raise awareness of cutting-edge statistical tools and methods being brought to bear in the industry. The presentation will provide highlights of real-world examples of data-mining projects in three different shale plays.

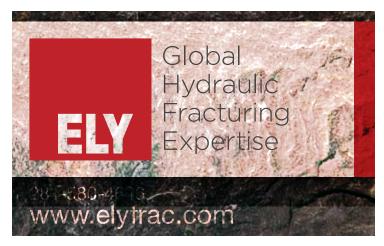
The key takeaways are that exploiting unconventional reservoirs is a highly complex task with many moving parts and that data mining is a needed tool to better understand the importance of specific well productivity drivers. The talk is intended to provide the audience with improved statistical methods for the "statistical" plays so that multi-million dollar decisions can be truly data-driven.

RANDY LAFOLLETTE



Randy LaFollette is the Director, Applied Reservoir Technology for Baker Hughes Pressure Pumping. LaFollette holds a BS degree in geological science from Lehigh University and has 37 years of experience in the industry. He is active in SPE and AAPG, aiding with conference organization and presenting on various reservoir, completion/stimulation, and data-mining topics. LaFollette is a subject

matter expert for Baker Hughes and leads a team of experts responsible for structuring and implementing geospatial and data-mining studies of stimulation effectiveness linking reservoir quality, well architecture, well completion, and treatments performed to production results.





PROJECT, FACILITIES & CONSTRUCTION

A 50-Year History of Safety Awareness in the US Gulf of Mexico

The safety and environmental protection aspects in the design, construction, operation and maintenance of drilling and producing systems are of paramount importance. The industry has always been concerned with safety. Our awareness, however, of how to act on that concern and what is possible from the standpoint of safety has changed over the years.

The history of safety awareness by industry in the US Gulf of Mexico is characterized by periods of slow improvement with dramatic step changes after major accidents. The industry has historically responded with major design and operation changes in offshore drilling and production only in the face of negative publicity from a few highly visible accidents and the threat of regulations. Thus, the history of safety awareness by the industry is generally, with many specific company exceptions, a history of major accidents, the threat of new regulations, and the industry's response to these threats to assure the regulations are both practical and efficient.

This presentation is a personal recollection of past changes and concerns as we go forward in improving safety while addressing new challenges and innovations. Among these concerns:

- compliance attitudes
- SEMS audits
- mentality of punishment
- developing safety cultures
- imagining the impossible
- · training the next generation

KENNETH E. ARNOLD, PE, NAE

Kenneth E. Arnold has 50 years of industry experience, including 16 years at Shell Oil Company. In 1980, he founded Paragon Engineering Services, which was purchased by AMEC in 2005. In September 2007, Arnold retired from AMEC and formed K Arnold Consulting Inc. (KACI). In 2010, he joined WorleyParsons as part-time Senior Technical Advisor while maintaining KACI for independent consulting work.

Arnold is co-author of two textbooks and author of over 50 technical articles on safety management, project management, and facilities design. He has been chosen as an SPE Distinguished Lecturer three times. He has twice served on the Board of SPE, and is currently President of The Academy of Medicine, Engineering and Science of Texas.

Arnold has taught facilities engineering at the University of Houston and Technion in Israel as well as for several oil companies. He is a registered Professional Engineer and serves on the advisory board of the engineering schools of Tulane University and Cornell University and the Petroleum Engineering Advisory Board of University of Houston.



EVENT INFO

Tuesday

11.10.15

4:30 PM - 6:00 PM

SPEAKER

Kenneth E. Arnold, PE, NAE
President
K Arnold Consulting Inc.

LOCATION

Wood Group Mustang Inc. Clydesdale Bldg 17320 Katy Freeway Houston, TX 77084

EVENT CONTACT

Bryan W. Marlborough 281-647-8385 bryan.marlborough @woodgroup.com

MEMBERS

\$35/\$50 Walk-In

NON-MEMBERS

\$45/\$50 Walk-In

STUDENTS

\$10

REGISTRATION LINK

spegcs.org/events/3035/





Why keep using outdated economics and reserves software that's hard to learn and costly to support?

Get answers with Value Navigator® – forecasting, economics and reserves in one highly accurate, easy-to-learn system. Val Nav is feature-rich and robust. It's backed by expert conversion assistance, and includes ongoing support, training, and version upgrades. No wonder more than 300 E&P companies worldwide see it as the perfect answer to manage and report on over 2.7 million boe/day in total production.

Get all the answers about Val Nav.

Visit energynavigator.com/answers or call Sheldon Winters at 1-866-856-9544.





WATER & WASTE MANAGEMENT

Beneficial Reuse of Oilfield Byproducts - Opportunities and Challenges

The successes of beneficial reuse are well recognized. Examples of beneficial reuse in the oilfield include energy recovery, rigs to reefs, crop irrigation with produced water, enhanced oil recovery with produced water, reuse of flow-back water in hydraulic fracturing operations, reuse of non-aqueous fluids, use of cuttings as construction aggregate, and use of cuttings as a soil amendment.

These reuse opportunities reduce both waste generation and resource consumption. While there is clear evidence these techniques are both cost effective and good for the environment, they often face significant challenges in their application from technical, cost, regulatory, and liability barriers. This presentation will review examples of technologies that have overcome barriers and others that continue to struggle to work their way into common use.

JOHN CANDLER

John Candler is responsible for global environmental compliance for M-I SWACO Schlumberger and works with customers, industry work groups, and regulators to support their efforts to protect the environment. He has a degree in civil engineering from Louisiana State University and is a registered Professional Engineer in the state of Texas.

Since 1987, Candler has been actively involved in researching and advancing environmentally advanced drilling fluid systems and treatment processes for drill cuttings. In the mid-1990s, he was a significant contributor to industry efforts to develop appropriate discharge regulations for the use of synthetic-based muds. Other recent research projects have included beneficial reuse of drill cuttings.





Tuesday **11.10.15**

11:30 AM - 1:00 PM

SPEAKER

John Candler
Operations Integrity Development
Manager – Process Safety
M-I SWACO Schlumberger

LOCATION

The Petroleum Club of Houston 1201 Louisiana St, 35th Floor Houston, TX 77002

EVENT CONTACT

Reshmy Mohanan 713-344-4094 reshmy.mohanan@me.com

MEMBERS

\$40/\$50 Walk-In

NON-MEMBERS

\$50

STUDENTS/UNEMPLOYED

\$10

REGISTRATION LINK

spegcs.org/events/3063/







DRILLING

Dilution Based Dual Gradient Drilling

The dilution based dual gradient drilling system concept and development work started in 2002. A dual gradient drilling system improves well safety by restoring kick margins and drilling with enhanced kick detection. It improves well efficiency by using less casing and liner strings, a larger hole size at well TD, and earlier and more production. It reduces risk for both exploration and development wells.

Dual gradient drilling is not only for deepwater wells. It can also be used for platforms, spars, and jackup wells. Dual gradient combined with managed pressure drilling is safer and reduces drilling time. This presentation describes the benefits of a dual gradient drilling system, the applications, and the advantages.

LUC DEBOER



Luc deBoer has over 40 years of experience in the oil and gas industry, including 15 in deepwater and ultra-deepwater projects. He started his career in the oil and gas industry in 1975 as a drilling rig contractor. After five years working for SEDCO in various positions, in 1980 he went to work for Phillips Petroleum as an Offshore North Sea drilling supervisor. In 1986, he moved onshore in the drilling and engineering group.

In 1995, deBoer transferred to Phillips corporate headquarters

in Bartlesville, OK, to work on international drilling projects. After leaving Phillips Petroleum in 1997, he started his own engineering company, eventually founding Dual Gradient Systems, LLC in 2000.

DeBoer spent over six years developing the basic tools of dilution-based dual gradient drilling, and engineered and field tested the fundamental aspects of the DG separation process. He has been granted eight patents related to his technology, and in 2007, Transocean took on the dilution based dual gradient system for its CAPM project.

His education includes a BS in mechanical engineering with professional memberships in SPE, IADC, and AADE.





Wednesday 11.11.15

11:30 AM - 1:00 PM

SPEAKER

Luc deBoer President and Founder Dual Gradient Systems, LLC

LOCATION

The Greenspoint Club 16925 Northchase Dr Houston, TX 77060

EVENT CONTACT

Tom Wick 713-806-2631 Fieldwick2@gmail.com

_____ **MEMBERS**

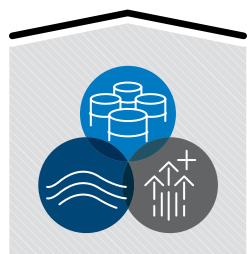
\$35

NON-MEMBERS

\$45

STUDENTS

\$10



EVENT INFO

Thursday **11.12.15**

11:30 AM - 1:00 PM

SPEAKER

Mike Stell Advising Senior Vice President Ryder Scott

LOCATION

Sullivan's Steakhouse 4608 Westheimer Rd Houston, TX 77027

EVENT CONTACT

Alexsandra Martinez 956-249-0994 adinorah.martinez@gmail.com

MEMBERS

\$35/\$45 Walk-In

NON-MEMBERS

\$40/\$45 Walk-In

RESERVOIR

Reservoir Evaluations in the Eagle Ford Shale

This talk will discuss a broad range of topics in geology, completions and performance in the Eagle Ford. The presentation will include structure and hydrocarbon maps, log response, completion lateral length, EURs, and type curves. In addition, volumetric determinations, recovery factors, and well spacing considerations will be discussed, as well as undeveloped reserve assignments.

MIKE STELL



Mike Stell is an Advising Senior Vice President with Ryder Scott. He serves as a technical advisor responsible for coordinating and supervising staff and consulting engineers of the company in ongoing reservoir evaluation studies worldwide. Before joining Ryder Scott in 1992, Stell served in a number of engineering positions with Shell Oil Company and Landmark Concurrent Solutions.

Stell earned a Bachelor of Science degree in chemical engineering from Purdue University in 1979 and a Master of Science degree in chemical engineering from the University of California, Berkeley, in 1981. He is a licensed Professional Engineer in the State of Texas. He is also a member of the Society of Petroleum Engineers and the Society of Petroleum Evaluation Engineers.





GENERAL MEETING

Advances and Challenges in Dynamic Characterization of Naturally Fractured Reservoirs

The industry has recognized that dynamic reservoir characterization, from wellbore pressure to production behaviors, is a key driver for maximizing production and recovery. Accurate simulation requires appropriate modeling of the existing heterogeneities in the field. Most of the main fields around the world produce from naturally fractured vuggy reservoirs, in which matrix, fracture network, and high vuggy porosity are usually present. The effects of vugs on permeability are related to their connectivity. Also, some fractured reservoirs exhibit a fractal behavior, which describes fractures with different scales, poor fracture connectivity, and disorderly spatial distribution. The behaviors of both fractured-vuggy and fractal reservoirs cannot be explained by the conventional dual-porosity model.

This lecture addresses the above characterization approaches and reviews field applications using pressure transient and rate data. It also presents the current and future vision for an appropriate dynamic characterization of these reservoirs.

DR. RODOLFO CAMACHO-VELÁZQUEZ

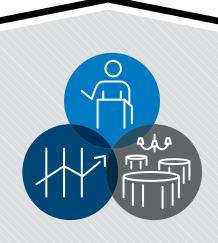


Dr. Rodolfo Camacho-Velázquez is the Manager of Production Technology at Pemex and has more than 30 years of experience in academia and industry. He has developed several well test analysis techniques and interpretation methods for production data. He has written or co-written more than 100 technical papers on petroleum engineering. Camacho-Velázquez holds MS and PhD degrees in

petroleum engineering from the University of Tulsa. He is an SPE Distinguished Member and a recipient of the 2008 Lester C. Uren Award. He is a Society of Petroleum Engineers Distinguished Lecturer for 2015-2016.

Camacho-Velázquez's trip to Houston to make this presentation is being sponsored by RPSEA (Research Partnership to Secure Energy for America). We are thankful to the staff at RPSEA for making this presentation possible.





EVENT INFO

Monday **11.16.15**

11:30 AM - 1:00 PM

SPEAKER

Dr. Rodolfo Camacho-Velázquez Director's Advisor Pemex

LOCATION

The Petroleum Club of Houston 1201 Louisiana St, 35th Floor Houston, TX 77002

EVENT CONTACT

Barry Faulkner 281-627-8790 barryfaulkner@earthlink.net

MEMBERS

\$35

NON-MEMBERS

\$40

REGISTRATION LINK

spegcs.org/events/3012/







HSSE-SR

Increasing Operational Integrity Through Optimized HSE Processes & Systems Integration

In a constantly changing industry, Anadarko recognized the opportunity to improve operational integrity and foster more fluent continual improvement through process standardization, enablement, and reinforcement through technology. Specifically, Anadarko's leadership identified six key objectives for the business—two of which are environmental performance and operational health and personal safety. Anadarko then established a strategic plan to realize the desired improvements to these processes and solutions. One of the foundational elements of the strategy was to standardize the tools and systems on which the underlying business processes are enabled once optimized.

To do this, Anadarko selected SAP's suite of EHS/Sustainability solutions and have since designed and implemented SAP's EHSM-Incident Management solution globally in order to provide a key foundational piece of the operational risk management strategy. The solutions enable reduction of risks associated with both planned and unplanned events by ensuring all risks were more holistically managed, and that corrective and preventative tasks were monitored and completed satisfactorily.

Anadarko has set a vision and a plan for transforming operational risk management processes, ensuring safer and supporting continual improvement in operations around the globe. Join us on November 17 to learn more about Anadarko's path to standardization.

CHELSEA LACKEY

Chelsea Lackey is the leader of Anadarko's Corporate Health, Safety & Environmental (HSE) Analytics & Systems team. Her responsibilities include developing and implementing enterprise strategies aimed at improving the company's operational integrity and excellence through data analysis and communications. Lackey is also responsible for the corporate Environmental Management Information System strategy and roadmap and coordinating internal HSE reporting. She successfully led the implementation of the SAP Business Intelligence for HSE and supported the implementation and global deployment of the SAP-EHSM Incident Management into all Anadarko locations worldwide. Prior to joining Anadarko, Lackey held various roles in Corporate HSE&S at Baker Hughes Inc., leading continual improvement and corporate reporting. She began her career in the field as an HSE Representative. Lackey received her Bachelor of Science in agricultural business from Texas A&M University and is currently completing her Master of Business Administration.



EVENT INFO

Tuesday **11.17.15**11:30 AM - 1:00PM

SPEAKER

Chelsea Lackey Leader of Corporate Health, Safety & Environmental Analytics & Systems Anadarko

LOCATION

Hilton Westchase 9999 Westheimer Rd Houston, TX 77042

EVENT CONTACT

Trey Shaffer 832-209-8790 trey.shaffer.com

MEMBERS

\$45

NON-MEMBERS \$50





EVENT INFO

Tuesday **11.17.15**11:30 AM - 1:00 PM

SPEAKER

Dr. Horacio Ferreira Founder and CEO Surpetrol Inc.

LOCATION

The Petroleum Club Houston 1201 Louisiana St, 35th Floor Houston, TX 77002

EVENT CONTACT

Barry Chovanetz 214-475-771 bchovanetz@yahoo.com

MEMBERS

\$35

NON-MEMBERS \$40

INTERNATIONAL

Mexico Series: The Pros and Cons of Operating in Mexico

During this presentation, Dr. Horacio Ferreira will discuss his experiences testing wells in Mexico, in particular the use of sophisticated multiphase measurement technology. At one stage, he almost held a monopoly of well testing for Pemex. He will discuss both the environmental and local content experiences with Pemex in Mexico.

DR. HORACIO FERREIRA



Dr. Horacio Ferreira has more than 20 years of domestic and international experience in the oil and gas industry. He is the President and CEO for Surpetrol Inc., an engineering company based in Houston, and also serves on the Board of Directors for the Colombian company Ecopetrol.

He has conducted research in optimization of multiphase meters, underbalanced reservoir engineering, real time reservoir and production analysis, reservoir simulation, and waterflood techniques with horizontal wells.

Before Surpetrol, Ferreira worked for Weatherford and Roxar as a team leader in reservoir engineering applications using state-of-the-art-technology. Ferreira holds MS and PhD degrees in petroleum engineering from Texas A&M University. He has several publications in reservoir management.

Integrated Energy Services ,Inc.

Robert Barba Petrophysicist Log Analysis Completion Optimization

> 500 N. Capital of TX Hwy Building 4-150 Austin, TX 78746 C: (713) 823-8602 F: (713) 583-9400 RBarba75@gmail.com

www.integrated-energy-services.com

BUSINESS DEVELOPMENT

Enhanced Completions - E&P Case Studies

Operators relentlessly make step-change advancements in delivering greater value from new wells, driven by reductions in cost, increased efficiencies, and improvements in productive impact. Drilling engineers generate charts showing an ever-reducing number of days from spud to TD. The only limit seems to be how fast they can lower drill pipe down the hole. And yet all that is for naught if the well cannot be completed and stimulated to unlock the true value of the formation. Please join us for a moderated panel discussion by top experts who will share case studies on how they have continuously increased rates, EURs, and value delivered by improving the completion and stimulation techniques utilized in their wells. You will learn:

- · What were the keys to these advancements?
- What have been the main improvements within the wellbore?
- How have SRVs been manipulated to deliver better results?
- · What are the trends in advanced stimulation strategies to create near field fracture diversion?
- What has been the impact of low commodity prices on the methods used to achieve success?
- Do refracs offer an opportunity with existing well inventory?

Please join us at the Four Seasons for this informative discussion. The popular format of a business and social networking hour, with complimentary hors d'oeuvres and a cash bar, followed by a 90-minute program including a Q&A session, will begin at 5:00 PM in the Mezzanine.

GARTH STOTTS

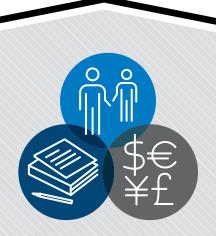


Garth Stotts is Chief Reservoir Engineer at SM Energy Company. He is responsible for technical advancement and integration of reservoir engineering best practices across the company. His extensive knowledge and innovative approach to technical data add maximum value to SM's assets.

Before joining SM in January 2014, Stotts worked in a variety of reservoir engineering capacities for EOG, Husky Energy, Ryder Scott, and Fekete, where he gained an in-depth understanding of successful unconventional resource plays. Since 2005, he has analyzed hundreds of wells in unconventional oil and gas reservoirs, published technical papers, and managed several reservoir studies in a variety of plays, including the Eagle Ford and Midland Basin.

Stotts earned a BS in engineering with distinction from the University of Alberta and is an active member of SPE.

Season Pass Holders: You do not need to register for this event, as your Season Pass has automatically registered you for all 2015-2016 Business Development events. Thank you for being a Season Pass holder!



EVENT INFO

Wednesday

11.18.15

5:00 PM - 7:30 PM

SPEAKERS

Garth Stotts
Chief Reservoir Engineer
SM Energy Company
Other speakers TBD
See registration link

LOCATION

Four Seasons Hotel Downtown Houston 1300 Lamar St Houston, TX 77010

EVENT CONTACT

Cody Felton 281-221-3042 Cody.Felton@energynet.com

MEMBERS

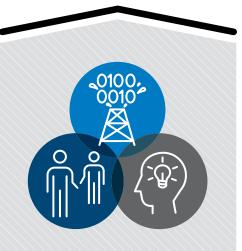
\$40/\$50 Walk-In

NON-MEMBERS

\$45/\$50 Walk-In

REGISTRATION

spegcs.org/events/2976/



EVENT INFO

Wednesday **11.18.15**

11:30 AM - 1:30 PM

SPEAKER

Mario Chiock Security & Technology Executive Advisor Schlumberger

LOCATION

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

EVENT CONTACT

Alvin Barber 713-513-2431 abarberspe@gmail.com

MEMBERS

\$35/\$45 Walk-In

NON-MEMBERS

\$40/\$45 Walk-In

REGISTRATION LINK

spegcs.org/events/3062

DIGITAL ENERGY

The Rising Threat - Guarding Against the New Generation of Cyber-Attacks

In 2014, Norwegian E&P executives from more than 300 companies found themselves the target of a sophisticated spear-fishing campaign designed to gain access to corporate servers. These incidents are particularly troubling since hackers researched personal details about each individual before their attack. With over 45% of energy organizations victimized by cyber-attacks in 2014 (higher than any other corporate sector), it is understandable why cyber-security, both corporate and personal, has moved to the forefront of security concerns.

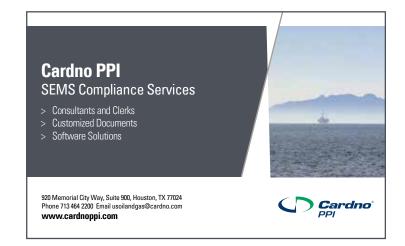
This presentation will provide thought-provoking details on cyber-threat essentials — covering recent examples of corporate attacks, as well as how to assess your own vulnerabilities, detect security breaches, and implement measures to reduce your personal and organizational exposure to cyber-attacks.

MARIO CHIOCK



Mario Chiock is the Security & Technology Executive Advisor at Schlumberger. He has more than 23 years of experience in cyber-security. In 2014, he was named Information Systems Security Association Fellow. He also has received the 2014 CSO40 award, the ISC2-Information Security Leadership Award, and the ISSA Honor Roll award.

He was recognized as one of the top 25 out of more than 10,000 security executives in the ExecRank 2013 Security Executive Rankings and won the 2012 Central Information Security Executive People Choice Award. He chairs the information security subcommittee for the American Petroleum Institute and is the vice president for the Houston InfraGard.



WESTSIDE

Unconventional Well Refracturing: Where Is the Industry Heading?

Across all oil and gas plays, the rapid evolution of completion and stimulation designs has created enormous opportunities to re-enter and restimulate wells that were completed early in the play development. Early understimulation (often in the best rock) has resulted in potentially significant reserves being left behind pipe for redevelopment consideration. This presentation will summarize feedback from a recent SPE applied technology workshop that addressed:

- · Selection process for refracturing candidates
- Well integrity (including regulatory issues and BLM language)
- · Deployment techniques and intervention requirements
- Zonal isolation techniques
- · Chemical and mechanical diversion
- Fracture stimulation design (in a fractured well)

Reporting on the general trends, experiences, and expectations from various operators and service providers, the presentation will summarize and compile the messages that were delivered across the two-day meeting.

MARTIN RYLANCE



Martin Rylance is the Senior Advisor and Engineering Team Lead for the Fracturing and Stimulation Group within the BP Global Wells Organization. He has worked with BP, its partners and JVs for more than 28 years since graduating with honors with a BS in pure mathematics. At BP, he has held the positions of Interventions Team Lead with BPX in Bogota, Senior Engineer with TNK-bp in Moscow,

and Project Manager with BP in a number of frontier exploration areas.

Rylance has been involved in all technical aspects of pumping operations, well control, well interventions, and pressure services, including hydraulic fracturing, snubbing, stimulation, coiled-tubing, PWRI, and cuttings reinjection. In more recent years, he has specialized in the development of tight oil and gas reservoirs, and hydraulic fracturing in tectonic and HTHP environments. He has numerous papers and publications to his name with SPE, AIME, and various numerical and geological societies. He is an active member of SPE and the ASME Executive Committee, and served as an SPE Distinguished Lecturer in 2008-09 and 2013-14.



EVENT INFO

Wednesday **11.18.15**

11:30 AM - 1:00 PM

SPEAKER

Martin Rylance
Senior Advisor and
Engineering Team Lead
BP Global Wells Organization

LOCATION

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

EVENT CONTACT

Stephen Loving 713-328-2244 stephen.loving@corelab.com

MEMBERS

\$40/\$45 Walk-In

NON-MEMBERS \$45





Success Rate							
Solutions Matrix	Cement Squeeze	Solid Expandable					
Longevity	Low	High					
Isolation	Low to Medium	High					
Integrity	Low to Medium	High					

Save the cement! Contact the expandable tubular experts at Enventure to maximize the efficiency and value of your well.

www.EnventureGT.com





1.281.552.2200









Integrated Directional Drilling Services

Innovative
Directional Drilling
services centered around

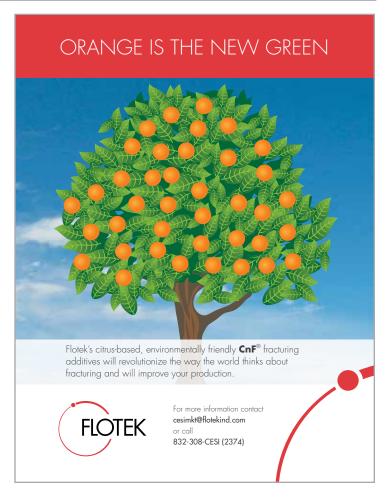
High Performance Rigs

Unearth additional performance gains when you pair a rig with a downhole toolset - designed to work together. Learn more:

www.precisiondrilling.com/directional

- high quality people
- lower well costs and HSE risk
- higher quality wellbore





PERMIAN BASIN

What's Old Is New Again: A Minifrac Perspective

By definition, during Nolte flow, pressure versus G-time has a constant slope, and Nolte flow is a sign of an open fracture. The departure from this constant slope is evidence of closure. Everyone would typically agree on this closure pick. Height recession, transverse storage, pressure dependent leak-off, and tip extension, however, appear to be the more common signatures reported in well reports highlighting a) more complex reservoirs, b) problematic data sets, c) incorrect use of the G-function plot, d) misunderstanding of the fluid leak-off dynamics, or all of the above.

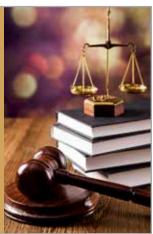
Welltest solutions developed in the late '80s and early '90s are shown to be very beneficial for closure identification and after-closure analysis in shale plays and require a second look. This presentation will look back at some of the welltesting community's "trade secrets" and will show how they can be easily used in today's complex reservoirs.

ROBERT V. HAWKES

Robert V. Hawkes graduated from the Southern Alberta Institute of Technology in Calgary, Alberta, with a diploma in petroleum engineering technology in 1979. Since graduation, he has worked on many basins in the oil and gas industry and is currently the Corporate Director, Reservoir Solutions, for Trican Well Service Ltd. in Calgary.

A leader in his field, Hawkes has been published in JCPT and JPT and was co-author of Chapter 3, "Gas Well Testing and Evaluation," of the 2007 Modern Fracturing - Enhancing Natural Gas Production engineering textbook. Hawkes was a 2008 Distinguished Lecturer with the Society of Petroleum Engineers and the recipient of the 2011 SPE Canadian Reservoir Description and Dynamics award.







EVENT INFO

Thursday **11.19.15**

11:30 AM - 1:30 PM

SPEAKER

Robert V. Hawkes Corporate Director, Reservoir Solutions TriCan Well Service Ltd.

LOCATION

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

EVENT CONTACT

Amy Timmons Atimmons1114@att.net

MEMBERS

\$35/\$40 Walk-In

NON-MEMBERS \$40/\$45 Walk-In

ProTechnics

KNOW WHERE PRODUCTION IS COMING FROM

Maximize Production
+++Increase Revenue



Fluid Diagnostic Tracer

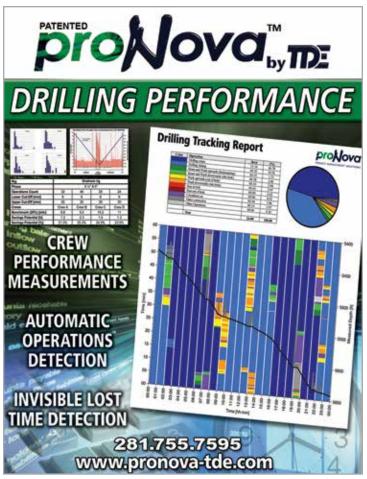
The industry's first comprehensive after-frac flow profile tracer technology that simultaneously evaluates both frac fluid clean-up and hydrocarbon production over time.

FLOWPROFILER provides critical information such as:

- Simultaneous Zonal Clean-Up & Production
- Hydrocarbon Production Indexed to Geologic Horizons
- Hydrocarbon Production Over Time
- Well Spacing Insights



For more information on FlowProfiler, visit us at www.corelab.com/protechnics or call us at 713-328-2320





The Role of Mergers & Acquisitions in Resetting the Energy Landscape

Mergers and acquisitions have played an important role in the evolution of the energy industry. The current market environment is certainly one that should encourage M&A activity.

This will be a structured discussion based on the experience and opinion of one CEO. Topics will include:

- Where has M&A worked and not worked in support of corporate strategies?
- What conditions do CEOs and boards of directors need to consider as the buyer?
- What common mistakes are made in considering M&A?

DAVID D. DUNLAP



David D. Dunlap has been President, Chief Executive Officer, and a Director of Superior Energy Services since 2010. Superior Energy Services serves the oil and gas industry through drilling products and services, subsea and intervention technologies, and broadranging marine services.

Under Dunlap's leadership, Superior has grown through strategic acquisitions, including Complete Production Services in 2012. That acquisition accelerated Superior's expansion into the US land market and doubled the size of the company.

Dunlap received the 2013 Transformational CEO award for the United States Gulf Coast Area presented by Ernst & Young's Entrepreneur of the Year Awards program.

Before joining Superior, Dunlap was Executive Vice President and Chief Operating Officer for BJ Services Company. During his 25-year career there, heserved in engineering, operations, and management positions.

Committee: Young Professionals

Volunteering at The Beacon

Please join SPE-GCS Young Professionals in their support of The Beacon, a non-profit 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. On November 8, it will be the SPE-GCS Young Professionals who answer the call to service. Please come and bring friends or family.

Please have a good breakfast before arriving in order to remain energized throughout the event, which goes beyond the typical lunchtime and may involve some physical activity. You may also bring gently used or new items to donate.

REGISTRATION: spegcs.org/events/2968/

EVENT INFO

MONDAY

11.2.15

11:00 AM - 1:00 PM

SPEAKER

David D. Dunlap President & CEO Superior Energy Services

EVENT LOCATION

The Petroleum Club of Houston 1201 Louisiana St, 35th Floor Houston, TX 77002

EVENT CONTACT

Sahil Malhotra 832-854-7885 sahil.malhotra@chevron.com

MEMBERS/NON-MEMBERS \$20



Dialogue will be encouraged at this event, and the use of PowerPoint presentations will be limited.

EVENT INFO

SUNDAY

11.8.15

10:30 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



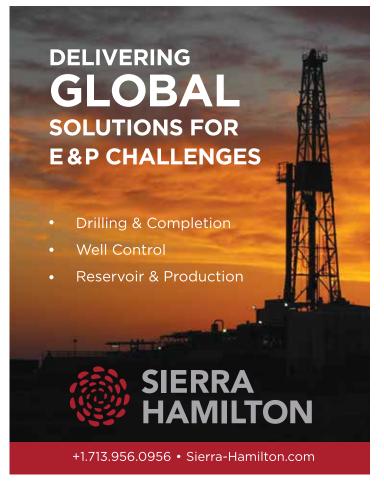








A LEADER IN WELL COMPLETION

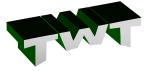


ENGINEERS OF ALL DISCIPLINES

Want to get Professionally Registered
But have not passed the FE Examination
And have been out of college more then four years
Then contact us to find out how to get prepared
And pass the FE Exam the first time.
The technique has a 98% + pass rate to date.

Next FE Exam Dates: April 16 and October 29, 2016

P: 405-822-6761 | E: bingwines@cox.net winrockengineeringinc.com



The Wells Team LLC.

Deep Water Engineers

Providing Services in:

Well Planning

Wellbore Certifications

Consulting

979-479-5778 713-825-9544 A Registered Engineering Firm 13155

Accelerated Learning Tutorial: Introduction to Gas Lift Systems

This one-day tutorial will give attendees a broad overview of gas lift operations, with an emphasis on deepwater applications.

Topics include downhole equipment involved in gas lift operations, gas lift design procedure, and effects of operational changes. Attendees will also be briefed on basic troubleshooting issues. Topics covered include:

- Introduction
- Overview of gas lift
- Major system components
- High reliability deepwater solutions
- Design process for gas lift systems
- Daily operations
- Troubleshooting
- Reference information

SANDIP MELKAVERI

Sandip Melkaveri works as a Gas Lift Technical Support Specialist in the Artificial Lift Systems group at Weatherford International. His primary duties include providing technical support to customers and Weatherford personnel vis-à-vis designing and troubleshooting gas lift installations. He also teaches the "Gas Lift Fundamentals in Artificial Lift Training" seminar and is an assistant instructor for a three-day gas lift applications seminar. Beginning his career as a mud-logger, he has eight years of experience in the oil and gas industry. He holds a BS degree in petrochemical engineering from Andhra University, India, and a MS degree in petroleum and natural gas engineering from West Virginia University.

CORBIN MOZISEK

Corbin Mozisek works as a Specialist in the US Gas Lift Systems group at Weatherford International. Mozisek's duties include providing technical training and support to clients and Weatherford personnel. Weatherford operations and sales teams also look to him as a technical resource for both gas lift designing and troubleshooting. Beginning his career in 2006, he has nine years of experience focused mainly in gas lift. He holds a BS degree in business from the University of Houston.

EVENT INFO

THURSDAY

11.5.15

8:30 AM - 4:30 PM

SPEAKERS

Sandip Melkaveri Corbin Mozisek

EVENT LOCATION

SPE-GCS Training Center 10777 Westheimer Rd, Ste 1075 Houston, TX 77042

EVENT CONTACT

Sunil Lakshminarayanan 832-627-3470 sunil_lakshminarayanan@oxy.com

MEMBERS & NON-MEMBERS \$350

REGISTRATION

spegcs.org/events/3049

NOTE

A limited number of subsidized passes for this one-day tutorial will be available for students, retired professionals, and professionals with no corporate support.

Committee: Auxiliary

PROGRAM

This month brings another informal gathering of friends and guests for a fine lunch at Bistro le Cep. There will be no program, but plenty of time for visiting with friends. Lunch will be on separate checks.

EVENT CONTACTS

Evelyn Earlougher Nancy Hill 281-419-1328 281-435-1619

eearlougher@comcast.net Nancyhill2444@sbcglobal.net

EVENT INFO

FRIDAY

11.13.15

EVENT LOCATION

BISTRO le CEP 11112 Westheimer Road @ Wilcrest Houston, TX 77042 713-783-3985

Measure oil and gas stage flow... optimize future well development.

A Tracer Production Log[™] gives continuous data to help plan your next well:

- · Clean out efficiency
- · Compare geology with oil and gas productivity
- Assess stimulation design effectiveness
- Well trajectory and spacing optimization

Frac smart, recover more with Tracerco technologies

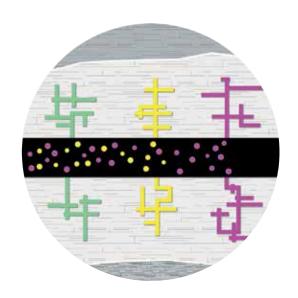
To learn more about our local field and lab capabilities contact:

4106 New West Drive, Pasadena, TX 77507, USA

Tel: +1 281-291-7769 | Fax: +1 281-291-7709 | www.tracerco.com/reservoir-characterisation



Providing Insight Onsite







PetroSkills'

To maximize convenience, PetroSkills will deliver our most popular courses multiple times in Houston in 2016, but there is still time to enroll before the end of the year...

Enroll soon to ensure your seat!







- Basic Petroleum Engineering Practices BE:
 November 16-20, December 14-18
- Production Operations 1 PO1:
- December 7-18
- Applied Reservoir Engineering RE:
 - November 9-20, December 7-18
- Completions and Workovers CAW:
 November 30 December 4

See the 2016 Schedule now at petroskills.com/catalog

For details on these or our other 250 sessions in the Gulf Coast, contact Patty Davis, (832) 426-1203 or patty.davis@petroskills.com, or see details and full selection at www.petroskills.com

At Petrolink we see things a little more clearly. You can too with our advanced real-time visualization tools. From customizable displays and collaborative environments to powerful analytics and reporting, we help you spot trends, gain insights and see the potential in your operations.

www.petrolink.com

Thermal Recovery of Bitumen Resources: Oil and Gas Firms Find New Solutions in the Aerospace and Defense Industry

The oil and gas industry has been effective at optimizing its technologies. But as the pool of resources has become increasingly unconventional — tighter, deeper, hotter, heavier, etc. —new technologies are called for.

Periods of low oil prices heighten the call. Many firms are looking in earnest outside the sector for step-change technologies that can enable unconventional resource development and dramatically reduce capital and operating costs, regardless of conventionality. Harris Corporation, a leading aerospace and defense contractor, will discuss its work with exploration and production companies worldwide to introduce technologies previously unavailable to the oil and gas industry.

This presentation will show how Harris' radio frequency-based technology is being developed for the thermal recovery of bitumen resources. The development is being performed in partnership with Suncor, Devon, Nexen/CNOOC and Alberta's Climate Change and Emissions Management Corporation. Other potential applications of this technology, such as in thermal fracturing and formation damage remediation, will be discussed.

The presentation will also describe several other technology areas that may be of particular interest to the oil and gas industry, but that are highly advanced in the defense and aerospace sector. The areas include photonics and fiber optics, mechatronics and robotics, advanced structural and thermal analysis, electronics design and packaging, remote monitoring and operations, and large data management and data analytics.

The technology areas will be of interest to firms looking for new ways to access unconventional resources and to increase production, lower cost, and drive more efficiency into their operations.

DR. BRIAN BLAKEY

Dr. Brian Blakey is Vice President and General Manager for the Energy Solutions business area for Harris Corporation. Harris is an international communications and information technology company serving government and commercial markets in more than 125 countries.

Blakey is responsible for the technical development and commercial introduction of Harris' RF-based system for the thermal recovery of heavy oil and bitumen resources. He is also responsible for the development and commercialization of other Harris technologies for the oil and gas industry, such as photonics and fiber optics, mechatronics and robotics, advanced structural and thermal analysis, electronics design and packaging, remote monitoring and operations, large data management and advanced data analytics.

Before joining Harris, Blakey served in a number of director-level roles for the oilfield services company Baker Hughes and as an engineering manager for GE's Energy division.

EVENT INFO

THURSDAY

11.12.15

11:30 AM - 1:00 PM

SPEAKER

Dr. Brian Blakey Vice President & General Manager Energy Solutions

EVENT LOCATION

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

EVENT CONTACT

Carol Piovesan 949-232-6353 cpiovesan@APOoffshore.com

MEMBERS & NON-MEMBERS \$35

Build more production and assurance into your deepwater wells

By engineering our SCALEGUARD® proppant-delivered scale inhibiting technology with KRYPTOSPHERE® HD ultra conductive, high-density ceramic proppant as the substrate, CARBO has created a unique technology ideally suited to Gulf of Mexico Lower Tertiary development.

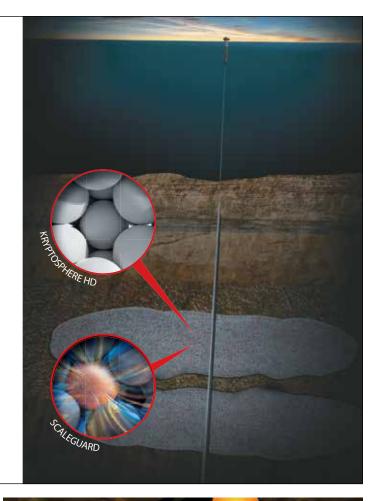
The tailored technology provides the highest level of long-term conductivity and maintains fracture integrity under cyclic loading in ultra-high closure stress formations, together with long-term protection from scale throughout the entire production network.

Build enhanced production, reduced lifetime cost and less risk into your next deepwater Gulf of Mexico well with CARBO.



Production. Enhanced.

carboceramics.com









2015 Annual SPE-GCS Petroleum Engineering High School Recruiting Fair

Curious about an exciting and financially rewarding career? The SPE-GCS Petroleum Engineering High School Recruiting Fair is designed to encourage high school students to consider careers in petroleum engineering.

The event will have representatives from various universities to answer questions from students and provide additional information about their engineering programs and admission processes. Students, parents and teachers are all welcome.

The two-hour event will have a 30-minute program of speakers, including recent grads, industry leaders, and university recruiters. Universities participating in the past have included Colorado School of Mines, Louisiana State University, Marietta College, Montana Tech, University of Oklahoma, Penn State, Texas A&M University, Texas Tech University, University of Tulsa, University of Missouri-Rolla, and University of Texas.

Throughout the school year, SPE volunteers are available to speak to students and adults about the oil business, thereby increasing public understanding of the science and engineering involved in our industry. For more information about our programs, please contact Katie Essary, High School Recruiting Chair.

EVENT INFO

WFDNFSDAY

11.18.15

7:00 PM - 9:00 PM

LOCATION

Memorial High School 935 Echo Lane Houston, TX 77024

EVENT CONTACT

Katie Essary 713-372-1281 katieessary@chevron.com

REGISTRATION

spegcs.org/events/3064/

FREE ADMISSION

Oilfield Games

Oilfield Games

In an innovative approach to both fundraising and networking, SPE's Gulf Coast Section introduced the OilSim Competition earlier this year to raise funds for local petroleum engineering scholarship recipients. Help us make the second annual event bigger and better by supporting the newly rebranded Oilfield Games: sign up to volunteer on the committee, participate as a player, or donate a sponsorship!

This year's event will take place in the spring of 2016 and will again feature an oilfield simulation training software. In this interactive gaming event, teams will work together to produce profitable fields whilst upholding good corporate citizenship. Come put your technical knowledge to the test in this real-life simulation of the collaborative aspects of oil and gas ventures – may the odds be ever in your favor!

The success of Oilfield Games hinges on the support of our sponsors. We are seeking donations as follows.

- \$10,000 Diamond Event Sponsor
- \$7,000 Platinum Sponsor
- \$5,000 Gold Sponsor
- \$3,500 Silver Sponsors (2)
- \$2,000 Bronze Sponsors (3)

EVENT INFO

EVENT CONTACT

Lindsey Ferrell spevolunteer@frontline-group.com 281-453-6058

MEMBERS

\$65

NON-MEMBERS

\$75

For more information about sponsorships, participating or volunteering, please contact the event Chair, Lindsey Ferrell.

2015-2016 SPE-GCS

SPONSORSHIP OPPORTUNITY

The 2015-2016 program year for SPE-Gulf Coast Section (SPE-GCS) has started, and a new opportunity to sponsor the SPE-GCS is available this year!

Proceeds from sponsorships will benefit the SPE-GCS Scholarship Fund, which has awarded more than \$3 million in scholarships since 1963 to local engineering students. Please consider investing in this important SPE-GCS program so that we can continue to support our aspiring oil and gas professionals

Platinum \$50,000

- Sponsorship of SPE-GCS newsletter, GCS Connect (3/4 year-company name, no logo on front cover)
 - A four-year SPE-GCS scholarship presented in your company name
- Sponsored table at annual Awards Banquet 4 attendees from your company to sit with 2 scholarship winners and their parents
 - SPE-GCS website advertisement (www.SPEGCS.org) full year
 - Verbal recognition of sponsorship at 2 key meetings (TBD)
 - 3 gratis slots at two different study group meetings
 - 1 speaking opportunity at a study group or SPE-GCS event (TBD)
- Sponsorship of Casino Night (4 tickets) or Oilfield Games (train 4 young professionals/1 team) and 1 team at the Tennis, Golf or Sporting Clays Tournament (1 team or 4 people)

Gold \$30,000

- Sponsorship of SPE-GCS newsletter, GCS Connect (1/4 year-company name, no logo on front cover)
 - Sponsored table at annual Awards Banquet 4 attendees from your company to sit with
 - 2 scholarship winners and their parents
 - SPE-GCS website advertisement (www.SPEGCS.org) 6 months
 - Verbal recognition of sponsorship at one key meeting (TBD)
 - 2 gratis slots at two different study group meetings
- Sponsorship of Casino Night (4 tickets) or Oilfield Simulation competition (train 4 young professionals/1 team) or one team at the Golf, Tennis or Sporting Clays Tournament (1 team or 4 people)

Silver \$15,000

- SPE-GCS website advertisement (www.SPEGCS.org) 3 months
- Verbal recognition of sponsorship at a key meeting (TBD)
 - 2 gratis slots at one study group meeting
- Sponsorship of Casino Night (2 tickets) or Oilfield Simulation competition (train 4 young professionals/1 team)



SPE-GCS SPONSORSHIP CONTACTS

John Vozniak SPE-GCS Sponsorship Chair jvozniak@mac.com

Ivor Ellul SPE-GCS Chair iellul@ciskventures.com

INFORMATION/REGISTRATION

spegcs.org/sponsorship-opportunity/

2016-17 SPE-GCS Scholarships

SPE-GCS scholarships are available to students who maintain a GPA of 3.0 or higher and are majoring in petroleum engineering, geology, or related discipline. Students not majoring in petroleum engineering or geology who complete an internship with a company in the Oil and Gas industry are also eligible.

The requirements for new applicants:

- Currently reside in Houston OR 29-county Gulf Coast area (Austin, Brazoria, Brazos, Burleson, Chambers, Colorado, Fayette, Fort Bend, Galveston, Grimes, Hardin, Harris, Jasper, Jefferson, Lee, Liberty, Madison, Matagorda, Montgomery, Newton, Orange, Polk, San Jacinto, Trinity, Tyler, Walker, Waller, Washington, and Wharton)
- Enroll in an engineering or science program at a university in the fall
- Currently be a high school senior
- Minimum SAT score of 1650
- Be a US citizen
- Completely fill out the scholarship form and turn in by deadline: February 12, 2016
- Submit high school transcripts
- List activities, awards and honors
- SAT and/or ACT score
- Include professional reference letters
- Demonstrate financial need (if applicable, not required)
- Submit short essay (approximately 500 words)

The process:

- Scholarship committee reviews each application
- Selected applicants are interviewed in the second round (April 2016)
- After the interviews, the scholarship committee meets and decides the 2016-17 scholarship recipients (May 2016)

EVENT INFO



APPLICATION & INSTRUCTIONS spegcs.org/scholarship-application-instructions/

COMPLETED APPLICATIONS

gcs-scholarship@spemail.org

NOTE

Renewable yearly scholarship (\$2,000/semester, \$4,000/academic year) up to 4 years

Each 2016-17 first-time scholarship recipient may be eligible for a summer internship with an oil and gas company on availability.

Visit the SPE-Gulf Coast Section homepage and select the Scholarship Committee page for more details.

REMINDER

Renew and Update

Renew your SPE membership and update your profile before December 31 so that you don't miss a single issue of Connect!

The GCS Connect newsletter is your source for all SPE-GCS news and Gulf Coast Section activities.

RENEW TODAY AT:

http://www.spe.org/join/renew.php.



SPE-GCS CONNECT

EVENT

RECAP





The SPE-GCS hosted a panel discussion on local content in Mexico. Speakers included representatives from the Ministry of Economy (Secretaría de Economía), Ministry of Energy (SENER), ExxonMobil, and the Baker Institute's Mexico Center at Rice University. Among the main challenges identified for corporations were the global competitiveness of the local providers, supplier adherence to international standards, safety performance, financing for local suppliers, and enforcement of local content requirements. The opportunities that local content present include short-term job creation during development of upstream projects, local business growth and development, improvements in technology transfer, and long-term positive benefits for society.







SPE-GCS YP hosted a professional event at the Houston Technology Center on September 22. Guest Speaker Randy LaFollette from Baker Hughes delivered an informative talk on "Lessons Learned from Data Mining in Unconventional Reservoirs." The talk was very well attended by the professionals from many operating companies, service companies, and educational institutions. The event not only enhanced technical discussions, but also provided an opportunity for attendees to network.









SPE-GCS

STUDENT CHAPTER PAGE

TEXAS A&M STUDENT CAREER DEVELOPMENT

TAMU-SPE

Career development activities are again in full swing at Texas A&M University this fall semester, with TAMU-SPE hosting a flagship recruiting event – the Career Enhancement Event (CEE).

The CEE was held September 11 at Texas A&M's Memorial Student Center. A total of 24 companies and over 650 students participated in this event, making it the biggest recruiting fair for petroleum engineers.

Companies were allotted time in the morning to present their internship and full-time position opportunities, as well as their selection criteria for candidates, to the students. In the afternoon, students had the chance to mingle with the recruiters and discuss potential career options.

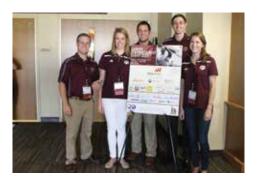
"This is a very important event, especially for the students looking for internship, full-time, and even co-op opportunities, and the CEE provides the best platform in achieving that career step" – Riyan Ariwibowo, Career Development Director

In addition to the Career Enhancement Event, TAMU-SPE held a mock interview and an interview workshop for students to hone their skills, as well as an industry talk to help students see different career paths in the oil and gas industry.

Such SPE events and many more in the future provide invaluable support for the students, especially during this challenging oil market environment. TAMU-SPE would like to thank all the sponsors, recruiters, and students who have made these events very successful.

SHAWN GUICE | PRESIDENT

Texas A&M University SPE Student Chapter SPE_President@pe.tamu.edu













Student Chapter Directory

HOUSTON COMMUNITY COLLEGE

Raymond McCoy rqm3rd@yahoo.com

RICE

Yichen Liu astron.liuy@gmail.com

TEXAS A&M

Shawn Guice SPE_President@pe.tamu.edu

UNIVERSITY OF HOUSTON

Mohamad Salman president@uhspe.org

SPE GULF COAST SECTION

DIRECTORY

YOUR GUIDE TO YOUR ORGANIZATION LEADERS

Gulf Coast Section 2015-2016 Board of Directors

CHAIR

Ivor Ellul, CiSK Ventures 713-240-2740 iellul@ciskventures.com

VICE CHAIR

Deepak Gala, Shell 281-544-2181 deepak.gala@shell.com

PAST CHAIR

Jeanne Perdue, Occidental 713-215-7348 jeanne_perdue@oxy.com

SECRETARY

Gabrielle Guerre Morrow, Ryder Scott 713-750-5431 gabrielle_guerre@ryderscott.com

TREASURER

Alex McCoy, Occidental 713-366-5653 alexander_mccoy@oxy.com

VICE TREASURER

David Flores 281-381-5828 david_p_flores@yahoo.com

Board Committee Chairs

CAREER MANAGEMENT

Sunil Lakshminarayanan, Occidental 713-344-1249 sunil_lakshminarayanan@oxy.com

COMMUNICATIONS

Subash Kannan, Anadarko 713-385-7242 Subash.Kannan@anadarko.com

COMMUNITY SERVICES

Marissa Davis, Baker Hughes 281-231-3418 marissa.davis@bakerhughes.com

EDUCATION

Simeon Eburi, Chevron 832-854-3134 simeon.eburi@chevron.com

MEMBERSHIP

David McCalvin, McCalvin Enterprises 281-818-7504 david@mccalvinenterprises.com

PROGRAMS

Fady Chaban 832-387-7249 chabanf@gmail.com

SOCIAL ACTIVITIES

Jim Sheridan, Baker Hughes - retired 281-740-0913 sherim@operamail.com

TECHNOLOGY TRANSFER

Carol Piovesan, APO Offshore 281-282-9291 cpiovesan@apooffshore.com

YOUNG PROFESSIONALS

Chiedozie "Dozie" Ekweribe, Chevron 832-854-7599 Dozie@chevron.co

DIRECTORS AT LARGE 2014-2016

Jenny Cronlund, BP 281-366-8966 jenny.cronlund@bp.com

Torrance Haggerty, T.R. Consulting 281-714-5472

thaggerty06@gmail.com

Eric Kocian, Exxon Mobil 832-624-7962 eric.m.kocian@exxonmobil.com

DIRECTORS AT LARGE 2015-2017

John "J.J." Jackson, Unimin Corp. 832-247-0233 jsjackson@unimin.com

Alvin Barber, Schlumberger 713-513-2431 abarberspe@gmail.com

Mark Fleming, Suntrust Robinson Humphrey 832-603-2305

Mark.Fleming@SunTrust.com

SPE GULF COAST NORTH AMERICA REGIONAL DIRECTOR

J. Roger Hite, Inwood Solutions, LLC 713-385-5343 hite@inwood-solutions.com,

SECTION MANAGER

Kathy MacLennan, SPE-GCS 713-457-6813 kmaclennan@spe.org

SECTION ADMIN

Sharon Harris, SPE-GCS 713-457-6821 sharris@spe.org

Committee Chairs

AUXILIARY

Nancy Giffhorn 281-360-4631 rgiffhorn@aol.com

AWARDS BANQUET

Jeremy Viscomi, Petroleum Technology Transfer Council 785-864-7396 jviscomi@pttc.org

CASINO NIGHT

Rini Assad, Scientific Drilling 713-447-7478 rini.assad@scientificdrilling.com

ESP WORKSHOP

Noel Putscher, Newfield 281-674-2871 nputscher@newfield.com

GOLF CO-CHAIRS

Cameron Conway, KB Industries 281-217-0660 cconway@kb-industries.com

Marc Davis, Champions Pipe and Supply 713-248-3956

mdavis@championspipe.com

Robin Smith, Halliburton 713-907-1694 robin.smith@halliburton.com

INTERNSHIPS

Open

NEWSLETTER

Lynn Ponder, Frontline Group 281-352-9164 editor@spegcs.org

OILSIM COMPETITION

Kristin Obenhaus, Frontline Group 281-453-6037 kobenhaus@frontline-group.com

Lindsey Ferrell, Frontline Group 512-913-7112 Iferrell@frontline-group.com

SCHOLARSHIP

Tanhee Galindo, Nexeo Solutions 832-823-1511 gcs-scholarship@spemail.org

SPONSORSHIP

John Vozniak, McCoy Global 281-513-7774 Jvozniak@mccoyglobal.com

SPORTING CLAYS

Paul Conover, NOV 713-346-7482 paul.conover@nov.com

TENNIS

James Jackson, Halliburton 713-366-5704 james.jackson@halliburton.com

WEB TECHNOLOGY

Shivkumar Patil, Aker Solutions 713-369-5352 Shivkumar.Patil@akersolutions.com

Study Group Chairs

BUSINESS DEVELOPMENT

David Pantoja, Citi A&D Group 713-821-4715 david.pantoja@citi.com

COMPLETIONS & PRODUCTION

Jonathan Godwin 713-259-9726 jongodwin@hotmail.com

DIGITAL ENERGY

Rick Morneau, Morneau Consulting 281-315-9395 rickmorneau@outlook.com

DRILLING

Ernie Prochaska, NOV Downhole 832-714-3842 ernie.prochaska@nov.com

GENERAL MEETING

Robert Saucedo, ASHMIN 281-773-4135 rsaucedo@ashmin.com

HSSE AND SOCIAL RESPONSIBILITY

Trey Shaffer, Environmental Resources Management (ERM) 281-704-3664 Trey.Shaffer@erm.com

INTERNATIONAL

Barry Chovantez, Santander 713-850-9955 bchovanetz@yahoo.com

NORTHSIDE

Robert Estes, Baker Hughes 713-879-4414 robert.estes@bakerhughes.com

PERMIAN BASIN

Amy Timmons 281-384-0882 atimmons1114@att.net

PETRO-TECH

Jessica Morgan, Blackstone Minerals 713-929-1633 jmorgan@blackstoneminerals.com

PROJECTS, FACILITIES, CONSTRUCTION

Mark Faucher, TFG, LLC 713-212-9067 mfaucher@all-llc.com

RESEARCH & DEVELOPMENT

Kitty Harvey, Cameron 281-901-3245 Kitty.Harvey@c-a-m.com

RESERVOIR

Mohammad Tabatabaei, Marathon 713-553-5642 mtabatabaei@marathonoil.com

WATER & WASTE MANAGEMENT

Joe Kilchrist, Consultant 713-302-2727 jkilchrist@sbcglobal.net

WESTSIDE

Steve Loving, Core Laboratories, LP 713-328-2244 stephen.loving@corelab.com

CONNECT **INFORMATION**

NEWSLETTER COMMITTEE

CHAIR | Lynn Ponder

editor@spegcs.org

AD SALES | Pat Stone

starlite1@sbcglobal.net

BOARD LIAISON | Subash Kannan

NEWSLETTER DESIGN | DesignGood Studio

designgoodstudio.com

SPE HOUSTON OFFICE

GULF COAST SECTION MANAGER

Kathy MacLennan | kmaclennan@spe.org

GCS ADMINISTRATIVE ASSISTANT

Sharon Harris | sharris@spe.org

HOURS & LOCATION

10777 Westheimer Rd, Ste 1075 Houston, TX 77042 P 713-779-9595 | F 713-779-4216 Monday - Friday 8:30 a.m. to 5:00 p.m.

PHOTO SUBMISSIONS

We are looking for member photos to feaure on the cover of upcoming issues! Photos must be at least 9" by 12" at 300 DPI. Email your high resolution picture submissions to: editor@spegcs.org

CHANGE OF ADDRESS

To report a change of address contact: SPE Member Services Dept. P.O. Box 833836 Richardson, TX 75083-3836 1.800.456.6863 | service@spe.org

CONTACT

For comments, contributions, or delivery problems, contact editor@spegcs.org.

ADVERTISE YOUR BUSINESS IN THE SPE-GCS NEWSLETTER

Connect is printed 12 times per year and contains premium positions for advertisers wanting to reach some of the most influential oil & gas professionals in the world.

For information on advertising in this newsletter or on the SPE-GCS website, please contact:

Pat Stone, Star-Lite Printing, Inc. 281-530-9711 / starlite1@sbcglobal.net



SCALEGUARD proppant-delivered scale inhibition

SCALEGUARD® technology is an encapsulated ceramic proppant infused with scale-inhibiting chemicals to maintain optimum production and recovery rates from scale-prone wells, while reducing well costs and chemical usage.

SCALEGUARD technology features an engineered internal porosity and can be blended with any product from our high quality proppant portfolio, without compromising the high conductivity of the proppant pack. Scale-inhibiting chemicals infused within the proppant are released into the fracture only on contact with water to deliver highly efficient production assurance.

Now long-term scale prevention is available throughout your entire production system from a single, simple treatment while you frac.

carboceramics.com/scaleguard

Production. Enhanced.



NON-PROFIT ORGANIZATION U.S. POSTAGE PAID PERMIT NO. 6476 HOUSTON, TX

SOCIETY OF PETROLEUM ENGINEERS **GULF COAST SECTION**

10777 Westheimer Road Suite 1075 Houston, TX 77042

$-\mathbf{November}-$

CALENDAR

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	Young Professionals			Research & Development		
				Career Mgmt & Cont.		
1	2	3	4	Ed. 5	6	7
		Northside		1	1	
		Projects, Facilites &	Drilling	Reservioir	Auxiliary	
Young Professionals		Construction		Technology Transfer		
	_	Water & Waste				
8	9	Mgmt 10	11	12	13	14
	General Meeting	I	Business Development	Board of Directors	ı	ı
	General Meeting	International	Digital Energy	Permian Basin		
		HSSE-SR	Westside			
15	16	17	Education 18	19	20	21
22	23	24	25	26	27	28
20	20					
29	30					