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SPEGCS.ORG
We 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.

All the best!

Please visit spegcs.org for more information!
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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
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SPE-GCS MEMBERSHIP REPORT
September 2015

TOTAL SPE-GCS MEMBERSHIPS

- PROF NEW: 1,497
- PROF RENEWED: 15,037
- PROF LAPSED: 2,647
- STUDENTS RENEWED: 1,600
- STUDENTS NEW: 932
- STUDENTS LAPSED: 273

CURRENT MEMBERSHIP TRENDS

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STUDENT MEMBERSHIPS

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DON’T MISS OUT
RENEW YOUR DUES TODAY!

Volunteer Spotlight
Ernie Prochaska

This 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!

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November, 2015
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-million-gallon 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 blocking 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

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 wildcard 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 feet 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, is now 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

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

Roosevelt’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!

**THEN & NOW**

**NOVEMBER 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.
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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 Q&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.
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.
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.
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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.

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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.

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

Dilution Based Dual Gradient Drilling
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.
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 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.
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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.
**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.
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!
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 Chioc 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.
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.
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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.
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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 broad-ranging 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, he served in engineering, operations, and management positions.

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.
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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.

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 281-419-1328
earlougher@comcast.net

Nancy Hill 281-435-1619
Nancyhill2444@sbcglobal.net
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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

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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.
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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

WEDNESDAY

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

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 SpOrNShiP 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:
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 presents 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.
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

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rqm3rd@yahoo.com

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November

CALENDAR

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