Just in case you hadn’t noticed, the balance of world oil demand and supply over the last year or so has tipped and we remain in an oversupply mode. One of many ways to gauge this in the US is by tracking the oil stocks at Cushing, OK (Figure 1), which show a gradual increase during 2015 and then hit an all-time high of over 64 MM bbls in January. I am no economist, but the effect that this is having on the commodity price is self-evident, as can be seen on our GCS Energy Ticker below.

Any wonderment as to how we arrived here can be very simply dispelled by one word – geopolitics – something that, as petroleum engineers, is probably above our proverbial pay-grade to debate, and certainly not in this forum.

What really interests us is where we may be headed, and I have tried to answer this by attempting to distill information from two reports that I would consider to be fairly authoritative on the subject. One is the World Oil Outlook released late last year by the Organization of the Petroleum Exporting Countries (OPEC). The other is ExxonMobil’s Outlook for Energy – A View to 2040 that has just been released.

We will look first at the demand side of the equation. Both OPEC and ExxonMobil agree that the world population will grow by 25% from 7.2 billion to 9 billion in 2040 and that most of this population growth will come from developing countries. Population needs equate directly to energy demand, which OPEC estimates will increase by 47% to 399.4 MBDOE in the period to 2040. Astonishingly, ExxonMobil estimates that energy demand in the same time period will only grow by 25% to 703 Quadrillion BTUs or 347 MBDOE. This is a significant disparity which, as shown in Figure 2, derives from differences in projected energy sources.

The fact remains that the demand for energy is going to grow over the next years, whomever you are inclined to believe.

Now let us focus on supply and demand as this relates to liquids (oil). Here there is reasonable agreement between the two reports, with both trending towards a demand for 100 MBDOE by 2040.

An interesting breakdown of the source of supply to address this demand is provided in Figure 3, which is reproduced from ExxonMobil’s report.

So what might one take away from all this? Firstly, the demand for oil and gas is and will continue to outweigh other sources of energy. Secondly, the majority of the supply for oil to meet this demand must come from new conventional crude and condensate development. Similarly, tight oil production will play an increasingly important role in the supply of oil as will NGLs. All this converges to the fact that we, as petroleum engineers, will continue to be pivotal in meeting the increasing energy needs of the planet and, absent geopolitics, commodity pricing will evolve to reasonable levels.

Back to geopolitics, it is refreshing to finally see a ray of light coming out of the Middle East with the Minister of Oil and Gas in Oman, Dr. Mohammad al-Rumhy, committing to cut back production between 5% and 10% if all in the region would do the same. Hopefully, other global players are listening...

All the best!

Please visit spegcs.org for more information!
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## BOARD OF DIRECTORS MEETING

**Thursday, March 17 / 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
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Though January 2016

TOTAL SPE-GCS MEMBERSHIPS

- **Prof New**: 161
- **Prof Renewed**: 11,581
- **Prof Lapsed**: 6,076
- **Students Renewed**: 1,496
- **Students New**: 101
- **Students Lapsed**: 777

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CURRENT MEMBERSHIP TRENDS

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STUDENT MEMBERSHIPS

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This chart does not reflect lapsed student memberships.

DON’T MISS OUT
RENEW YOUR DUES TODAY!

VOLUNTEER SPOTLIGHT
TOM KNODE

This month, SPE Gulf Coast Section is thrilled to feature Tom Knode as the Volunteer of the Month. Tom got involved with SPE in the ‘90s when he saw the organization taking a leadership position on Health, Safety and Environmental (HSE) concerns in the oil and gas upstream industry. He first served on the committee of the SPE Americas regional HSE conference and with the SPE-GCS HSE Study Group. As he got more involved, he truly saw the benefit of being an active participant in the conferences, committees, and study groups that SPE has to offer. Tom went on to co-chair the SPE International HSE Conference in Rio and four regional HSE conferences. He also served as the HSSE-SR Technical Director for SPE from 2008-2011, and has co-authored upwards of 20 papers and articles for SPE conferences and the JPT.

Tom is an HSE Consultant working on contract with Statoil through Contek LLC. With bachelor’s and master’s degrees in geology, he spent the first part of his career working in petrophysics and the last 23 years working on health, safety and environmental performance and compliance.

Tom truly enjoys being a volunteer. He appreciates seeing the energetic thought leaders in the industry share ideas and practices that will help make our HSE performance better. He believes that building a network of technical experts outside of your normal business interactions can help provoke new thoughts around your discipline. This is what makes volunteering for SPE an indispensable professional development activity.

Thank you, Tom!
**MARCH 1936**

Ironically, in these early days of oil well acidizing, Dowell ads promote their acidizing as being “the only safe method because every drop of acid is Inhibited.” (Inhibited from corrosion, that is.)

Speaking of acidizing, one of the biggest HSE issues of the day is not the contamination of aquifers due to uncontained hydrocarbons, but rather the killing of fish in streams and rivers due to oilfield acid waste dumping.

One of the hottest areas in South Texas is the Pearsall Field, where Amerada Petroleum (not aligned with Hess at this time) is drilling vertical wells (remember those?) and producing from three horizons, namely the Navarro sand, the Austin chalk, and the Buda lime. (Don’t look now, but the Austin chalk is back!)

Some major operators of this era are hiring staff entomologists. Why, you ask: termites! Termites are attacking the wooden derricks and wooden oilfield operational structures at an alarming rate.

**East Texas crude oil - $1.15/bbl**

---

**MARCH 1966**

Newfoundland’s Grand Banks will get its first exploration wells spudded soon, as eastern Canada enters the exploration arena.

Humble’s CEO insists that the US must pursue oil from shale and both oil and gas from coal projects, due to demand outstripping produced crude. (And pursue them we did!)

Special diving systems become available that will enable divers to work in 200-ft water depths for several hours, thus speeding offshore development.

Warnings by “think tanks” that companies must computerize to survive will reportedly spur a drive for the industry to hire 285,000 computer personnel by 1970.

**US active rig count – 1,229**

---

**MARCH 1996**

E&P corporate lawyers remain active with a litany of legal challenges in the areas of racial discrimination, corporate board representation, pollution, international political ties, unethical business practices, and proposed mergers.

After two years of negotiations, Amoco and Shell reach a final agreement to join forces in a new limited partnership called Altura Energy, which will effectively become the largest oil producer in Texas and the third largest in the US.

The DOE reports that the world’s first cogeneration fuel cell power plant, which is designed to provide electric power and steam for the Miramar Naval Air Station north of San Diego (Remember Top Gun?), is predicted to operate at a 50-70% electrical efficiency level, double that of a conventional power plant.

Shell has experienced such positive results from horizontal drilling and related technologies that special approval is now required at Shell to drill a vertical well.

**Light sweet crude oil - $20.72/bbl;**

**Natural gas - $1.88/MMbtu;**

**US active rig count – 882**

---

**THE REST OF THE YARN**

This month, a shot rings out on the campaign trail, but TR is not deterred.

While Taft vacationed and Wilson gave as few speeches as possible, Roosevelt raced up the East Coast and down, across the South and into the Midwest. In Milwaukee on October 14, 1912, as he stood in an open car to salute a cheering crowd, a man drew a revolver and fired, hitting Roosevelt in the chest and knocking him back into the car seat.

Three presidents had been assassinated in TR’s lifetime, and he had long ago prepared for such a moment. He put his fingers to his lips, saw that he was not bleeding from the mouth, and concluded that the bullet
had not perforated a lung. Slowed by the contents of his breast pocket—a steel eyeglass case and a copy of the speech he was about to give—the bullet had lodged in a rib. He insisted on proceeding to an auditorium where a crowd of 10,000 was waiting for him. In full command of his political instincts, he showed the audience his bloodstained shirt and said, “I have just been shot, but it takes more than that to kill a bull moose.” He spoke for 90 minutes, and then consented to go to a hospital.

From first to last, no candidate in 1912 fought harder than Roosevelt, but in the end, the country chose Wilson. The results resembled those of 1992, when Ross Perot’s third-party run deprived Bill Clinton of a popular majority but gave him a victory, with 43% of the vote. Wilson’s plurality was 42%. Roosevelt finished with 27% and Taft with 23%.

Monday-morning quarterbacks have claimed that if TR had sat out 1912, his votes would have gone to Taft. In actual fact, 77% of the electorate wanted anyone but the heavyweight candidate (Taft weighed in excess of 300 lbs).

Next month, a look back at the legacy of Theodore Roosevelt.

---

**QUIZ**

What was the average octane rating of “premium grade” gasoline circa 1936?

---

**ANSWER TO FEBRUARY’S QUIZ**

I.C. White, formerly employed by the Pennsylvania Geological Survey, made the first practical application of the anticlinal theory of oil prospecting in West Virginia in 1882.

---

**CONGRATULATIONS TO JANUARY’S WINNER**

Dal Payne with Breitburn Energy Partners

---

If you would like to participate in this month’s quiz, e-mail your answer to contest@spe.org by noon March 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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- high quality people
- lower well costs and HSE risk
- higher quality wellbore
The Project, Facilities and Construction Study Group announces a four-part Spring Event Series on “Improving Project Efficiency at Less Than $50/bbl.”

The role of the project manager is crucial to project development and execution. Presented by experts from the oil and gas community, this series will cover project management roles from the perspective of an operator, a fabricator, an EPC, and a consultancy. The goal of the series is to transfer knowledge related to how organizations can collaborate to improve efficiency at relatively lower oil prices than we have become accustomed to. What can we do to improve project execution to meet the new budgetary goals in a low oil price environment?

Each event begins at 4:00 PM with 30 minutes of networking, followed by a one-hour presentation and a 30-minute Q&A. The room will remain available for an additional 30 minutes after the event to facilitate networking and one-on-one discussions.

**PART 1 - MARCH 2**
Bill Pritchett, Project Leader, Noble Energy
Presented by Noble Energy, this event will discuss projects as viewed by the operator and how the operator owns the complete project life cycle from lease sale to abandonment. The presentation focuses on project leadership as opposed to the function of project management.

**PART 2 - MARCH 9**
Mark Menuier, VP Offshore Services, Kiewit
Presented by Kiewit, this event will discuss trust, along with the “Dark Side” of project execution. Trust promotes communication, collaboration, great morale, and significant opportunity to reduce costs and shorten schedules. The Dark Side, however, causes overruns due to late deliverables, delayed critical equipment, frustrated clients, massive carryover work, and challenges to reputations.

**PART 3 - MARCH 23**
Kevin Raatz, Project Director, Technip
Presented by the EPC Technip, this event will discuss recent bidding trends for the Gulf of Mexico. Sub-$40/bbl oil prices are forcing oil companies to revisit historical execution models, be they company work processes, standardization, project cycle time, contracting strategy, operational philosophy, or execution methodology. Recent trends for project execution will be compared with historical executions, and the associated opportunities for overall project savings will be discussed.

**PART 4 - MARCH 30**
Neeraj Nandurdikar, Director-Oil & Gas Practice, Independent Project Analysis
Presented by the consultancy IPA, the final event of the series will bring all the aspects of successful project management together. It will focus on the collective actions that the industry should pursue to reduce the number of specialists working on projects and to improve collaboration across all project functions. Most of these actions can start within individual project organizations.
Speaker Paul Lutes will discuss North Houston BEST (Boosting Engineering, Science, and Technology), a non-profit, volunteer-based organization whose mission is to inspire students to pursue careers in engineering, science and technology through participation in a free, sports-like, science and engineering-based robotics competition.

Paul will describe BEST competitions. These events feature a robotics game based upon an annual theme. Four teams compete at once in a series of three-minute, round-robin matches. Themes have ranged from robots harvesting minerals in a re-commissioned mine, to robots delivering payloads to the Space Station, to robots collecting blood cells and filtering them for blood transfusions.

Starting in early September, students have six weeks to build their robots after receiving their instructions for the game along with free materials and component kits. Only students are allowed to design, build, and operate their robots throughout the season. After five weeks, they are allowed to practice with their robots on the competition field to better prepare them for the final competition.

It all comes together in a daylong competition that covers marketing presentations, project notebooks, team displays, and, of course, the robotics competition. Teams take away trophies for both their robot performance as well as overall BEST competition. Winners advance to the Texas BEST Regional Competition in Dallas in early December to round out the fall semester.

Paul Lutes has worked for Baker Hughes since 2004, with roles including Product Development Engineer, Drilling Technology Laboratory Manager, and Manager of Testing & Engineering Services. He is currently Manager of Test Execution, Productivity, and Special Projects for Drilling Services. Paul has served as a Vice President on the STEM Engineering Council of Houston for the past six years as well as the K-12 STEM Chair for the South Texas Section of the American Society for Mechanical Engineers for the past seven years. He has also served as the President of North Houston BEST after founding the company in 2008.
The evolution to horizontal wellbores requires a similar evolution in measuring and monitoring wellbore production. Tools commonly used in vertical wellbores have not been adequately indicating horizontal production characteristics, and in many cases, have not been utilized due to cost. However, an approach taken by trending the internal wellbore data during the initial phase of production, and in some cases, long-term monitoring, has provided insights to wellbore operational characteristics that can be modeled in the new complex hydraulic fracture simulators being incorporated in the design and optimization of infill wellbores to better understand the rock properties, wellbore effect on nearby wells, and EURs. With many operators moving to infill well development, an option to monitor the stimulation effect on the new and existing wellbores by the use of tracers is opening the evaluation of the rock properties to new understanding. This presentation will focus on a review of production log responses compared to tracer production to highlight the difference between a discrete measurement and a production trend over time.

Case histories will show the productive performance as indicated by tracer production against production logging tools with commentary on the correlations and discrepancies.

**JON SPENCER**

Jon Spencer has 38 years in the oil patch. After obtaining an engineering degree, he spent 15 years with Halliburton Logging Services performing open hole, cased hole, and production logging services in Texas, South America, the Mideast, and the Far East before joining Tracerco in 1993. He worked in various technical and managerial roles in Texas, Alberta and Brazil leading the reservoir tracer technology group.

As Technical Advisor for Reservoir & Completion Tracer Technologies, he designs and analyzes waterflood and frac tracer projects for wells throughout the world.

Spencer has collaborated on three SPE papers and is co-sponsor of the patent on oil tracer technology for hydraulic stimulation production measurements.
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Latest Advancements in Drill-String Mechanics

This event will cover many aspects of drill-string mechanics, going from bit and BHA modeling for directional drilling applications in unconventional plays to tubulars mechanics related to torque, drag, buckling, and casing wear.

The first part of this presentation will focus on directional drilling and explain how the interaction between the PDC bit, the rock formation, and the BHA affects the directional response of the drilling system. After a summary of modeling steps and laboratory results, this presentation will show results of case studies in shale play environments, where PDC bit and BHA selection is of utmost importance to control the well trajectory. Calculations of inclination and azimuth each foot or so enable us also to highlight the presence of local doglegs using standard surveys, bottom hole assembly data, and steering parameters.

The second part of the discussion will be dedicated to the mechanical behavior of drill string in a 3D wellbore. Extensive research was conducted a few years ago to be able to calculate deflection and contact points between tubulars and the borehole without using finite element analysis. This research has led to a robust and accurate model, able to compute simultaneously torque, drag and buckling, and also estimate casing wear. Case studies highlighting the necessity of such advanced computations will be shown.

STEPHANE MENAND, PhD

Stephane Menand is Managing Director of DrillScan US Inc., based in Houston. Previously, he held a research position at Mines ParisTech University. He has 17 years of experience in the oil and gas industry, mainly as an R&D project manager in drilling engineering, more specifically in directional drilling, drill-string mechanics (torque, drag and buckling), drilling dynamics, and drill-bit performance. Menand has authored more than 25 SPE and other technical papers and holds patents. He earned a PhD degree in drilling engineering from Mines ParisTech. Menand serves on the Journal of Petroleum Technology Editorial Committee and is Associate Editor of SPE Drilling and Completions Journal.
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API 17TR8: Second Verse, Same as the First

This discussion will highlight some of the findings in the first edition of American Petroleum Institute standard 17TR8, recognize the work being done for the second edition, and touch on some of the work being done by other API subcommittees.

17TR8 is an API technical report published in February 2015 to establish design methods, material functional specifications, and design validation requirements for equipment operating at greater than 15,000 psi and 350°F, specifically for subsea equipment.

As the first design guideline, 17TR8 provides the industry a foothold in developing other HPHT standards based on current high-pressure design theory and fracture mechanics protocols developed since the late 1970s. It also aims to reconcile these more advanced design guidelines with grandfathered equipment, built without these advanced design tools/theories, but nevertheless qualified through rigorous material practices and exhaustive qualification tests and in-service history.

Since its introduction, other subcommittees within API’s Committee on Standardization of Oilfield Equipment and Materials are now using 17TR8 as a template in part or in total to develop their own HPHT guidelines. The 2015 publishing date was a compromise by the task group to get most of the basic guidelines out to the industry in time to address pressing pending projects. But not all of the vexing issues could be brokered in time. So the task group has embarked on a second edition of 17TR8 to provide clarity to existing text and address outstanding issues not addressed in the first edition. The second edition is not intended to change scope or direction; instead, it’s meant merely to clarify and provide additional insight and guidance.

BRIAN SKEELS

Brian Skeels has 36 years’ experience in subsea completion and pipeline design and installation. He spent five years with Exxon Production Research Company working on Exxon’s famous SPS and UMC subsea systems, and the rest of his career with FMC Technologies and FTO Services. As FMC’s Emerging Technologies Director, he serves as a technical subsea advisor for HPHT equipment development, and strategic planning specialist for frontier technologies and new business opportunities. At FTO, his efforts delve into riserless light well intervention, ROV and remote robotics technology, and hydrate remediation programs.

Skeels has been part of API’s Upstream Standards Committee for 31 years and currently serves on API Subcommittee 17 (executive committee). He serves as task group chairman for 17G on subsea intervention systems, co-chair for 17D on subsea tree and wellhead equipment, and chairs 17TR8 for HPHT equipment design. Skeels also serves on several industry and professional society conference program boards.

Skeels has a BS in mechanical engineering from Cornell University and an MS in ocean engineering from the University of Rhode Island. He has won numerous professional awards and is an Adjunct Professor in subsea engineering at the University of Houston.
Stop squeezing. Start expanding.

Success Rate

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WESTSIDE

Refrac Candidate Selection and Refrac Performance Evaluation Using the Recovery Factor Technique

The recovery factor analysis technique involves the integration of hydrocarbon pore volume from a core-calibrated petrophysical analysis with the estimated ultimate recovery from the horizontal lateral. When the hydrocarbon pore volume estimates are tied to production results, a model can be developed to both identify potential refrac candidate wells and zones and to assess refrac performance. This technique can provide a realistic comparison of the effectiveness of the refrac process using various diversion and mechanical isolation methods. Case studies are provided to demonstrate the utility of the process.

BOB BARBA

Bob Barba spent 10 years with Schlumberger as an openhole field engineer, sales engineer, and product development manager. While at Schlumberger, he was the North American product champion for the FracHite and Quantifrac products that integrated wireline, testing, and pumping inputs to optimize hydraulic fracture treatments.

Since then, he has spent 24 years consulting to over 250 companies on petrophysics and completion optimization. He served as a SPE Distinguished Lecturer on integrating petrophysics with the hydraulic fracture treatment optimization process. He has implemented this integration process in a wide variety of reservoirs in North America, conducting numerous field studies for operators evaluating well performance and providing “best practices” recommendations based on the study results (SPE 90483). Recent major consulting projects have integrated petrophysics with completions in organic shale reservoirs for major operators in the Wolfberry, Wolfbone, Wolfcamp, Marcellus, Utica, Cline, Eagle Ford, and Bakken shales.

Barba has a BS from the US Naval Academy and an MBA from the University of Florida. He holds memberships in SPE, the Society of Professional Well Log Analysts, and the American Association of Petroleum Geologists.

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Fracturing and Refracturing Insights From Micro-Seismic Geomechanics

Micro-seismic data has been used to qualitatively assess hydraulic fracture geometry for two decades. Recently, geomechanics is starting to be used to integrate the inelastic micro seismic displacements with the large-scale hydraulic fracture displacements. This provides a much better understanding of the geometry of the hydraulic fracture network. Model predictions of micro seismic activity can be compared with field data to calibrate geomechanical fracture models, estimate key metrics such as fracture geometry, proppant placement and refracture diversion efficiency, and demonstrate the effect of changed completion and stimulation practices such as stage and cluster spacing, fluid types, pump rates, and proppant schedules.

**DR. MARK MACK**

Mark Mack is General Manager of Itasca Houston, and Geomechanics Director for IMaGE. He has more than 25 years of experience in geomechanics and hydraulic fracture simulation. Mack has a BS in chemical engineering from the University of Witwatersrand in South Africa, MS and PhD degrees in geomechanics from the University of Minnesota, and an MBA from the Edinburgh Business School in Scotland.

Mack worked for Itasca for a few years before joining Schlumberger, where he spent 22 years working on various aspects of hydraulic fracturing, including developing hydraulic fracture models and applying geomechanics to micro seismic measurements. He was the Vice President of Engineering at an advanced ceramic proppant company for two years before rejoining Itasca at the beginning of 2015. Mack has authored or co-authored approximately 30 technical papers and three book chapters.
**RESERVOIR**

**Effectively Leveraging Big Data Technology in Unconventional Resource Development**

In this time of decreasing margins, Big Data technology seems like a compelling way to optimize the development of unconventional resources – but how is that technology leveraged effectively? The technology companies often suggest that it’s just a matter of loading anything and everything into the Big Data platform and useful insights will magically appear. But this is not the case. This presentation will lay out a framework and roadmap for organizations to leverage Big Data platforms to enable the operational efficiencies required in today’s business environment.

**ROBERT E. BEST**

Robert E. Best is a Senior Principal at Noah Consulting and Vice Chair of the Professional Petroleum Data Management Association. Noah Consulting, an InfoSys company, is a Houston-based firm that specializes in upstream information management strategy and planning. PPDM is a Calgary-based standards body that also promotes the professionalization of information management in the petroleum industry.

Previously, Best held executive positions at PetroWEB, a Denver-based company that provides GIS web-based data management and data-access solutions, and Neuralog, a Houston-based company that specializes in tools for digital conversion, interpretation, and management of E&P geosciences data. He has been involved in the planning and implementation of information management projects at companies and sites worldwide, including Nexen, Devon, Chesapeake, Continental Resources, PDVSA, Pemex, KUFPEC, and Sinopec.

**EVENT INFO**

**Thursday 3.24.16**

11:30 AM – 1:00 PM

**SPEAKER**

Robert E. Best
Senior Principal
Noah Consulting

**LOCATION**

Sullivan’s Steakhouse
4608 Westheimer Rd
Houston, TX

**EVENT CONTACT**

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

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The Deepwater Gulf of Mexico, a Story of Steady Growth

Chevron produces and explores for crude oil and natural gas around the world. In 2014, its worldwide net oil-equivalent production averaged 2.571 million barrels per day, with about 26% of the production coming from the United States and the rest from more than 20 other countries.

Production growth is dependent on bringing resources and proven reserves into production through major capital projects. Chevron has an extensive lineup of major capital projects under way, from conventional oil and natural gas to deepwater, liquefied natural gas (LNG) and heavy oil developments.

Exploration also is key to future growth. The company’s focus areas for exploration in 2014 were the deepwater regions of West Africa, the deepwater US Gulf of Mexico, offshore northwest Australia, and several shale and tight resource plays in North America.

Stephen P. Thurston will present a story of steady growth in the deepwater Gulf of Mexico, a world class petroleum basin with significant remaining oil and gas resource potential but with many technical challenges. His presentation will describe why the deepwater Gulf is so attractive and the technologies being deployed to enable the development of such a significant petroleum system. The recent Jack/St. Malo development will be highlighted as an example of overcoming the challenges and delivering a world-class project in the sub-salt Lower Tertiary trend.

The business and social networking hour will begin at 5:00 PM in the Mezzanine, followed by an hour-long program including a Q&A session.

NOTE: Due to scheduling difficulties, the March meeting will be on April 6. The regularly scheduled April meeting will be on April 27.

STEPHEN P. THURSTON

Stephen P. Thurston, a native of Denver, CO, has a master’s degree in geology from the University of Washington, and is currently Vice President of Chevron North America Exploration and Production Company in charge of the Deepwater Exploration and Projects Business Unit, responsible for all of Chevron’s exploration and project development work in the deepwater Gulf of Mexico.

Thurston has held a variety of leadership positions throughout his career with Chevron since 1982, including Exploration Supervisor for all of California’s Coastal Basins, Exploration Supervisor for the Gulf of Mexico Shelf, and Profit Center Manager for the Eastern Gulf of Mexico. More recently, Thurston has served as Country Manager for Chevron upstream in Brazil and as General Manager of Strategic Planning for Chevron Corporation before starting his current assignment in 2008.
MEMBERS IN TRANSITION INITIATIVE (MIT)

The SPE Members in Transition Seminar Series includes topics of interest to SPE members who are between jobs during the industry downturn or who are looking for new career opportunities. The agenda for the second seminar in the series will include “Franchising Basics,” “Starting and Running Your Own Business,” and “Business Planning.”

PROGRAM 1: Franchising Basics
If you are looking for a business to own and think a franchise opportunity is right for you, Diana Trondsen will work closely with you to understand your work experience and skills, as well as your goals, values, and interests. She will then coach you through the process that matches you with franchise opportunities and ensure that you get the information to make the best decision. Trondsen will help you find the franchise that coincides with your skills, goals, and financial capability.

DIANA TRONDSEN
Diana Trondsen has been involved in franchising her entire career, including having personally owned a franchise for over 10 years. Her expertise is in single and multi-unit franchises, with extensive expertise in implementation of franchise systems, business operations, and regional/local marketing. She is devoted to helping other aspiring entrepreneurs achieve personal and financial success in franchise ownership.

PROGRAM 2: Starting and Running Your Own Business
In this talk, you’ll receive information, tips and techniques to start a new business or to improve an ongoing enterprise. You’ll leave this seminar with new skills and insights on how to start and run a successful business.

KENNETH WOHLBERG
Kenneth Wohlberg has 36 years of experience in helping business owners and their families achieve their financial goals. He has 26 years as an investment professional and 10 years of teaching experience in business education. He is a Certified Financial Planner and Charter Financial Consultant. He holds a BA degree from Nyack College in New York and an MA degree from University of Pittsburgh. Wohlberg also has had a career in international education, having been on the faculty of the University of Goroka in Papua New Guinea and at the Guangdong Provincial Institute for Technical Personnel in Guangzhou, China.

PROGRAM 3: Business Planning
Is your business plan in your head but not on paper? Is it time to get your ideas and strategy more organized and focused? This presentation will go over business plan basics, review the contents of a strong plan, and teach you how to write a plan to launch and grow your business and to seek funding.

YUSEF MUHAMMAD
Yusef Muhammad is the CEO of Frequency Communications Inc., the owner-operator of The Family Channel, Houston Affiliate Station KVVV 15.5, Mixed Media Network, and American Business TV. Muhammad has been in charge of business operations, television programming, syndication, advertising, media, and business consulting for more than 19 years.
Unmanned Aerial Vehicles (UAV): Disrupting the Way We Operate

Increasing operational risk and cost due to hazardous and remote environments has led to the adoption of new capabilities within our industry involving unmanned aerial vehicles (UAVs). With the growing popularity of UAVs, some would refer to the technology as “disruptive,” as it has begun to change the way we inspect, measure and quantify oil and gas assets. In early 2015, Sky-Futures, a UK-based company with offices in Houston, received its FAA Exemption Certificate and became the first to legally carry out an inspection in the Gulf of Mexico. This talk will feature background and learnings regarding the technology and application—current and future—with some of the hardware and technology on display.

JAY FORTE

Jay Forte graduated from the Air Force Academy in 1998 with a mechanical engineering degree. He spent eight years active duty, achieving the level of Evaluator Pilot in both the C-21 and EC-130 Hercules. Forte is a Lieutenant Colonel in the Texas Guard, where he operates the MQ-1B Predator UAV as an Instructor Pilot. Between 2012 and 2014, he worked as an offshore engineer for Baker Hughes.

Forte is the North American/GOM Vice President Operations for Sky-Futures. Sky-Futures uses small UAVs to do visual inspections of oil and gas infrastructure both on and offshore. Sky-Futures has been doing these inspections globally for five years. The first US office opened in Houston in 2015.

EVENT INFO

TUESDAY

3.8.16

11:00 AM – 1:00 PM

LOCATION

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

EVENT CONTACTS

Greg Palmer
832-386-2483
gpalmer@us.ibm.com

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Transforming Performance and Enhancing Sustainability: A Structured Approach

BHP Billiton Petroleum embarked on a structured approach to performance improvement in 2015. The implementation of this approach is timely, considering the current oil and gas market conditions. The talk will give an overview of the approach and look at how BHP Billiton is leveraging market conditions, competitive benchmarking, technology, and culture to drive performance improvement across its business globally. All professionals are welcome to attend this event.

DAVID BANKS

David Banks is the Transformation Executive for BHP Billiton Petroleum. In this role, he supports the business to deliver a sustainable transformation in performance. Prior to his current role, Banks was the General Manager for BHP Billiton’s Eagle Ford Asset. Throughout his career with BHP Billiton, Banks has held a variety of roles, including Integration Manager for BHP Billiton’s acquisition of Petrohawk; Transition Manager for the acquisition of the Fayetteville shale assets; Vice President of Health, Safety, and Environment for the Petroleum business; Vice President Shale Drilling & Completions; Asset Manager Bass Strait; and numerous managerial, operational, and technical roles in countries including Australia, Bolivia, Singapore, Trinidad and Tobago, and the United States.

Banks is a graduate of the University of Tasmania with an Honours degree in civil & mechanical engineering and holds an MBA from Deakin University in Australia. He is an alumnus of the General Management Program at Harvard Business School and serves on the Board of Directors of the Australian American Chamber of Commerce in Houston. Before joining BHP Billiton in 1994, Banks worked in the oilfield services industry with Schlumberger and in the construction industry with Stephenson-EMF Consultants.

The SPE auxiliary will not have a formal luncheon and program in March. Meet us at Rio Ranch for conversation and friendship, with separate checks. Please note the new e-mail address for Nancy Hill.

EVENT CONTACTS

Evelyn Earlougher
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earlougher@comcast.net

Nancy Hill
281-435-1619
ben-81_rth@comcast.net

DEADLINE FOR RSVP

March 8, 2016
Mud Motor: Not a Dying Breed – From Workhorse to Racehorse

The positive displacement motor, commonly called a “mud” motor, is a simple but elegant machine that has become an integral part of the BHA, especially when drilling shale wells. Even though tremendous advancements have been made, several challenges remain. This one-day workshop on mud motors covers the concepts, performance, advancements, future designs, and how and when to use them at difficult times. The presentation draws on additional talks from industry technology leaders, engineers, mud motor experts, and manufacturers.

Please note that the event price includes the textbook Positive Displacement Motor: Theory and Applications by Dr. Robello Samuel.

DR. ROBELLO SAMUEL

Dr. Robello Samuel is a Technology Fellow with Halliburton. He is currently a research and engineering lead for well engineering applications, responsible for research and scientific activities for new drilling technologies. Samuel has more than 25 years of multi-disciplinary experience in domestic and international oil/gas drilling and completion operations, management, consulting, software development and teaching. He has been an adjunct Professor at the University of Houston for the past 13 years.

Samuel has published more than 150 technical papers, reports and books, and he holds five patents with 75 more patent pending applications. He serves regularly as a keynote speaker at major conferences and corporate forums and is regarded as one of the world’s most influential contributors to the advancement of research and practice in drilling engineering. Samuel’s unique blend of skills as a field engineer, researcher and teacher helped him to author 12 drilling books and a forthcoming book, Well Engineering: Torque and Drag. He started his career working on rigs as a drilling engineer, and also worked at Oil and Natural Gas Corporation from 1983 to 1992 as a field drilling engineer. Samuel, a SPE Distinguished Lecturer, holds BS and MS degrees in mechanical engineering from the University of Madurai and the College of Engineering, Guindy (Chennai) respectively, and MS and PhD degrees in petroleum engineering from Tulsa University.
Help us make this second annual SPE-GCS scholarship fundraiser bigger and better by supporting the Oilfield Games as a participant or sponsor.

Participant registration is now open. Win epic bragging rights, a large trophy, and more!

Oilfield Games is a half-day, interactive oilfield simulation where asset teams of 3-4 will compete to maximize the recovery and profitability of a mature field while applying the principles of responsible corporate citizenship. Interested individuals can sign up to be placed on a team arranged by the committee.

There are still a few sponsorship opportunities left. Available sponsorship packages range from $250-$5,000 and include recognition in the SPE-GCS Connect newsletter, event program, and event signage, as well as participant registration entitlements. Contact the committee chair for information.

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Meet SPE-GCS Scholarship Winner Shelley Kubik

The Scholarship Committee recently conducted a survey of past recipients of the SPE-GCS scholarship. If you’re considering donating to the SPE-GCS scholarship fund or hiring an SPE-GCS scholarship winner for a summer 2016 pre-college internship, you’ll be glad to know that the program has enjoyed considerable success over the past six decades. Here's winner Shelley Kubik’s story:

I have many fond memories of my time at UT-Austin: all-nighters at the Petroleum Engineering Building, SPE events, and meals at the Crown & Anchor with classmates. I was SPE Student Chapter President during my senior year of college. After completing a Bachelor of Science degree in petroleum engineering, I was hired by Kerr-McGee. I began my career working operations in the Gulf of Mexico (GoM), with aspirations to move into completions and, ultimately, management. Anadarko purchased Kerr-McGee in 2006, and since the acquisition I’ve spent my time in various reservoir roles in the Rockies, including Surveillance Engineer, Planning Engineer, and Subsurface Manager, with a few forays into Business Development. It is amazing how different your career can be from early expectations if you are open to it! I am grateful to the SPE-GCS for the scholarship I was awarded. Their financial commitment to my education encouraged me to pursue petroleum engineering as a major.

My advice to current and future students is to study hard, pursue industry internships, make great connections, and have some fun!

Shelley Lynn (Dunham) Kubik is currently a PRB Subsurface Supervisor at Anadarko Petroleum. She attended Klein Oak High School in Spring, TX, graduating in 1998, and then went on to obtain her BS in petroleum engineering from University of Texas at Austin.

SPE-GCS Networking Event & Membership Drive

Please join us for the SPE-GCS Networking Event & Membership Drive on April 14 from 6:00-9:00 PM at the Houston Texans Grille.

Hors d’oeuvres and beverages will be served, and there will be a cash bar. Attendance is free of charge. Register today!
2nd Annual SPE-GCS Casino Night & Gala: Scholarship Fundraiser

Join fellow senior and executive oil and gas leaders for our annual scholarship fundraiser at the Houston Museum of Natural Science with hors d’oeuvres, dinner, refreshments, casino-style games, and the chance to win several raffle grand prizes. A Texas hold ’em poker tournament for up to 30 attendees will also be held at the event. Spouses are encouraged to join. All funds raised benefit the SPE-GCS student scholarship program supporting our future oil and gas leaders.

As the market recovers, it will be more important than ever to do our part, encouraging students to seek careers in oil and gas. For more information, including pricing and sponsorship opportunities, please visit spgcs.org/events/3153/ or contact Rini Assad.

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UH-SPE GOLF TOURNAMENT
The University of Houston Student Chapter of SPE will host its Golf Tournament on March 11 at BlackHorse Golf Club in Cypress, TX. The tournament format will be a four-player scramble and will start at 12:00 noon with registration at 10:00 AM. Players are able to purchase various levels of sponsorship packages providing a range of contributions. Please send in your registration packet by March 4 to ensure your team’s spot at this tournament. Registration packets can be obtained from the tournament director, Sagar Panchal (contactus@uhspe.org).

Refreshments will be provided during the tournament, and dinner will be served at the end of the tournament. By sponsoring this event, companies will have the opportunity to learn more about the thriving Petroleum Engineering Department at the University of Houston and how the SPE student chapter has grown along with it. All sponsors will be recognized on the sponsor board, in the tournament program, and during the awards presentation. We hope to see you come out and enjoy a fun-filled day with friendly competition and networking.

A SPECIAL INVITATION:
DVG MEMORIAL GOLF TOURNAMENT
TAMU-SPE would like to invite industry professionals to participate in the annual Douglas Von Gonten Memorial Golf Tournament. The tournament will be held April 4 at the Traditions Club in Bryan. The tournament is a four-player scramble in which two industry players and two students are paired. The proceeds of this tournament help support the DVG Memorial Scholarship Fund, which provides annual scholarship support to petroleum engineering students. Sponsorship packages are available starting at $500. For details, please contact Mason Whittington at masonwhittington12@gmail.com.

FALL 2015 AT-A-GLANCE
TAMU-SPE thanks each and every one of you who helped make Fall 2015 a semester to remember! From the Career Enhancement Event to tailgates, and clay shoots to field trips, we have enjoyed it all. We are excited to see where 2016 leads us, and what adventures we might take!
On December 11, SPE-GCS YP members Nii Nunoo and Sahil Malhotra delivered an Energy4Me lecture at Lanier Middle School in Houston. Our young professionals gave fascinating talks, and students were very glad to learn about energy and the oil and gas industry. If you would like to obtain more information about the program, visit www.energy4me.org or contact the SPE-GCS YP Community Outreach Coordinator Danny Marquez at dannymarquez0@gmail.com to find out how you can help.

On January 22, SPE-GCS YP members Rachel Lewis, Gabriella Collazo, Abanob Ibrahim, and Jesus Perez delivered a lecture on energy to 50 students in their junior year at Houston Heights High School. After the lecture, the YPs gave a riveting talk on their exciting and diverse backgrounds, which was followed by a question-and-answer session with the juniors.
The Northside Study Group had a sold-out event at their new venue in the Southwestern Energy Building. Over 100 people came out to listen to Eric Westbrook of Unimin Energy Solutions talk on ‘Proppant: It Matters What You Pump.’

The Accelerated Learning Tutorials are technical courses that cover the various segments of our industry. At left is the ‘Introduction to Managed Pressure Drilling’ tutorial. At right is the gas lift simulator that was used in the ‘Introduction to Gas Lift Systems’ tutorial.
ANNUAL DRILLING SYMPOSIUM

Cost-Saving Innovations to Improve Drilling Economics and Well Integrity

The Annual Drilling Symposium is hosted by the Drilling Study Group to disseminate knowledge and technology to achieve the many objectives of drilling operation, including understanding risk and hazard mitigation, real-time application, and new technologies. This year, we focus on cost-saving innovations to improve drilling efficiency. This symposium is also a great opportunity to network with oil and gas industry professionals in an engaging and dynamic environment.

PRELIMINARY AGENDA

Keynote Speaker - Steven L. Mueller, Southwestern Energy CEO

“Adapting Wells Automation Efforts to a Low Oil-Price Environment”
- David Blacklaw, Shell

“Evaluating Barriers to Manage Drilling Cost and Risks” - Prosper Aideyan, TOTAL

“Onshore Well Control Intervention Trends” - Daniel Eby, Blowout Engineers

“Next Generation Kick Detection during Connections: Influx Detection at Pumps Stop (IDAPS) Software” - Brian Tarr, Shell

“Well Integrity: What Completions and Production Engineers Need from Drillers to Make the Well Successful” - George E. King, Apache

“From the asset to the enterprise: scalable and actionable real-time analytics”
- Moray Laing, SAS

“Stuck Pipe Prediction Using Automated Real Time Modeling and Data Analysis”
- Curtis Cheatham, Weatherford

“From Historical Drilling Data to Optimized Drilling Operations using an Integrated Drilling Guidance System and Novel Machine Learning Algorithm”
- Enrico Ladendorf, Pason Systems

“An Instrumented Top drive Sub System: Enabling Greater Drilling Efficiencies via Innovative Sensing Capabilities” - Thomas M. Bryant, APS Technology, Inc.

“Double the performance improvements when you combine Automation and Optimization” - Tony Pink, National Oilwell Varco

“Drilling Optimization and Hazard Mitigation Solutions”
- Akshay Sagar, Halliburton

“Applied Drilling Automation with the goal to improve Safety and Performance”
- Eric Maidla, TDE Petroleum Data Solutions, Inc.

“High frequency drilling measurements and drilling system model work together”
- Yezid Arevalo, Schlumberger

EVENT INFO

THURSDAY
4.14.16
8:00 AM – 5:00 PM

HOSTED BY
Drilling Study Group

LOCATION
Southwestern Energy Office
10000 Energy Drive
Spring, TX 77389

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43rd Annual SPE Gulf Coast Section Golf Tournament

Monday 04.11.16

Now in its 43rd year, the annual golf tournament is one of SPE Gulf Coast Section’s most important fundraisers. Come out to the beautiful courses of Kingwood and Deerwood Country Clubs and enjoy a great day of golf in support of scholarships for young engineers embarking on the adventure of an oilfield career. You will also love the wonderful food provided out on the course by our fabulous oilfield cook teams!

In addition to prizes for the winners, we have flight vouchers to raffle off, and all players will receive exciting door prizes courtesy of our generous sponsors. So bring your customers out for the day and treat them to a fun experience they won’t forget!

Your support goes directly to funding valuable scholarships for many Gulf Coast Section students embarking on careers in petroleum engineering or related fields. We know how tough these times are, but we all know that we still need to attract new talent to this great industry. Every penny made by the golf tournament is invested in the drive to educate more young engineers.

Thank you for your support!

SPONSORSHIP & REGISTRATION
spegcs.org/events/3126/

COST
Varies (see website for more info)

WHERE
Kingwood Country Club
1700 Lake Kingwood
Kingwood, TX 77339

Deerwood Country Club
1717 Forest Garden Dr
Kingwood, TX 77345

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## March Calendar

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