



CHAIR'S CORNER

DEEPAK M. GALA, SHELL

2016-2017 SPE-GCS Chair



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CHAIR'S CORNER

DEEPAK M. GALA, SHELL

2016-2017 SPE-GCS Chair

2017 Annual Update



Dear SPE Member,

It has been my privilege to serve you as Chair of the Gulf Coast Section. The experience was enriching and relationships built over last year will be forever lasting. Last year as I took on the Chair's role, challenges remained for the Gulf Coast Section as the "lower for longer" industry downturn continued to impact operators and service companies. However, with fiscal discipline, zealous cost-cutting, slightly higher oil prices, and new, relevant programs, the SPE-GCS's financial results outperformed expectations.

Established in 1935, GCS is the largest of the Society of Petroleum Engineers' 187 sections with more than 14,000 members in the 29-county area surrounding Houston. SPE-GCS provides a forum for oil and gas professionals and students to exchange technical knowledge, develop their careers and leadership skills, gain new skills, and network with other professional members.



Figure 1- Membership data as of July 2017

Over the past year SPE-GCS has added a range of new or expanded programs such as Data Analytics Study Group, Entrepreneurship Cell, and Investment & Finance Committee. It has expanded SGs to organize one-day annual symposiums and added the Members in Transition program.

Over 8,500 members attended our 170 events in the past year resulting in an average attendance of 56 per event. With the growth of Member in Transition awareness, there was a substantial increase of MiT members (1,219 in FY 17 Vs 525 in FY 16) attending these events at a subsidized rate from the previous year. We have shown that our section is there for our members even in challenging times.

Over the last year, we were privileged to have speakers such as R. A. Walker, Chairman, President and CEO of Anadarko; William R. "Bill" Thomas, Chairman & Chief Executive Officer, EOG Resources Inc.; and, Michael Teague, Oklahoma's Secretary of Energy and Environment.

Financials

SPE-GCS exceeded budget expectations for the fiscal year ending July 31, 2017. SPE had total operating revenue of USD \$1.14 million compared to \$1.03 million in FY 2016. All major professional segments (study groups, committees, social activities, membership, and accelerated training courses) contributed to the overall success. Net operating income for the year was surplus of \$241,000 compared to a loss of \$234,000 last year. The turnaround for the financials was largely due to fiscal discipline, Best-in-Class volunteers, and support of the members and companies at large. Most of the events were held at company-sponsored venues resulting in zero cost on venues. A major event to support the turnaround of the results was the Electric Submersible Pumps symposium.

GCS Vanguard Investments earned dividend income of \$6,300. The fund increased in market value by \$17,000. Member advantage funding for programs such as Member In Transitions

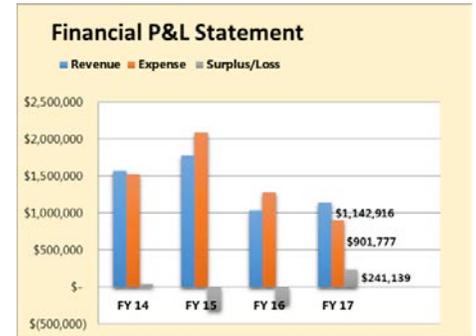


Figure 2- Data provided by SPE GCS CPA Vicki Rao

subsidized rates, scholarships, and community services was close to \$150,000. We have a total of 69 active students currently enrolled in our scholarship program. Based on the current membership numbers, SPE rebate will result in an annual rebate of \$16,000. Since 2000, GCS has awarded over \$2.5 million in scholarships.

SPE-GCS's balance sheet continues once again on the path to be financially strong. Since the balance sheet date of July 31, 2017, there have been no significant events that would materially impact the section's current financial condition.

We have also advanced a new Scholarship Endowment fund in a separate Vanguard account, which currently has a balance of \$128,000. This is a combination of donations from volunteers, attendees, individual corporate sponsors, and company match programs.

Lastly I would like to thank all volunteers, members, companies, and donors for supporting SPE. Volunteers are the unsung heroes who run SPE-GCS activities and I am indebted to them for a remarkable year.

Stay engaged, stay safe,

Deepak M. Gala
2017 SPE-GCS Chair

Further information on summary of key events over the past one year and compilation of Chair's Corner are included on the following pages.

RECAP

Chair's Corner/GCS Monthly Update



Gulf Coast Section



CHAIR'S CORNER

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2016-2017 SPE-GCS Chair



An Introduction to the 2016-2017 Chair, Deepak M. Gala

The SPE Gulf Coast Section extends a warm welcome to our new chair, Deepak M. Gala with Shell! We thought we'd introduce him by sharing part of our conversation:

Connect: Where are you originally from, and how did you wind up in Houston?

Originally, I am from Mumbai, India. I arrived in Texas in fall 2002 to pursue graduate studies. I come from a hard-working family with basic education. However, my parents understood the value of education and its importance in the world, and they supported my development from my early childhood. I wanted to pursue a career in oil and gas, which made Houston a natural destination for me.

Connect: Since you're not a native Texan, what do you think makes Houston and the Gulf Coast region such a great place to live and work?

When I was considering where I wanted to attend college, I shortlisted Texas as it offers more oil and gas exposure than any other state in the US. After graduation, I was successful in transitioning from my internship to a full-time job in Houston, the energy capital of the world. I feel Houston has all the components of a metropolis. The diversity of the city is vibrant with a large international community. I was able to establish social network – friends, extended family, and professional contacts – in only a few years. Thus, Houston quickly became my home away from home. Also, compared to some other major oil and gas hubs, Houston provides more opportunities for dual-career couples, which is one the reasons why my wife and I have made Houston our home for now.

Connect: How has SPE helped you in your professional life?

SPE keeps us connected throughout our careers and office lives. SPE provided me with avenues for sharing knowledge; enhancing my technical, writing, and project management skills; and networking at the local and international levels. With its deeply interconnected and diverse culture, SPE provided me with the opportunity to test my leadership skills at a young age and connect with a plethora of leading talent in the industry.

Connect: You are part of Shell's Deepwater group. Where do you foresee attractive future deepwater exploration and production plays?

Deepwater is one of Shell's two growth priorities (chemicals is the other). With our early 2016 completion of the BG deal, we boosted our global deepwater production by 25% and increased our access to resources. This gives Shell an abundance of choices in countries where we already have expertise, longtime relationships, and critical infrastructure. We have a strong development pipeline and production on-stream in Brazil, the US Gulf of Mexico, Nigeria, and Malaysia. We expect our global deepwater production to double to more than 900,000 barrels of oil equivalent (boe) per day by the early 2020s, and that production will come from already-discovered, established areas.

Connect: A topic that interests many of our readers is balancing work and family. How do you do that?

I have a strong support system at home, even though we are a dual-career couple. The key is to have a supportive network, which includes our employer. At Shell, I have a support network that understands the challenges of work-life balance as well as dual-career couples. The flexible work culture at Shell has been instrumental in keeping the balance tipped on the positive side.

Connect: What do you get excited about outside of Shell & SPE?

I enjoy spending time with my wife and two kids. Recently, my son and I have started going for tandem bike rides. They are a lot of fun. I like to read non-fiction books and annual reports.

Connect: Last word?

SPE is your society; connect and contribute to it.

Finally, I would like to thank our outgoing Chair, Dr. Ivor Ellul, for all he has done for GCS and for me. I am glad he will still be an active part of GCS and will serve as Past Chair of the board. I have always valued Ivor's advice, friendship, and leadership attributes. I learned a lot from him, as an entrepreneur, a mentor, and as a friend.

QUICK TAKE:

Technology that has made the most impact on my career: Managed pressure drilling

Number of SPE papers published?

11 conference papers and four journal papers. I would like to acknowledge my co-authors for their support and encouragement.

Must-haves for YPs to succeed: A curious mind and persistence (and that's not limited to YPs!)

Last international business trip: Tanzania

Sports I follow: Professional cricket, football and tennis

Last book I read: *When Breath Becomes Air* by Paul Kalanithi



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Bureau of Safety and Environmental Enforcement (BSEE) Well Control Rule (WCR)

The new Bureau of Safety and Environmental Enforcement (BSEE) Well Control Rule (WCR) will be effective as of July 29, 2016. I will provide a short overview on the WCR, as it is important for our members and industry.

After the Deepwater Horizon/Macondo incident in April 2010, BSEE was established in October 2011 to oversee offshore worker safety, environmental stewardship, and resource conservation. BSEE's workforce fulfills the Bureau's mission by employing a spectrum of statutory authorities that are designed to reduce offshore risk and improve the ability of companies to respond effectively should an incident occur.

In April 2015, BSEE proposed new regulations for Outer Continental Shelf—Blowout Preventer Systems and Well Control equipment. More than 170 comments from different companies and organizations were submitted to BSEE on the proposed rule by July 2015. Industry organizations (API, IADC, OOC, IPAA, NOIA, etc.) as well as individual companies reacted swiftly, formed various workgroups and worked on the WCR for over a year in anticipation of the final WCR. The final rule was released in mid-April 2016 and was required to be implemented within 90 days, with the exception of certain regulations that have implementation timeframes ranging from one (use of BAVOS) to seven years (shear rams that center drill pipe during shearing operations) following publication. BSEE has been working with the organizations, companies with providing clarifications on the WCR.

The final rule was released in mid-April 2016 and was required to be implemented within 90 days, with the exception of certain regulations that have timeframes of up to seven years for implementation.

The key regulations in the BSEE WCR can be loosely grouped into four categories:

- 1) Drilling margins
- 2) BOP maintenance and inspection requirements and BAVOS - BSEE-Approved Verification Organization
- 3) Real-time monitoring (RTM) requirements
- 4) API standards (incorporates 10 different API standards)

The cost of complying with the new WCR will vary depending on each company's current stage in the implementation process. While initial cost estimates from the original draft version of the WCR have come down, the fact remains that operating in the Outer Continental Shelf will become more expensive as the industry moves to fully comply with this new WCR.

SPE-GCS Update

I have been impressed by the interest of our professionals in technical topics and career advice and the events SPE sponsors to address those needs.

Recently, I attended the R&D Study Group's "Key Challenges Facing the Upstream Operators" luncheon. The event featured four speakers representing Shell, Total, Anadarko and Chevron. It was sold out with over 100 professionals in attendance, a high turnout that confirms the resiliency of our SPE chapter members. Congratulations to Kitty Harvey, R&D Study Group Chair, and her team for organizing this event.

I also attended the Roughneck Camp. This annual event is managed by SPE Young Professionals. After six months of meticulous planning and outstanding leadership by Abe Abraham and Venkata Gundepalli, the event was a resounding success. The camp attracted more than 275 attendees (with over 50 waitlisted).

I would like to acknowledge Shell for allowing SPE to use its facility for this flagship event. The significant savings from using this venue were returned to support our education initiatives.

Board News

I would like to welcome these members to their new roles for 2016-17:

- Trey Shaffer, Vice Chair
- Marisé Mikulis, Secretary
- Prashant Sainani, Vice Treasurer
- Bryan Marlborough, Communications Chair
- Sunil Lakshminarayanan, Programs Co-Chair
- James Jackson, Social Activities Chair
- Nii Nunoo, Young Professionals Chair

I would also like to welcome three new Directors-at-Large to the board:

- Robert Estes
- Dr. Mohammad Tabatabaei
- Ernie Prochaska

Website Hosting

We are moving spegcs.org's web-hosting portal to SPEI. This will save us \$15,000 annually.

Staffing

Plans are in place to have a full-time dedicated support staff for our section. SPEI will support GCS in providing this critical link.

Finance

The board has approved the 2016-2017 budget for a break-even year. The key areas allowing us to break even are the ESP workshop, newsletter ads, community services, expense reduction with key events, and education expenses. Section Treasurer David Flores will need ongoing support from study group and committee treasurers in providing enhanced oversight on their expenses.

For the first time, SPE-GCS Annual Kick-Off was held at a no-cost venue. Thanks to RAC Conference Center for hosting the event.

Stay engaged, stay safe,

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Oil and Gas Markets

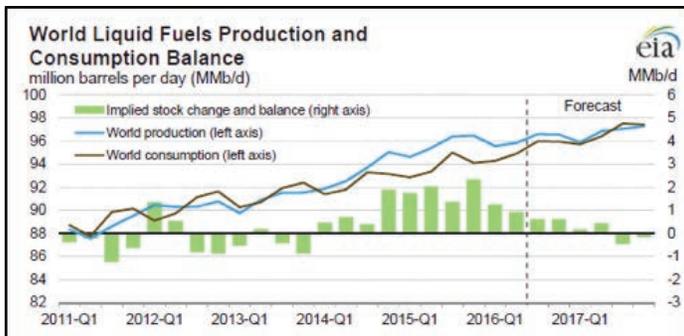
Rig Counts

After over a year and half of declines, the US land rig count bottomed out in May at close to 375, an 80% decline from the peak in November 2014. The rig count increased to almost 500 by the end of August and continues to climb. Most of the gains have been driven by horizontal oil and gas wells. Permian operators remain at the forefront of driving the increases. U.S. offshore rig count is still decreasing and is currently at 18. It is down 50 over the last six quarters. Source - Baker Hughes

Production

West Texas Intermediate (WTI) serves as benchmark for oil pricing in North America, in both the crude oil physical market and the crude oil futures market. It reached \$50 per barrel in early June, sparking optimism for a sustained price recovery. Since then, prices have settled in the low- to mid- \$40s, reflecting concern about oversupply and growth in the global economy. Crude prices are still up from the low of mid \$20s in February, a point most forecasters believe to be the trough.

The US Energy Information Administration forecasts WTI to average \$42 through the remainder of the year and \$52 in '17. The average regular pump price of gasoline is forecast to be \$2.26/gallon, almost -15% YoY change.



Source - U.S. Energy Information Administration

The EIA estimated June '16 world production at 96.3 million barrels per day (MMbbl/d) with world consumption 95.6 MMbbl/d. Consumption is not expected to exceed production until mid-'17 as shown in the graph above.

US crude oil production is projected to decrease from an average of 9.4 million b/d in 2015 to 8.7 million b/d in 2016 and 8.3 million b/d in 2017. EIA estimates that onshore crude oil production will continue declining until mid-2017 at least and that overall US crude oil production will remain below the 9.7 million b/d level reached in April 2015 at least for next few years.

OPEC Update

Gabon rejoined OPEC as of July 1, following a 21-year hiatus. Gabon produces more than 0.2 million b/d of crude oil. Iran has not been able to increase its crude exports for the past three months. OPEC production is at historical high levels, and production gains from Iran, Iraq and Saudi Arabia more than offset production losses from Nigeria, Libya and Venezuela. Source- Petro-Logistics SA

Supply and demand will need to balance before prices rally to sustained higher levels. At the end of the day, we will likely hit resistance in oil prices before we see some sustainable gains in the oil price.

SPE-GCS UPDATE

Joint Social Event Attracts 150

On August 17th, 2016 the SPE- GCS Young Professionals in conjunction with the SPE- GCS Business Development group organized a successful networking event to kick off the SPE YP year. This annual event was organized to match mentors and mentees from the two diverse groups in oil and gas to share knowledge and network, and announce the events planned throughout the year.

Sporting Clays Raises Almost \$17,000

The 16th annual SPE Gulf Coast Sporting Clays Tournament was held on August 5th at the Westside Sporting Grounds. A total of 31 teams and 155 shooters participated in the event. Thanks to the committee's chair Paul Conover and his team for putting on a well-run and successful event. If you are interested in helping with next year's event, please contact Paul and his contact information is listed in this newsletter.

Kick-Off a Success at RAC

For the first time in SPE GCS, SPE GCS Annual Kick-Off was held on August 23th at a no-cost venue, resulting in savings of USD 8000. Thanks to RAC conference center for hosting the event. Over 120 members attended the event. Section leaders provided an update on the section, upcoming changes in website, staffing and what will be the key drivers in the coming year.

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Deepak M. Gala



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Inclusiveness

Inclusiveness is essential in an increasingly globalized world. I like to say that Houston is “local yet global” because of the diversity that we enjoy. To prepare for this column, I examined SPE’s performance when it comes to gender inclusiveness in leadership. Reports on public companies’ inclusiveness are available; however, very little has been published for non-profit and professional organizations.

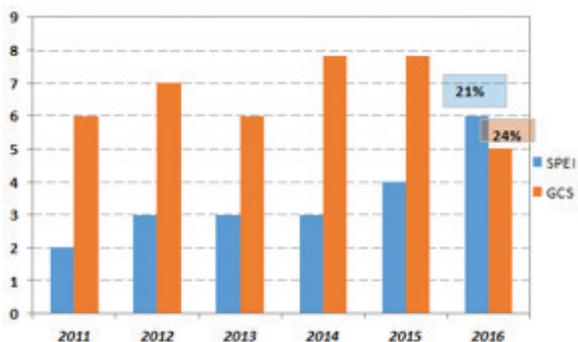
The benefits of an inclusive workplace have been researched and published in *Harvard Business Review* and other journals, and they apply to for-profit as well as non-profit groups and professional organizations such as SPE. Inclusive groups attract and retain talent, can serve increasingly varied customer bases, have stronger brands and reputations, and achieve enhanced business performance. Some companies set specific targets or quotas for female representation in recruiting and talent development to gain strategic benefits in the long run.

CEO Ben van Beurden from Shell, the company for which I work, recently signed the call to action on “Closing the Gender Gap in Oil & Gas” at the World Economic Forum in Davos. Shell supports its guiding principles and is already putting them into practice. Over 40% of Shell’s graduate intake is now female, and women now fill 19% of our senior leadership roles. This is not limited to technical roles.

Many organizations make strong efforts to achieve greater gender diversity during recruiting for entry-level positions. Female representation can be diminished rapidly within the first few promotion cycles. It is important for companies to maintain focus on inclusion for employees at each stage throughout their career paths so that the company has access to the talents of all qualified women and men at senior levels in the organization.

When I looked at the SPE data on female representation, I was pleasantly surprised and encouraged. Female members are represented on the SPEI Board of Directors (21%) and our local GCS Board of Directors (24%).

The dataset below charts the number of female members at board level for SPEI and GCS. The trend has improved as the number of women entering in the oil and gas industry increased in recent years. Flexible working options and corporate targets for collaborating externally also contributed to the rise in the number of women in these roles.



Number of Female Members on SPEI and GCS Boards

GCS board, study group, and committee roles are voluntary leadership positions, and women and men are encouraged to participate. The strong participation by female members seems to indicate that SPEI and GCS have cultures in which all volunteers feel engaged, involved, respected and connected which provides a true competitive advantage.

As an SPE-GCS officer, I feel indebted to the work of previous leaders in tackling gender issues. To continue the good work, I encourage more women to volunteer for

SPE at the leadership level. We must keep this momentum going. I believe that inclusiveness irrespective of the gender is not only the right thing to do but also the smart thing to do.

SPE-GCS Update

Our Section continues to have strong attendance for its events, and below are three recent examples. In September, the International Study Group, under the leadership of Mary Beth Snodgrass and her team, presented a program discussing the Production Sharing Agreement signed between Talos and Mexico. Loren Long, a petroleum engineer for over 20 years and Managing Director-Mexico at Talos Energy, discussed the bid and the award of two tracts in shallow waters of the Gulf of Mexico. Loren discussed the 15% local requirement and how they plan to accomplish that via purchasing casing and fuel from Mexico. He also reflected about the historical bidding process and how he expects Talos to compete with larger companies in future rounds. Almost 100 professionals attended.

In October, the Permian Basin Study Group, under the leadership of Amy Timmons and her team, presented a panel session on state of the Permian Basin. The panelists were from Occidental, Halliburton and Conoco Phillips. Another event in October was the inaugural Mergers, Acquisitions & Divestments Symposium under the leadership of David Pantoja and his team, the Business Development Study Group. Over 75 professionals attended the event. The workshop welcomes young and mid-career professionals to the commercial and transactional side of the oil and gas industry.

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Career Management

Uncertainty and cyclical business create challenges for those of us who make our careers in the oil and gas industry. Our companies compete in a cyclical market, although the current extended downturn might be the first one many professionals have experienced. Recent retirements of experienced engineers from the baby-boom generation, and layoffs of younger and mid-career employees, have reduced the industry's in-depth technical ranks.

If you're reading this, you probably want to continue working in the oil and gas industry. How can we assure our places and build careers we can be proud of in an industry in the midst of rapid change? How do we develop the skills to succeed in an era of lower-for-longer commodity prices, while applying the latest technology, fit for purpose standardization models and without compromising safety or respect for the environment? Perhaps most important, how do we transcend the turmoil around us and enjoy our work and life?

I have come to realize that there are some things under my control and some things that I really cannot control. I suggest that you always focus on things that are under your control or realm of influence. Do the best job that you can on what you are doing now. Then look for avenues to gain new skills. Volunteer for projects that will help you gain new experience, expand your professional capabilities, and give you visibility in your company.

Like it or not, perceptions mean a lot in the workplace. Fortunately, you can control how you are perceived. While you are working to the best of your ability and adding value to your company, inform your supervisors and managers about your accomplishments and continuously seek feedback. Take advantage of performance appraisals (both formal and informal) by proactively communicating the results of your work, the problems you have solved, the skills that you have gained, and what could be done better in the future. Earlier in my career, I made a point of completing detailed quarterly performance summaries of what I had achieved, without waiting for my boss to set aside time to evaluate me. I also included projects and assignments that I planned to tackle in the next quarter. This gave me autonomy and empowerment and helped me take charge of my career.

I've also found that it is important to make each job a unique opportunity and keep an open mind. At times we find ourselves in roles that aren't exactly what we expected, especially when there are less roles available in the industry. Even in these situations, you're likely to find problems that you can solve, new things to learn, and situations that require your intuition, patience and judgment.

With the right attitude, you can make most jobs meaningful and rewarding. Whatever you do, be persistent, even when things don't go entirely right. Being persistent really helps develop resilience in your career. This approach has kept me from being resentful at work, and it has helped my personal life because I didn't have to bring hard feelings home with me every evening.

It's also important to never stop learning. Always look for something new to learn or do to expand your horizons. During the financial meltdown in 2009, I earned an executive master's degree in finance, which helped me understand the global financial crisis as well as the economics of the oil and gas industry. By learning a new technical skill or mastering a new software application, you can be more valuable to your team and your company. Find out how your company and its industry peers are developing

ways to operate more efficiently. This knowledge will likely spark ideas and suggestions of your own on how to improve your company's operations.

As we head into another exciting year, it's important for all of us to reflect on 2016, be proud of our accomplishments, take control of our careers, and welcome 2017!

SPE-GCS Update

The SPE-GCS has been providing college scholarships for students interested in math and engineering degrees since 1963. Our program has sponsored over 500 students in the 53 years that we have been awarding scholarships. The SPE-GCS currently has a total of 85 scholarship recipients in the program for 2016-17 academic year. Since 1994, SPE-GCS has given out over \$3.4 million in scholarships. The current scholarship amount is \$2000/student/year, renewable for up to 4 years based on academics and other criteria.

Earlier in the year, the SPE-GCS Board of Directors launched a scholarship fundraising effort to raise money towards a Scholarship Endowment Fund. As of November 1, 2016 we have raised close to \$100K which includes donations from SPE members and affiliates, company donations, company matching donations, named scholarship donations, and pledges. We invite you to consider future donation (tax deductible contribution) in support of our fundraising efforts. Some companies may offer matching program where your donation will go an extra step. Please visit our scholarship fund website: spegcs.org/spegcs-scholarship-fund/#Donate.

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It's All About Big Data

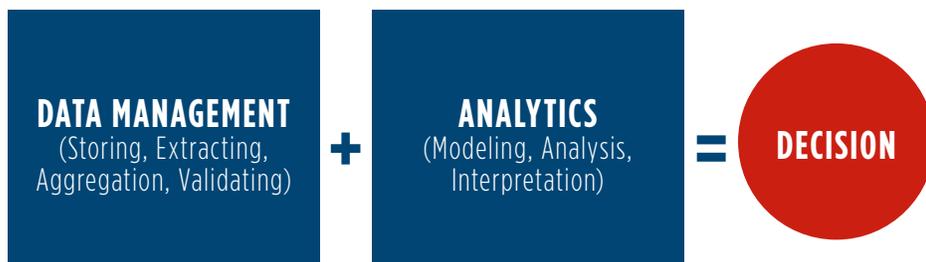
Each New Year brings new opportunities, and 2017 will not be any different. An emerging theme we see is Big Data. At the Gulf Coast section, we are initiating a new study group on data analytics, and we are excited to welcome Supriya Gupta, Data Scientist with Schlumberger, to our team. She will head the pilot phase of the study group.

To address the growing interest of students, young professionals, and seasoned peers in Big Data and its applications, we will arrange a series of luncheons and accelerated learning tutorials in the coming months. The first luncheon is titled “Has the E&P Industry Realized the Value of Digital Transformation and Leveraging Big Data Analytics?” See more details on Page 26.

But what is Big Data? According to Statistical Analysis System’s website, the term describes the large volume of data – both structured and unstructured – that overwhelms a business on a day-to-day basis. But it’s what organizations do with data that matters. To leverage Big Data, we need to understand the four V’s: volume (scale of data), velocity (speed of data), variety (different forms of data), and veracity (accuracy of data).

Big Data is worthless in a vacuum. Its potential value is unlocked only when it’s leveraged to drive decision-making. To enable such evidence-based decision-making, organizations need efficient processes to turn high volumes of fast-moving and diverse data into meaningful insights, whether it is for optimization (well spacing, production) or predictive analysis (failure prediction, equipment reliability) or to make a better strategic decisions.

There are two main processes involved: data management and analytics to extract any meaningful insights from the data. Most companies are well ahead on their journey with data management, but only a few companies are incorporating processes for analytics. Even fewer companies are already reaping benefits from data analytics. Companies such as Devon, NOV, Shell, GE, and BP have already started implementing data analytics in various capacities. An article in the October 2016 issue of JPT highlights Devon Energy’s rise to the top as a data-driven producer.



Predictive analytics comprise a variety of techniques that aim to predict future outcomes based on historical and current data. In practice, predictive analytics can be applied to almost all disciplines – from anticipating the failure of jet engines based on the stream of data from several thousand sensors to analyzing the symptoms that precede an artificial lift rod pump failure and predicting its probability accordingly.

One of the challenges with big data in the oil and gas industry is applications where there is not enough data from a technique or process to derive meaningful results. Another challenge is around data confidentiality, which limits the amount of data available for sharing. The industry is working toward mechanisms such as joint industry projects where the data can be shared for further analysis. Currently, with the issuance of new regulations, the industry is looking at ways to incorporate data analytics to satisfy the key regulatory requirements.

Data mining and machine learning really form the basis of data analytics. Machine learning is the modern science of finding patterns and making predictions from data based on work in multivariate statistics, probabilistic modeling, data mining, and pattern recognition. Data mining is the science of examining the data to discover patterns and hidden relationships. With the advances in high-performance computing, it is more feasible than ever to process large amounts of data fairly quickly and efficiently, making data analytics almost real-time.

In a “lower for longer” world, organizations may take competitive advantage from realizing value from their data assets faster through advanced analytics such as machine learning.



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It's All About Big Data

So the question is, do you just want to store your data, or do you want to put it to work creating real business value? Let's discuss at the upcoming "Data Analytics" Study Group events.

[SPE-GCS Update](#)

The **Water and Waste Management** Study Group, under the leadership of Barbara Denson and her team, was pleased to welcome Oklahoma's Secretary of Energy and Environment, Michael Teague, to Houston on November 16. He spoke on Oklahoma's response to induced seismicity. This event was both topical and timely, especially considering the recent earthquake near the Cushing, OK, trading hub, which sets the global price for West Texas Intermediate crude.

This talk had a record-breaking 163 in attendance including seven press reporters. It generated \$5,000.

Teague touched on the novel approach Oklahoma is taking to prove that recent seismicity is caused by disposal wells and to include all stakeholders in providing solutions. He outlined the state's team approach to finding solutions to the historically increased seismic events. His team includes state agencies, NGOs, academia, and representatives of the oil and gas industry.

Teague spent ample time explaining the pros and cons of this approach, but positive outcomes and measures were expressed and agreed upon by most in attendance.

The **Tennis Committee** held the 2016 Tennis Tournament under the leadership of Erin Chang on November 3-4. With more than 50 players participating, the tournament was a big success. The committee brought in new committee members and new sponsors while maintaining most of their existing sponsorships from past tournaments. The event raised \$3,000.

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Nominations

An important aspect of any professional society is recognition. SPE is no exception. The SPE Awards Program provides an opportunity for members to recognize the professional, technical and service accomplishments of their colleagues at both the regional and international level. The call for nominations is going on now through February 15, 2017. It's time to get your nominations prepared and submitted.

The SPE Award Program is nominator-driven. SPE relies on members to identify people worthy of recognition. Award committees cannot select a recipient unless that person has been nominated by an SPE member. Preparing an effective nomination is the key to presenting the accomplishments of your candidate to the award committee. Globally diverse award committees rely on concise and complete nominations. Well-written nominations allow committee members to use their time effectively, and poorly prepared nominations will not highlight the accomplishments of your candidate, no matter how impressive.

Members/volunteers can look around at their colleagues and think about what they have accomplished and how the industry has benefited. They can look to the research out of the universities or look at innovations in the field that made a difference in the industry regionally or globally and nominate the lead for a technical award. Look for steady and reliable volunteers who have influenced membership growth and retention or who have gone above and beyond in supporting section activities. Nominate them for a service award, or for the DeGolyer Medal if they have influenced the engineering or geology profession as a whole. Find out if colleagues have done amazing public service in

the community and nominate them for the Public Service Award.

Historically, Gulf Coast Section has not awarded all the awards which were eligible for the section due to low nominations of awards submissions. Gulf Coast being the largest section of SPE, the award nominations have been low compared with other sections, especially given the relevance of Houston for our industry. Also, the number of awards awarded to members has been a low 44% when compared with other sections in the below table. Surprisingly, even sections comparatively smaller than Gulf Coast did a better job at recognizing their volunteers by awarding 100% of the award allotments. We as a community should recognize the talent as this is the only reward we give back to our strong volunteers.

REGION	Total Awards Available 2016	Regional Service Awards Available	Awards Given 2016	
North Sea	18	6	18	100%
Russia & Caspian	15	3	15	100%
South America & Caribbean	17	5	17	100%
South Central & East Europe	16	4	13	81%
Southwestern North America	16	4	13	81%
Canada	17	5	12	71%
Mid-Continent North America	17	5	11	65%
Rocky Mountain North America	16	4	10	63%
Western North America	15	3	9	60%
Gulf Coast North America	18	6	8	44%
Southern Asia Pacific	16	4	7	44%
Northern Asia Pacific	18	6	4	22%
Eastern North America	16	4	3	19%
South Asia	16	4	3	19%
Africa	16	4		0%
Middle East	18	6		0%
TOTAL	265	73	143	54%



CHAIR'S CORNER

DEEPAK M. GALA, SHELL

2016-2017 SPE-GCS Chair



Nominations

You can visit www.spe.org to find out information on regional and international awards, as well as resources to help make an effective nomination. Let's challenge the members of the Gulf Coast Section to make at least one nomination for each of the regional and international awards.

[SPE-GCS Update](#)

The Houston Engineers Week Committee will host the **Young Engineer of the Year (YEOY)** Awards Banquet on February 20 to recognize the outstanding young engineers from around the Houston area. The awardee for SPE-GCS is Aniket Kumar with Halliburton. Aniket has been an active volunteer with the Young Professionals Committee and Drilling Study Group. He has applied for 15 patents and published 17 technical articles in peer review journals and at technical conferences. More details on YEOY and Houston Engineers Well Committee can be found at www.HoustonEngineersWeek.org.

Stay engaged, stay safe,

Deepak M. Gala



CHAIR'S CORNER

DEEPAK M. GALA, SHELL

2016-2017 SPE-GCS Chair



Continuing Education/Members in-Transition

We as professional members of SPE are always in transition, whether between jobs, roles, or varied projects. To help members navigate these transitions, the Gulf Coast Section has focused and expanded its efforts over the past 18 months for **Members in Transition**. The MiT subcommittee resides within the **Career Management/Continuing Education** Committee.

The CM/CE Committee provides continuing education opportunities to aid members in their professional development and career management. The committee has delivered consistent and relevant programs over the past 18 months. For example, the Accelerated Learning Tutorials are offered at subsidized costs for our members. The program has been a success and has been expanded to two more courses this fiscal year, bringing the total to 10. The latest topic was "Introduction to IP Laws," which was well received by our members. The tutorials are provided by industry-renowned experts. Below is the upcoming schedule of technical courses.

March 17, 2017	Applied Understanding of PVT
April 28, 2017	Introduction to Reservoir Simulation
May 2017	Introduction to Petroleum Economics
June 23, 2017	Multistage Completions in Unconventional Reservoirs
July 21, 2017	Introduction to Petroleum Geomechanics
TBD	Introduction to Petrophysics

The **MiT initiative** includes a monthly seminar series focused on non-technical topics (12 have been held so far); access to free computer software licenses and training from service providers (five companies); Job Search Work Teams, where groups of six to 12 people meet weekly to work on their job searches together; and a hiring event scheduled for March 28.

Over the past few months, some Work Team members have been successful, as we see some early signs of recovery. US land rig count has increased to 689 rigs. It was up 55 rigs in the last two weeks of January, which is the largest two-week gain since August 2011. Additionally, global oil inventories declined in the fourth quarter of last year from the previous quarter, confirming that inventory builds are now reversing as the market shifts from oversupply to undersupply — at least for now.

The upcoming **Upstream Oil and Gas Professionals Hiring Event** is to connect job seekers with employers that have open positions. Job seekers will also have access to resources from sponsors; collaborating organizations such as Houston Geological Society, Pink Petro, Society of Women Engineers, and Geophysical Society of Houston; startup employers; and staffing agencies active in the upstream oil and gas industry. The event committee is still looking for sponsors and employers. For any questions related to the event, please contact spgcs.mit.hiringevent@gmail.com

The event will be the first hiring initiative for SPE Gulf Coast Section. More hiring events will be planned in coming months.

SPE-GCS Update

The new **Data Analytics** Study Group, under the leadership of Supriya Gupta and her team, was pleased to welcome Dr. Satyam Priyadarshy of Halliburton for its inaugural event on January 18. Dr. Priyadarshy provided an enriching talk on data analytics and the associated challenges facing the E&P industry. He spoke about the state of the E&P industry in adopting digital transformation. Dr. Priyadarshy also educated the audience on what it takes to develop a data analytics capability and how organizations can grow this skill set. The event was sold out, with over 100 professionals attending.

The **Reservoir** Study Group, under the leadership of Freddy Alvarado and his team in conjunction with the SPEE team, was pleased to welcome Stephen R. Gardner, an Executive Director with BBVA Compass Bank, on January 4.

Mr. Gardner spoke on "Volumes and Value: a Banking Reservoir Engineer's Perspective." He led an open discussion on how banks determine the value for sizing reserves-based loans. He explained how the value is determined and how the SEC and PRMS use it. He also shared his view on recent changes in the oil industry with the ever-changing commodity prices and rules.

The event was hosted at the Petroleum Club, with a record-breaking 126 in attendance. This generated the highest revenue from a single Reservoir Study Group luncheon.

Stay engaged, stay safe,

Deepak M. Gala



CHAIR'S CORNER

DEEPAK M. GALA, SHELL

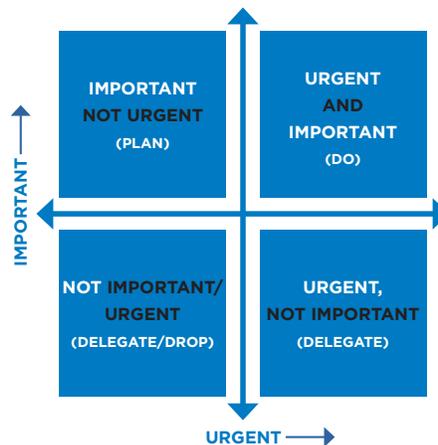
2016-2017 SPE-GCS Chair



Time Management

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

Below is the matrix developed based on Eisenhower's strategy. The first step in following this approach is to distinguish between what is important and what is urgent. Urgent matters can seem important or vice versa, and we get overwhelmed by trying to attack all kinds of work at once, which can affect overall productivity. Sometimes it's not obvious what's important and maybe some direction from your supervisor or manager can be helpful. Some issues – like safety emergencies – are urgent and important, so they can't be put off. Tasks that are important but don't need immediate attention – like preparing a budget or proposal – merit serious planning and thought, so you can decide on when to tackle them. Minor crises that are urgent but not important – like making last-minute travel reservations – can be delegated to others where possible, so you can spend your time on things that have more impact on the organization. Work that's neither urgent nor important can be delayed to a point in time when you're not so busy. I have found this tool to be very effective in prioritizing or categorizing tasks. You'll find that most aspects of your work and personal life can be placed in one of Eisenhower's box. The great thing about this strategy is that it can be used for daily tasks as well as long-range/weekly tasks hence can be easily scaled up.



SPE-GCS Update

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

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

December and February Board meetings.

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

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

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

Stay engaged, stay safe,

Deepak M. Gala



CHAIR'S CORNER

DEEPAK M. GALA, SHELL

2016-2017 SPE-GCS Chair



Entrepreneurship

With companies challenged to push boundaries in a new lower-for-longer era of our industry, the pace of innovation is picking up and Houston is emerging as the Silicon Valley for oil and gas. Scientific breakthroughs, technical innovation, and faster turnaround are the key ingredients to continue making progress.

Houston has several accelerators; venture capital and private equity firms are flush with capital; and operators and service companies are warming up to the challenges of trying something novel. However, becoming a Silicon Valley-style startup community requires plenty of work. Starting a company is challenging. For lack of money and connections, and perhaps missing guidance, many great ideas never get off the ground.

SPE, with its strong industry presence and reach, takes a leading role in promoting innovation and entrepreneurship in our industry. The **Ideas Launch Pad** initiative was set up in collaboration with the Houston Technology Center in early 2016, followed by the proposal to kick off an oil- and gas-focused **Entrepreneurship Cell** committee by four dedicated SPE members/entrepreneurs (Mikhail Alekseenko, Moji Karimi, Aniket Kumar, and Nii Nunoo). The committee has generated overwhelming interest within the community.

The E-Cell committee organizes monthly after-hours events on entrepreneurship topics, including panel sessions, fireside chats with oil-and-gas startup CEOs, workshops, and networking events. With attendees ranging from investors to startup founders to potential customers, the events provide a natural forum for exchange of ideas and for fundraising.

Since August, the Entrepreneurship Cell has conducted events that have garnered great interest and traction with the oil and gas entrepreneurs and investors alike. For example, the February panel session on "Raising Money For an Oil & Gas Startup" had more than 100 attendees at the evening event. The next E-Cell event is on May 31. At this pseudo *Shark Tank*-style event, startups will get feedback from industry experts on how to perfect their business model — and will potentially get investments.

Some companies have active innovation programs, such as Shell's GameChanger program. GameChanger works with startups and businesses on early-stage ideas that have the potential to impact the future of energy. It provides the companies support, expertise, and seed funding, while allowing them to maintain independence and to make their own decisions. The E-Cell committee plans to bring in speakers from GameChanger and other innovation practitioners to speak at future events.

TAKE YOUR
PASSION
AND MAKE IT
HAPPEN.

SPE-GCS Update

A separate **Scholarship Endowment Fund** has been set up within the overall Vanguard Investment account for GCS. Individual donors can benefit from company match contributions. Companies such as **Chevron, Shell, BP, ConocoPhillips, Murphy, Encana, Noble Energy**, and **ExxonMobil** offer matching programs for employee donations. (I personally applied for Shell's existing Easymatch program last year and felt it was a straightforward process.) If your company does not match SPE scholarship donations, ask your HR department about getting added.

It is important that you designate the gift for the SPE-GCS Scholarship Endowment Fund (and not the SPE International Foundation).

I want to stress, as always, that giving is a personal and voluntary choice, and irrespective of your choice, I am glad we are part of the SPE family.

Communications Chair Bryan Marlborough has undertaken a major overhaul of the SPE-GCS website with our partner eConverse Social Media Inc. The new site will be responsive on all devices and ensure that search functions allow for members to easily find documents and events. It will also incorporate community functionality to increase engagement, among other enhancements. We expect the new website to be running by September.

Stay engaged, stay safe,

Deepak M. Gala



CHAIR'S CORNER

DEEPAK M. GALA, SHELL

2016-2017 SPE-GCS Chair

Climate Change



Time flies — especially when you and your team are productive! The June and July issues of *Connect* are combined into one summer issue. My term as Chair ends July 31. In the August *Connect*, I will provide an update on our goals and how the Gulf Coast Section performed in fiscal year 2016-2017. Chair's Corner for August *Connect* will be an interview with my good friend and incoming Chair Trey Shaffer.

2016-2017 was a transition year for our industry. Oil prices and onshore rig counts reached bottom and began trending upward. OPEC endorsed oil production cuts to bring stability to the oil price markets. Professionally, my employer, Shell, completed the acquisition and integration of BG and set out a strategy for the future.

For my last Chair's Corner, I would like to provide a short note on **reducing the CO₂ intensity of the industry and climate change**, which we all are aware of and may affect most of us in some way or other.

At the 2015 Paris climate conference, 196 countries adopted an agreement that, as of November 2016, entered into force as 55 countries that account for at least 55% of global greenhouse emissions have deposited their instruments of ratification. The agreement sets out a plan to avoid dangerous climate change by limiting global warming to well below 2°C. As of April, 195 UNFCCC members have signed the treaty. The Paris Agreement acknowledges that different nations have different capacities for and duties to climate action. The agreement makes clear that developed countries must take the lead in reducing greenhouse gases. They must also provide financial resources to help developing countries succeed in their aims. The agreement is to be reviewed every five years.

One of the main elements of the agreement affecting our industry is significantly reducing greenhouse gas emissions. EPA studies indicate oil- and gas-related emissions consist of about 80% carbon dioxide and 20% methane. Coal is 30% more carbon intensive than oil and 70% more than gas. Switching from coal to gas in power/electric generation can reduce CO₂ emissions, and this replacement has been happening in many countries over the last decade. CCS or CCUS storing CO₂ safely underground is considered to be another key technology in a lower-carbon energy system, a process in which companies could reduce the large CO₂ streams vented in the atmosphere at refineries and natural gas processing plants by separating, capturing, compressing, and storing CO₂ deep underground. One such commercial-scale project is under way at Gorgon gas processing facility.

Various initiatives are under way to tackle climate challenges related to fossil fuels. SPE will form workshops on capturing and storing CO₂ emissions and new technologies in effectively dealing with methane emissions/leaks. One is OGCI Climate investments, where methane is one of the main priorities. OGCI Climate investments was set up with 10 IOC and NOC partners, with the aim to spend \$1 billion on low-carbon technologies. Individual companies have their own initiatives.

For a successful implementation of the Paris Agreement, the oil and gas industry and SPE can play a pivotal role. For today is not like yesterday — we will have to adapt!

SPE-GCS UPDATE

Drilling & Permian Study Groups

The **Drilling** and **Permian Basin** study groups had their annual symposia on April 13 and 18, respectively. Speakers represented Shell, Halliburton, Occidental Petroleum, Pioneer Natural Resources, Energent, Pinnacle, Weatherford, PetroSkills, University Lands, Texas Oil & Gas Institute, UpCurve Energy, and Laura Freeman Consulting. Both events were sold out. GCS generated close to \$12,000 equivalent for scholarships.

ESP Symposium

On the week of April 24, the **ESP Symposium** had its biannual event. This was the first year the event was established as a symposium: All papers were registered manuscripts, attracting industry-recognized authors and high-quality papers. The 14 sessions covered 36 papers, 33 main presentations, and three poster sessions over a 3½-day technical program. Numbers from the event point to a more stable oil industry than when the last event was held in 2015, rebounding from 363 registrants to 560 registrants from 29 countries. It was also the first time 39 vendors exhibited in 60 booths. We were fortunate to receive over \$30,000 in sponsorship money. Net profits increased from \$87,000 in 2015 to around \$200,000 in 2017. This single event supports most of the scholarship expenses for GCS.

I really appreciate the Drilling and Permian study groups and the ESP Symposium Committee for their efforts with these successful events.

Stay engaged, stay safe,

Deepak M. Gala

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