#### January SPE Newsletter

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I hope you had a fun and relaxing holiday break. On behalf of SPE Denver Section, I'd like to wish you a happy new year.

We're making some changes in the new year. We have a new <u>website</u> which I hope you will enjoy. You will need to <u>sign up</u> for it in order to register for events in the future. We've also made some changes to our General Meeting and Event registration policy. You can read about them

here <u>2016LuncheonAndEventsRegistrationPolicy.pdf</u>. We are introducing the Jack England Season Pass - a General Meeting season pass for remaining 5 General Meetings of the 2015/2016 season, including the Joint Session Meeting in March. The season pass costs \$125, which represents a \$10 discount, and can be purchased <u>here</u>. A new 9 month pass will be offered for the 2016/2017 season.

Finally, a shout out to the Community Outreach volunteers who helped out with Energy4Me presentations! Check out these photos from a December presentation.



Read on for upcoming events!

Cheers,

Marija Mircevska

**Newsletter Editor** 

## SPE Awards - Nominate a Colleague Today!

#### Applaud excellence in the E&P industry by nominating a colleague for an annual award given by the Society of Petroleum Engineers

SPE Awards recognize expertise and contributions to the upstream oil and gas industry. The 2016 SPE Awards will be presented at the regional and international levels for:

- Technical contributions
- Professional excellence
- Career achievement
- Service to colleagues
- Industry Leadership
  - Public service

On-line regional award nomination process only takes 15-20 minutes! So, PLEASE think of someone who deserves recognition for their outstanding work in the E&P industry and visit <u>www.spe.org/awards/</u> today!.

## Nominations will be accepted through February 15, 2016.

#### January 5, 2016

## **GENERAL MEETING**

## Measurement of Stimulation Effectiveness in Horizontal Well Completions Using Optic Fiber Distributed Sensing Methods

### Gustavo Ugueto, Shell

- III January 20, 2016, 11:30 AM 1:30 PM
- Denver Athletic Club

#### Tickets:

Members	\$25
Non-Members	\$35
Walk-Ins	\$40

## **Register Now**

**Abstract:** Connection of the wellbore to the hydrocarbon resource volumes via effective fracture stimulation is a critical factor in unconventional reservoir completions. Various well construction and dynamic placement methods are used to distribute treatment volumes into targeted sections of the wellbore. This paper provides some insights about the effectiveness of hydraulic fracture stimulation process from the interpretation of Fiber Optics (FO) in particular, distributed acoustic sensing (DAS) and distributed temperature sensing (DTS). We will show examples from multiple wells where FO and other complementary diagnostics, have been used to gain a better understanding of three highly debated fracture stimulation distribution topics. Communication between stages has frequently been observed in wells with diagnostics. There is consensus amongst the completion community that communication between stages is highly undesirable because the energy and materials of the stimulation are partially or totally misdirected from the target treatment interval to other portions of the wellbore. The analysis of DAS and DTS has not only helped us investigate the occurrence of communication between stages in cemented and uncemented horizontal wells but also provides insights about the different communication paths. Fiber Optic distributed sensing and other complementary diagnostics

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### Thanks to this Month's

### **Newsletter Sponsor:**



## 14<sup>th</sup> Annual Gas Well Deliquification Workshop

February 29 – March 2, 2016

Sponsored by the Artificial Lift R&D Council and Southwestern Petroleum Short Course

#### Information you need to optimize gas well Deliquification!

- Continuing Education Courses
- Technical Sessions
- Panel Discussions
- Breakout Sessions
- Exhibitors
- Networking

Detailed information can be found on our website.

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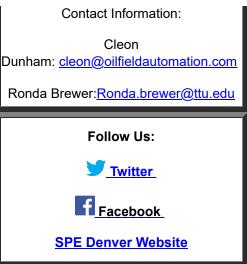
are also being used to investigate if connections are being maintained between the newly created frac and the well at the end of the treatment. The use of integrated diagnostics allows us to evaluate how frequently overdisplacement (over-flushing) occurs in both vertical and horizontal wells and the impact to well inflow performance where production logging data is acquired. Finally, diversion is increasingly being used as a way to improve the efficiency of hydraulic fracture stimulation distributions. The effectiveness of the diversion techniques has traditionally been judged on the basis of surface pressure response during treatment and ultimately, from production comparisons with reference wells. Unfortunately, getting clear answers from production performance comparisons takes significant time. FO allows for monitoring of the diversion process in real time. Analysis of DAS and DTS responses also allow for the quantification of the efficiency of diversion treatment in re-directing hydraulic fracture stimulation from dominant perforation clusters to those not being stimulated.



**Biography:** Gustavo Ugueto is Shell's Fiber Optic Regional Deployment Coordinator and Principal Petrophysicist for the newly created Completion Effectiveness Team in Shell's Unconventional Organization. In 1982 he received a degree in Geological Engineering from Universidad Central de Venezuela. He began his career as Petrophysical Engineer at Petroleos de Venezuela S. A. and joined Shell International in 1988

where he has worked as Petrophysical Engineer and Section Head of Petrophysics in The Hague, London and Nigeria. In 1996 he became Discipline Head of Petrophysics in Brunei before transferring to USA in 1997. After working in several exploration and development projects in Deep Water Gulf of Mexico both in New Orleans and Houston, in 2005 he started working on the development of Unconventional Tight Sands and Shale Reservoirs in the US-Rockies. During this time, he also was Technology Coordinator and Geoscience Advisor for multiple exploration and development assets in US-Rockies. In 2010 he became Shell's Global Principal Technical Expert (PTE) for Data Acquisition and Special Processing within Petrophysics.

# SPE Evening Event: 25-Year SPE Members



An evening honoring the 25 year SPE members – a time to reminisce, reconnect with old friends and meet a few new ones. This event is exclusive to SPE members with 25 years or more of membership.

#### Register Here!

January 28, 2016, 5:00 PM - 7:30 PM

• Denver Athletic Club - Billiards Room and Bar

#### Tickets:

\$25 per person (SPE members & Guests)\$30 walk - in*Complimentary hors d'oeuvres & drinks included.* 

#### Schedule:

5:00-6:00 PM Meet, greet, drink and eat 6:00-6:30 PM Hand out 25-year pins and awards 6:30-7:30 PM What happens after 25 years -Mentorship and giving back opportunities, Presentations

## HSSE STUDY GROUP

#### Recent Changes to GHG Reporting for Petroleum and Natural Gas Systems Tom Gibbons, Whiting Petroleum Corporation

IIII January 14, 2016, 11:30 AM - 1:00 PM

• Halliburton, 1125 17th Street, 19th Floor Training Room

#### RSVP: Clory Martin

**Abstract:** On October 22, 2015, EPA finalized significant changes to the Greenhouse Gas Mandatory Reporting Rule for the oil and gas industry. These changes, which became effective January 1, 2016, primarily affect the upstream and midstream sectors, and add two new reporting segments: 1) Gathering and Boosting, and 2) Natural Gas Transmission Pipelines, plus a new source type for the Onshore Production segment: oil well completions and workovers with hydraulic fracturing.

This presentation will provide an overview of the revisions to this federal rule, including discussion of the specifically affected source types and preparation for the substantial monitoring, recordkeeping, and reporting needed to comply with the rule.

**Biography:** Tom Gibbons is an Environmental Audit Professional with Whiting Petroleum Corporation, specializing in air quality. He has worked with Whiting for 6 years, primarily focusing on air quality for the Rocky Mountain region and company-wide greenhouse gas emissions reporting to EPA. He is responsible for reviewing and auditing air compliance for much of Whiting's 12-state operations.

Tom has a bachelor's degree in chemistry from the University of Illinois, and a master's degree in meteorology from Pennsylvania State University. He has 27 years of broad experience in air quality as an environmental consultant for a wide range of industries, and specifically within the upstream oil and gas industry.

## COMPLETIONS AND PRODUCTION STUDY GROUP

# Tying DFIT Response to Well and Fracture Mechanics

Robert D. Barree, Barree & Associates

IIII January 21, 2016, 11:30 AM - 1:00 PM

Halliburton, 1125 17th Street, 19th Floor Training Room

RSVP: Wendell Salas

**Biography:** Robert D. Barree is president and principal investigator of Barree & Associates, a consulting firm specializing in stimulation and well performance optimization. Previously Dr. Barree was a Senior Technical Consultant at Marathon's Petroleum Technology Center. His 24 years' experience at Marathon developed extensive expertise in the areas of well completion, stimulation, numerical simulation, special core analysis, formation damage, rock mechanics, and equipment design. He has been involved in the development of hydraulic fracture design simulators and fracture diagnostic procedures since 1980 and is the primary author of the fully three-dimensional hydraulic fracture simulator GOHFER.

Dr. Barree is the author of more than sixty technical publications. He has served as SPE Distinguished Lecturer on the topic of new philosophies in hydraulic fracturing. Dr. Barree has also served on many technical committees for SPE annual and regional meetings, Applied Technology Workshops, and Forum Series. He is a registered Professional Engineer in the State of Colorado and holds degrees in Petroleum Engineering from the Pennsylvania State University and Colorado School of Mines.

## CONTINUING EDUCATION

# Understanding and Optimizing Hydraulic Fractures

Mike Vincent, FracWell

- January 26-28, 2016, 8:00 AM 5:00 PM Registration Deadline is Friday, January 8, 2016
- Brown Palace Hotel and Spa, 321 17th St, Denver

## **Register Now**

Registration Fee

\$2,000 for members \$2,400 for non-members *Registration fee is fully refundable until January 8, 2016* 

2.4 CEUs (Contiinuing Education Units) will be awarded by SPE-Americas Office for this 3-day course

#### For more details, contact Darien O'Brien, P.E.

**Course Description:** This course is designed for people who are curious and don't mind being challenged to think differently about hydraulic fractures. Actual field results provide compelling evidence that our theory, models, and intuition have not led us to optimal designs. we can do better!

Course Contents: Although hydraulic fractures are the key to development of most low permeability reservoirs, fractures are frequently mischaracterized and poorly optimized. This course will focus on practical techniques to investigate and optimize fracture treatments. Instead of relying solely on theory and model forecasts, this course challenges conventional wisdom by focusing on irrefutable field evidence demonstrating fracture deficiencies. Participants in this course will have access to more than 200 published field studies in which the productivity and profitability of fields have been improved by altering the treatment design. Key concepts will be demonstrated in a wide variety of reservoir types, including tight gas wells, CBM, shale gas, high perm and low productivity oil wells. However, this course will also cover key learnings in horizontal wells including the Eagle Ford, Bakken, Niobrara, and Marcellus.

About the Instructor: Mike Vincent is a consulting engineer with more than 20 years of experience in economic optimization of hydraulic fractures. After completing his degree at the Colorado School of Mines, he worked with Amoco in Denver, and with ARCO in Anchorage, Kuparuk, and Denver, Mike started Insight Consulting in 1996, specializing in fracture design and reservoir analyses. Mike's work is focused upon helping clients improve fracture designs by accurately predicting production under realistic conditions. Mike has authored more than 30 technical papers and has instructed more than 300 seminars on fluid flow, fracture design, and practical production optimization. He is very active in SPE, serving as a technical editor and on steering committees for several SPE meetings and workshops. Mike frequently lectures at universities and presents fracturing schools to numerous companies and organizations, and has served as an SPE Distinguished Lecturer and Distinguished Author.

## SPE Handball/Racquetball Tournament

### **36th Annual Winter Tournament**

Save the Date!

Eebruary 26, 2016, 12:00 PM (Noon)

• Denver Athletic Club

All levels of participation welcome

#### Funds to benefit the Denver Section SPE Scholarship fund

#### **Society of Petroleum Engineers - Denver Section**

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