#### December Denver SPE Newsletter

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#### December 5, 2019

### **GENERAL MEETING**

#### FRAC TRENDS IN LIQUID-RICH BASIN

\$45

Dr. Leen Weijers, Vice President of Engineering, Liberty Oilfield Services

Denver Athletic Club, 1325 Glenarm PI., Denver, CO 80202
Wednesday, December 18, 2019, 11:30 AM - 1:00 PM
Early-bird registration deadline: December 16 at 5:00 PM

Tickets: Members \$30 Non-Members \$35

# **Register Now**

#### Abstract:

Walk-Ins

This presentation reviews how the industry achieved a step-change in reducing service delivery cost through innovation and efficiency, allowing sustained economic development of unconventional resources at decreasing breakeven production costs. Technological changes, as assisted by a better understanding through frac diagnostics, integrated modeling and statistical analysis have enabled the large cost reduction to commercially produce a barrel of oil. As a result, shale frac designs have focused on higher intensity completions with tighter stage and cluster spacing, improved diversion through extreme limited-entry perforation design and simultaneous and zipper frac'ing, increasing proppant mass per well, utilizing next-generation frac fluids to increase produced water recycling and using cheaper lower-quality proppant. At the same time, the environmental footprint of oil & gas production has been shrinking and will continue to do so as operational changes continue to make our industry a better neighbor, for example through faster well construction utilizing fewer pad locations, development of quiet fleets, greener frac chemistry, frac focus disclosure, etc. Together, oil and gas operators and their service providers have used technology & innovation to improve efficiencies and increase the overall daily pump time per frac crew. However, there is plenty of room for further improvements in technology and efficiency.



**Biography:** Dr. Leen Weijers is Vice President of Engineering at Liberty Oilfield Services LLC and served as its Business Manager at Liberty's founding. Leen worked at Pinnacle Technologies from 1995 to 2011, where he oversaw the development of the industry's most widely used fracture growth simulator, FracproPT. He was Pinnacle's Rocky Mountain Regional Manager from 2007 - 2011. Leen completed his doctoral research at the Faculty of Mining and Petroleum Engineering at the Delft University of Technology in the Netherlands. His focus was on fracture growth model experiments to investigate the interaction of hydraulic fracture systems with horizontal and deviated wells.

## GENERAL MEETING | SPRING 2020 JACK ENGLAND PASS

# **Register Now**



- Spring 2020 Jack England Pass
- Young Professionals
- YP Christmas Party
- Community Outreach
- Sponsorship Opportunities
- SPE Award Nominations
- Partner Event





Denver SPE members who would like to pre-pay for the Spring General Meeting lineup may now do so through the purchase of a Jack England Pass. This \$130 pass represents a discount below normal admission rate and provides access to the January, February, March and May General Meetings including the Joint Session meeting on April 2020. If a pass holder is unable to attend a pre-paid meeting, they can transfer the pass to another member by contacting <u>denversection@spemail.org</u>.

### YOUNG PROFESSIONALS

Lunch & Learn - Design Solutions to Challenges Petroleum Operators Face Dr. William W. Fleckenstein, EREP Director of Strategic Relationships and Enterprises, Colorado School of Mines

Liberty Oilfield Services, 1950 17th St. Suite 2400, Denver, CO 80202
December 11, 2019, 11:30 AM - 1:00 PM
Lunch will be provided

# **Register Now**

#### Abstract:

The Colorado School of Mines is developing a series of technologies to address challenges to operators using senior design teams through the Capstone Program. These challenges include verifying aquifers are sealed by surface casing using a simple pressure test while cleaning out the shoe track to building tractors to lengthen the reach of first coiled tubing but then open hole laterals, or to develop a single large ball frac sleeve to compete with Plug and Perf. These technologies will be discussed, upcoming projects to address further challenges, such as the use of drones for flowline inspection, and the process operators can take to propose a challenge for the Capstone Program and then how to support a team to solve that challenge.



**Biography:** William W. Fleckenstein currently serves as the EREP Director of Strategic Relationships and Enterprises. He was appointed in 2000 as an Adjunct Professor of Petroleum Engineering at the Colorado School of Mines, where he also served as Interim Department Head 2012-2014. He holds BSc, ME, and Ph.D. degrees in petroleum engineering from Mines. He has 33 years' experience in primarily drilling, completions and workovers, with direct experience on over 200 wells, was involved in planning his first horizontal well in 1990 and is a Registered Engineer in California. Dr. Fleckenstein was a co-PI on a comprehensive three-year study funded by the US National Science Foundation examining the impacts of nearly 18,000 wells drilled in the Wattenberg Field in Colorado. He was an SPE Distinguished Lecturer in 2017-18 and received the 2019 SPE Rocky Mountain Region Completions Optimization and Technology Award. Dr. Fleckenstein was a founder of FracOPTIMAL and is currently actively developing new fracturing and downhole tractor technologies.

### YOUNG PROFESSIONALS

#### **Tropical Holiday Shindig**

American Bonded, 2706 Larimer St. Denver, CO 80205
December 17, 2019, 7:30 PM - 10:30 PM

# **Register Now**

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'Tis the season to be merry, and kick off the holidays at the Tropical Christmas Shindig. Feel the warmth with your fellow YPs as SPE YP & EPIC (SEG) team up to bring you food, drinks and cheer. Register now to secure your spot, space is limited! We will be gathering at American Bonded, Tuesday, Dec 17th at 7:30 pm.

### COMMUNITY OUTREACH



Do you want to teach young students about energy, serve breakfast at the Denver Rescue Mission, or judge science fairs? Join other SPE members in giving back to our community!

#### **Upcoming Events:**

#### Energy4Me – Train the Trainer

Date: December 11th, 2019 Time: 3:00 pm Location: Lenski STEAM Elementary School in Littleton | 6350 S Fairfax Way, Littleton, CO 80121 Speaker: Ellen Scott, Engineering Advisor at Deep Imaging

#### Free

#### **Description:**

The workshop will equip attendees with the basic training to plan and deliver the Energy4Me workshop for students. This will be in advance of a hybrid Energy4Me "Fracking with Jello" event at the same location in late February. These educational hands-on activities are designed to both illustrate scientific concepts and engineering functions used in oil and gas exploration and production, and cultivate critical thinking and problem-solving skills in participants. The objective is to get participating students to consider STEM education and pursue a career in the energy, and oil and gas industries, which in turn ensures a positive flow of future talent for the industry.

#### SPE Serves Breakfast at the Denver Rescue Mission

Date: TBC Time: 6:30 am -8:30am Location: Lawrence Street Community Center | 2222 Lawrence Street, Denver, CO 80205 Limit: 15 volunteers

#### Free

#### **Description:**

Please join SPE Denver in their support of the Denver Rescue Mission, a nonprofit organization helping the poor and homeless populations of the Denver area. More than 85% of the services of the Denver Rescue Mission are operated by volunteers, serving people experiencing homelessness and poverty in our community since 1892. Please come and bring friends or family.

Please Contact Community Outreach Chair, Davis Scott, for more details! daviswsd@gmail.com

## Become a Sponsor!

The Denver Section of the Society of Petroleum Engineer is currently seeking sponsorship for the 2020 calendar year and would like to have your company as one of our sponsors. Sponsorship at any level gets you publicity at nearly every event (27+) throughout the year as well as social media exposure. In 2018-2019, we had an 8% increase in followers with up to 3,500 impressions/views per post.

SPE aims to run our events at break-even or better, so sponsorship dollars are going to support the scholarships we give out each year at 7 Rocky Mountain region universities. For the past 3 years, we have given out more than \$50K/year to undergrads pursuing degrees in petroleum engineering. \$35K+ of that was sponsorship dollars, whereas the rest was generated at the events we put on throughout the year.

Last year's sponsors were: Liberty OFS, Nitec Consulting, Anschutz Exploration, Antero Resources, Crescent Point, PetroSkills, Basin Fluids, Well Data Labs, Darcy Partners, MHA Consulting and some other ad hoc sponsors for specific events. We also had 60+ sponsors for a golf tournament. Please see the matrix framework below for different levels of sponsorship, as well as the ad hoc list of events we welcome support for this year. For inquiries or interest, please contact Clif Price, Sponsorship Chair, at (580) 339-0038 for tax exemption questions email us at <u>denversection@spemail.org</u>.

The Denver Section of SPE is seeking sponsors for its 2019-2020 Calendar Year. Last year our section gave out over 50K in scholarships and particpated in hundreds of hours of community support for those in need and those curious about our industry. We appreciate any and all interest in supporting the Section with charitable donations and have put together the following benefits table to outline the value of sponsorship at different levels. Should your charitable hopes not fall within this framework, let us know and we can find a way to make the donation equal value for your organization. Sponsorship Chair - Clif Price @ 580.339.0038





General Meeting held Monthly					
Presenting Sponsor (5 of 8 luncheons)	•				
Sponsor (8)		•	•	•	
Events					
Study Group Presenting Sponsor (min of 4)	•				
Study Group Sponsor (4)		•			
Continuing Education (2)	•	•	٠		
Education Track (2)	•	•	•	•	
Evening Event (2)	•	•	•	•	•
Young Professionals					
YP Lunch & Learn Presenting Sponsor (5 of 8)	•				
YP Lunch & Learn Sponsor (8)		•	•	•	
YP Happy Hour (8)	•	•	•	•	•
Sports					
Tennis/Racquetball/Golf Platinum	•	•			
Tennis/Racquetball/Golf Gold			•		
Tennis/Racquetball/Golf Silver				•	
Tennis/Racquetball/Golf Bronze					•
Advertising					
Newsletter Monthly Sponsor (5 of 8)	•				
Acknowledgement on Website Sponsorship Banner	•	•	•	•	•
Facebook/Twitter/LinkedIn Post	•	•	•	•	•
Unlimited Online Job Postings	•	•	•	•	•
Branded drinkware (socials) and writing materials (presentations) allowed (items provided by sponsor)	•	•	•		

Presenting Sponsors of the Section or an Event are given the opportunity to introduce the event and encouraged to display marketing material on a table(s) at the event.

## Nominate an SPE Member!

Award Nominations are open!! Nominate a friend! A fellow worker! An individual who did a great presentation or wrote a great paper! We want them all!!

The deadline for Regional Awards is March 1st, 2020.

2/9/24, 10:02 AM

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## PARTNER EVENT - SPE Permian Basin

# STIMULATING CONVERSATIONS BETWEEN THE FIELD AND OFFICE FOR 25 YEARS

Co-Hosted by the SPE Permian Basin Section



Carbon Management: New Thinking CO<sub>2</sub> Flood Field Trip to SACROC Natural Transmissive Fracture Short Course US and International CO<sub>2</sub> EOR Case Histories Cyclic Gas Injection (Data Rich) Session 650 Well Horizontal Play Update

## DECEMBER 9-13, 2019 AT THE NEW BUSH CONVENTION CENTER, MIDLAND, TEXAS REGISTER TODAY @ CO2CONFERENCE.NET

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**Society of Petroleum Engineers - Denver Section** 

**Asia Pacific** Level 35, Gardens South Tower Mid Valley City, Lingkaran Syed Putra 59200 Kuala Lumpur, Malaysia

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SPE members receive periodic emails on events and programs related to the section to which they belong. If you no longer wish to receive emails from this section, please opt-out. You may also choose to review your email preferences with SPE International.



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