February Denver SPE Newsletter

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February 6, 2019

GENERAL MEETING

Analytics, Physics, and the Truth Donny Keighley and Kerstan Wallace, Encana

Denver Athletic Club
 Wednesday, February 20, 2019, 11:30 AM - 1:00 PM
 Early-bird registration deadline: February 18 at 5:00 PM

Tickets:

Members	\$25
Non-Members	\$35
Walk-Ins	\$45

Register Now

Outline:

As engineers and geoscientists, a big part of our job is creating models to explain and predict well performance. We have no problem running physics based simulators, feeding machine learning algorithms, and creating mental models. Unfortunately, we also have no problem believing our models without bothering to check if they're any good. While there is no perfect way to predict reservoir behavior given time, budgetary, and physical constraints, we think that reservoir management can be improved by questioning personal biases, making/checking rigorous predictions, and simply being honest about what we do and don't know.



Biography:

Donny Keighley graduated from the Colorado School of Mines in 2004 with a BS in Geophysical Engineering and again in 2006 with an MS in Geophysics. Since then, he has worked at Encana in Denver on various teams including Jonah, New Ventures, Permian, and Business Development. Like many geophysicists, Keighley slowly morphed into a different role -- in his case, a data analyst. Currently, he works on the Business Development team

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Thanks to This Month's Newsletter Sponsor:

analyzing all types of data, making and using predictive models, and streamlining processes using R programming.



in geology from the University of Texas at Austin. After graduating in 2013, Wallace joined Encana and has been working with the company for 5+ years. During that time he has held various roles in operations and reservoir characterization. Wallace's primary areas of focus is in subsurface data analysis, geomechanical modeling, and, most recently, well performance data analytics. Over the last few years, Wallace has been responsible for developing a predictive well performance model in the Permian Basin used to help guide program development

Kerstan Wallace received his B.S. and M.S.

decisions.

CONTINUING EDUCATION

Artificial Lift and Production Optimization

Dr. Rajan Chokshi - Accutant Solutions of Houston

• Liberty Oilfield Training Room, 950 17th Street, Suite 2400, Denver

February 26-27, 2019

1.6 CEUs (Continuing Education Units) will be awarded for this 2day course

Registration deadline: February 12, 2019

Register Now

Description: This course is designed to give trainees an overview of various artificial lift solutions and related production optimization concepts. After introducing participants to the need for an artificial lift system, training will focus on each of the following lift methods: Gas lift, Reciprocating Rod Lift, Progressing Cavity Pumping, Hydraulic Pumping, Electrical Submersible Pumping, Plunger and Capillary System. For each lift type, the course covers main components, application envelope, relative strengths and weaknesses. Animations, field cases, and example-calculations are used to reinforce concepts. A unique feature of this course is discussion on digital oil field as applicable to lift optimization. The course will close with a discussion session wherein trainees would discuss their challenges and plans for lift systems with a view to understand applicability of the concepts learned during the training.

Instructor:

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In a career spanning over 30 years, Chokshi has worked on petroleum and software engineering projects globally in the areas of multi-phase flow, artificial lift design, and production optimization in oil and gas industries for national oil company and service providers. He continues to consult and teach professional courses in these areas. His interests are developing and nurturing young talent globally, technology integration and commercialization.



Dr. Chokshi is a Society of Petroleum Engineers' Distinguished Lecturer for the 2015-2016 year. He also serves on the SPE global committees for training and production awards. He holds a Bachelors and a Masters in Chemical Engineering from the Gujarat University and IIT-Kanpur, India respectively; and a Ph.D. in Petroleum Engineering from the University of Tulsa, USA.

YOUNG PROFESSIONALS

Lunch & Learn - Fracture-Driven Interference and Application of Machine Learning

Hayley Stephenson, Reservoir Analytics Engineer, Baker Hughes, a GE Company

Liberty Oilfield Services 950 17th Street #24, Denver, CO 80202
 February 13, 2019, 11:30 AM - 1:00 PM
 Lunch will be provided

Register Now

Abstract: There has been a significant amount of progress made applying data science techniques in the oil and gas industry over the last few years. These applications have occurred in all aspects of upstream, midstream and downstream sectors, but it is perhaps fair to say that direct application to reservoir centric challenges has not enjoyed as much success as when it has been applied to aspects of the value chain that experience direct observation and measurement by operators (e.g. optimization of facilities). Reservoirs, by their nature, introduce vast degrees of uncertainty due to their imperfect characterization and sporadic measurement and perturbation. Here we touch on several reservoir workflows incorporating data science and dive deep in to specific example involving frac hit mitigation.

Bio: Hayley is a reservoir analytics engineer at the BHGE Oil and Gas Technology Center. Her experience is in large scale data analytics and algorithm development, with an emphasis in reservoir data. Since joining BHGE in 2016, Hayley has had the opportunity to rotate between product lines and technology development, gaining experience in new product innovation, statistical analysis, and reservoir analytics development. These opportunities have led her to her current role where she works with geoscientists and digital experts to turn technical requirements into functional prototype algorithms, providing optimized solutions to customer problems. Hayley holds a B.S. in Mechanical Engineering from Oklahoma Christian University and is currently pursuing her M.S. at Georgia Tech.

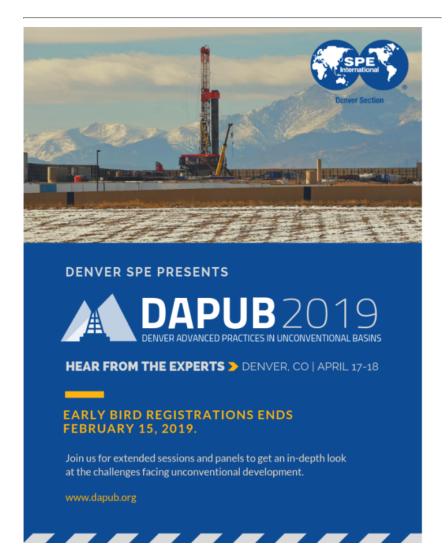
YP Happy Hour

Rialto Cafe, 934 16th Street Mall, Denver, CO
 December 13, 2018, 4:30 PM - 6:00 PM
 Sponsored by <u>Basin Fluids</u>

Join us for a drink and appetizers to catch up and network with friends and colleagues.



Denver Advanced Practices in Unconventional Basins



 Embassy Suites - Downtown Convention Center 1420 Stout St, Denver, CO 80202
 April 17-18, 2019
 Sponsorship opportunities available!

Register Now

The Society of Petroleum Engineers Denver Section is pleased to host the Advanced Practices in Unconventional Basins covering key topics and challenges in Unconventional Basins, geared towards professionals with experience in these types of basins.

Plan to attend to learn from the experts in Unconventional Basins and Technologies. The event will feature extended technical sessions and multiple networking opportunities.

Event details, registration, agenda and speakers, and sponsorship opportunities can be found on the event website: <u>www.dapub.org</u>

Registration includes admittance to the two day technical sessions, access to related presentations, daily keynote lunches, Colorado School of Mines Technology Expo and Paper Contest, and Thursday Networking Reception.

Registration	<u>By February 15</u>	After February 15
SPE Member	\$550 USD	\$650 USD
Non-Member	\$750 USD	\$850 USD

Early registration ends February 15th. Sign up today!

SPE & DAPL Ski Fast Oil Bash

Copper Mountain
 March 1-3, 2019
 Join us for this event!

Register Now

Welcome to the annual Oil Industry Ski Trip! This year, SPE and DAPL are partnering up to make a true Oilfield Ski Bash! Don thy onesie and prepare your favorite mountainside drinking container, for this year is sure to be the best year of petroleum shenanigans to hit the slopes since 2015! We'll have a ski bus traveling up on Friday, après ski party Friday, and other networking opportunities for the remainder of the weekend.

Spots are filling up quickly and this event will sell out. Registration closes on February 14, 2019 ... don't miss the window!

FACILITIES STUDY GROUP - DJ Basin Production Equipment Corrosion

Anadarko's 7th Floor Conference Center 1099 18th St.
 February 21, 2019
 Join us for this event!

Register Now

Title: DJ Basin Production Equipment Corrosion – One Operator's Observations

Speaker(s): Eric Onacila, Jacob Behling, Anadarko Petroleum Corp.

Short Description: An investigation of production equipment corrosion with an overview of prevention and mitigation methods.

Lunch and Event Sponsored by:



DRILLING STUDY GROUP - A Discussion of Bradenhead Challenges in the DJ Basin

Schlumberger, 1675 Broadway, 7th Floor
 February 28, 2019 11:30AM-1:00PM
 Join us for this event!

Register Now

Title: A Discussion of Bradenhead challenges related to Well Construction and Production Operations in the DJ Basin.

Speaker(s): Jeff Eulberg, Drilling Engineer, Anardarko, and Chris Cordaro, Sr. Production Engineer, Anadarko

Short Description: This is the first in what will be a series of talks on existing solutions to Sustained Casing Pressure (or Bradenhead pressure) in the DJ Basin. Jeff & Chris will discuss recent drilling team solutions to specifically target

placement of a lifecycle of the well annular barrier preventing Bradenhead on new drills as well as precise efforts to eliminate casing pressure and safely abandon wells that have surpassed their economic limits.

Please note that the Study Group is a bring your own lunch event.

COMPLETIONS STUDY GROUP - Addressing Well Interaction with the Help of Microseismic

Halliburton, 1125 17th St. Suite 1900
 February 28, 2019 11:30AM-1:00PM
 Join us for this event!

Register Now

Title: Addressing Well Interaction with the Help of Microseismic: Enhancing Integrated Diagnostic Data Streams with Heatmaps.

Speaker(s): Hannah Chittenden, Geophysical Analyst and Project Coordinator, ESG Global Energy

Short Description: It is well understood that in today's field development, well communication and interaction is a problem influencing production in both parent and child wells. While frac-hits are not a new phenomenon, infill drilling and tighter well spacing of horizontal pads in areas like the Permian and Eagle Ford have intensified the issue, leading to appreciable production losses or diminished producing capacity in many wells. With a better understanding of the nature of the well interaction, operators can make important decisions around well spacing, frac sequencing, and completions design to optimally stimulate a reservoir while minimizing production losses associated with unintended interaction. here we present a case study from the Permian basin to determine how integrated data streams can be enhanced with microseismic data to provide additional knowledge of the mechanisms diving well interaction and offer insights to operators to help mitigate the risk of frac-hits.

Please note that the Study Group is a bring your own lunch event.

2019 DISTINGUISHED LECTURER SELECTION

It's time to select our Distinguished Lecturers (DL) for the next SPE season!

The Distinguished Lecturer Program is one of SPE's most popular programs. Each season 30 to 35 experts from the oil and gas industry are selected to share their knowledge on the latest technologies and trends with SPE members.

The purpose of the program is to provide SPE sections with outstanding speakers for section meetings, and to recognize the professional contributions of the selected Distinguished Lecturers. The program promotes SPE's mission to collect, disseminate, and exchange technical knowledge.

Please fill our the survey <u>HERE</u> to help us select who we'd like to host at our General Meetings next season.

SPE AWARD NOMINATIONS



Nominate directly HERE.

or email <u>barbganong@gmail.com</u> or <u>Justin.Knappe@gmail.com</u> with your nominee's Name, Employer, Department/Title, and award category

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:
 - Join fellow SPE members as we volunteer to serve breakfast at the Denver Rescue Mission (2222 Lawrence St) from 6:30-8:30am on Wednesday, February 13th
 - Are you attending the 2019 Ski Fast Oil Bash? Do you want to ski Copper Mountain for free on Sunday, March 3rd? If you answered "yes" to either question, please consider volunteering with us for Special Olympics of Colorado's State Winter Games on Sunday morning, March 3rd from 7:30am-12pm.

If you want to learn more about SPE's outreach activities, please contact Community Outreach Chair, Ellen Scott. ellen.scott@fractureid.com

39th Annual SPE Racquetball/Handball Tournament



February 22, 2019 | Denver Athletic Club | 12:30 PM

\$35 (\$20 for students)
Price includes banquet with drinks. food, awards and door prizes. All skill levels welcome!

• Denver Athletic Club

Friday, February 22, 2019, 12:30 PM - 5:00 PM Sponsorship opportunities available!

Register Now

Please contact John Arsenault at <u>jarsenault@bayswater.us</u> or John Berning at <u>john.berning@apergy.com</u> for details or questions.

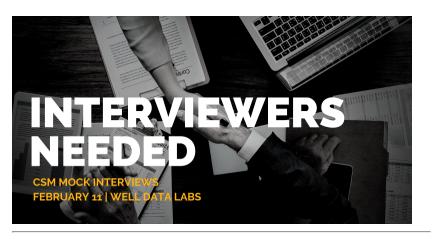
CSM Student Chapter

CSM Mock Interviewers

Well Data Labs, 1675 Larimer St, Suite 700
 February 11, 2019

Register Now

Kindly consider giving sometime to season the bright and future generation of the oil and gas industry.



Save the Dates!

On behalf of CSM SPE Student Chapter, we would like to announce save the dates for the upcoming Clayshoot and Golf Tournament.



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Colorado School of Mines SPE Chapter Presents: Colorado School of Mines SPE Chapter Presents: September 20 th 2019 Golf Tournament Fossil Trace \bigcirc Golden, CO
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Participation as a group of three professionals and one student Participation as a single colfer
□ Participation as a single golfer □ Sponsorship opportunities
Generating opportunities Generating opportunities
Please email completed form and information requests to Nicole Bourdon (<u>nbourdon@mymail.mines.edu</u>)

Colorado School of Mines Annual Clayshoot Fundraiser on 4/11/2019 at Kiowa Creek Sporting Club - More Details to Come!

Society of Petroleum Engineers - Denver Section

Americas	Asia Pacific	Europe	Middle East
222 Palisades Creek Dr.	Level 35, Gardens South Tower	1st Floor, Threeways House	Fortune Towers, 31st Floor
Richardson, TX 75080-2040 USA	Mid Valley City, Lingkaran Syed Putra	40/44 Clipstone Street	Offices 3101/2, JLT Area
	59200 Kuala Lumpur, Malaysia	London W1W 5DW UK	P.O. Box 215959, Dubai, UAE

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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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