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Welcome back from summer break, SPE Denver! As the kids go back to school and the leaves begin to turn, there's a new sense of optimism in our industry. Let's take advantage of this new energy by getting active in the Denver oil and gas community!

This month, we're excited to welcome SPE Distinguished Lecturer Tao Yang of Statoil to our <u>General</u> <u>Meeting</u>. He will be speaking on the topic of PVT property estimation in shale reservoirs using legacy data sources. Come down to the meeting and mix with engineering professionals you haven't seen in a few months.

For a limited time, members can pre-purchase discounted general meeting admission for the fall via the <u>Jack</u> <u>England Pass</u>!

Registration is now open for the first of this season's <u>continuing education</u> opportunities. Deepak M. Gala of Shell will be teaching a frequently requested introduction to Managed Pressure Drilling and Underbalanced Drilling.

Our <u>Young Professionals</u> committee has hit the ground running with educational opportunities and gettogethers, including a lunch and learn about using high frequency data to analyze drilling dynamics and the monthly happy hour at Rock Bottom. They're also accepting reservations and sponsors for the YP Topgolf Halloween Party in October.

Finally, the Denver section is seeking your help with a number of volunteer opportunities. Ellen Scott is looking for volunteers for <u>community outreach</u> efforts. The CSM SPE student chapter is looking for volunteers to conduct <u>mock interviews</u> on Thursday, September 8th. Additionally, SPE Denver and RMAG have provided a pair of opportunities for those wishing to help with the <u>Hurricane Harvey recovery</u>.

Sincerely, Michael Mehle Newsletter Editor

September 4, 2017

GENERAL MEETING

Estimation of Shale Gas and Oil Properties Based on Field Data

Tao Yang - Statoil Distinguished Lecturer

Denver Athletic Club
 September 20, 2017, 11:30 AM - 1:30 PM

Tickets:

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

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Thanks to This Month's Newsletter Sponsor:

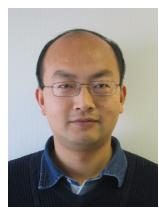
Register Now

Abstract: Reservoir fluid composition and PVT properties play important roles in liquid rich shale development. Accurate estimation of reservoir fluid richness has a significant impact on drilling target and well completion. Traditional PVT properties are widely used for reservoir management, production optimization, and economic evaluation.

Unfortunately PVT data from shale reservoirs is rarely available in public literature due to difficulty to obtain representative in-situ fluid samples in extremely low permeability reservoirs. This makes understanding shale PVT a very challenging task. Statoil spent two years' time collecting large quantities of PVT samples and measuring PVT properties for the Eagle Ford field. A wide range of reservoir fluids from dry gas, gas condensate, and volatile oil to black oil had been collected and studies thoroughly.

Based on the large PVT database from more than 50 wells, a new methodology was developed to estimate in-situ reservoir fluid composition and corresponding PVT properties based on readily available field data. Only providing one of following field data (either API gravity of surface condensate/oil, gas-oil ratio, surface gas composition, or mud logging data) is sufficient to derive the majority of PVT properties, including reservoir fluid composition, saturation pressure, formation volume factors, and NGLs.

The new method proposed in this presentation is a technical breakthrough for shale gas and oil properties with many applications with significant improvements. Thanks to reservoir fluid self-consistency in shale plays, it is very practical to estimate reasonable PVT properties based on existing field data without large sampling and laboratory programs.



Biography: Tao Yang is a reservoir technology specialist at Statoil. He holds BSc and PhD degrees in chemical engineering. Before joining Statoil, Tao Yang worked at Pera a/s - a leading reservoir engineering consulting company in Norway. From association with Prof. Curtis Whitson (Recipient of SPE Anthony F. Lucas Gold Medal 2011), he gained vast industrial experiences from global reservoir engineering consulting projects for more than 200 fields.

Tao Yang has publications in prestigious journals and reviews papers for several technical journals (technical editor of SPE Reservoir Evaluation & Engineering and editorial board member of Journal of Petroleum Science and Engineering). He served as cochairman and steering committee member for numerous workshops and conferences (including the successful SPE ATW Complex Reservoir Fluids in 2011, 2012 and 2014). He received the SPE Outstanding Technical Editor Award in 2009 and the SPE North Sea Regional Technical Award - Reservoir Description and Dynamics in 2011.

JACK ENGLAND PASS



Denver SPE members who would like to pre-pay for the fall general meeting lineup may now do so through the purchase of a Jack England Pass. This \$90 pass represents a 10% discount below normal admission rate and provides access to the September, October, November and December general meetings. 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>.

Registration for the Jack England Pass will close on Monday, September 11th.



CONTINUING EDUCATION

Introduction to Managed Pressure Drilling (MPD) and Underbalanced Drilling (UBD) Deepak M. Gala - Shell Upstream Americas

Liberty Oilfield Services Training Room, 950 17th St. Suite
2400, Denver, CO 80202
October 24 & 25, 2017, 8:00 AM

1.6 CEUs (Continuing Education Units) will be awarded by SPE-Americas Office for this 2-day course. **Registration Deadline:** Monday, October 9, 2017

Register Now

Description: This 2-day course will provide an introduction and overview of the current underbalanced and managed pressure drilling technology. The course will explain how and why UBD or MPD is carried out, highlight the differences between the two, and include the variations of MPD technologies such as dual gradient drilling and continuous circulation methods. It will provide a basic understanding of the equipment used in both drilling operations. The course highlights the relevant issues that need to be addressed in well planning and design as well as the well integrity and well control aspects for both UBD and MPD.

The objectives of this course are to understand:

- The basics of the UBD and MPD technologies
- When to use UBD and when to use MPD and what the various limitations and advantages are of these drilling techniques
- The equipment requirements for UBD and MPD and gain an understanding of how they differ in the well design process
- The engineering requirements for these drilling techniques

Instructor: Deepak M. Gala is Senior Well Engineer at Shell Upstream Americas. Prior to joining Shell, he was US commercial

manager at Weatherford and US well control engineer at Cudd Well Control.

Outside of his duties at Shell, Gala is involved in many industry associations and initiatives with over 15 technical publications. He regularly teaches SPEsponsored courses and serves on various regional and international SPE committees. Gala was recently selected to be a part of the new SPE Sustainability Committee and SPE International Young Professional Coordinating Committee. He was the first



Weatherford employee to receive SPE's 2008 Outstanding Technical Editor Award for the Drilling and Completion Journal, the first to receive the 2010 International Young Member Outstanding Service Award, and the 2011 Young Engineer of the Year for the SPE Gulf Coast Section.

Gala earned a bachelor's degree in chemical engineering from Mumbai University, a master's degree in natural gas engineering from Texas A&M University-Kingsville, and an MBA in finance from Tulane University.

YOUNG PROFESSIONAL UPDATES

Lunch & Learn - Using High Frequency Data to Analyze Drilling Dynamics

Jimmy Stacey - Technical Sales Engineer, NOV ReedHycalog - Dynamic Drilling Solutions

• Liberty Oilfield Services Training Room, 950 17th St. Suite 2400, Denver, CO 80202

September 13, 2017, 11:30 AM - 1:00 PM

Please RSVP by 1:00 PM Tuesday, September 12. Lunch will be provided.

Register Now

Biography: Jimmy Stacey has been in the Oil and Gas industry for 5 years. He was previously in Bakersfield, CA for two and a half years working with drilling/fishing tools and drill bits. Jimmy has been in Denver for 2.5 years and in the last year made the switch to DDS to cover the fleet of BlackBox tools to use for drilling optimization. He graduated from BYU in 2012 with a degree in Mechanical Engineering.

Happy Hour - Rock Bottom Brewery

Rock Bottom Brewery, 16th and Curtis St., Denver
 September 13, 2017, 4:30 PM - 6:00 PM

Join us for a drink and appetizers to network with friends, colleagues, and new connections. It's on us!

September Sponsorship Shout-Out

Please join us in thanking Butch's Rathole & Anchor Service for sponsoring this month's YP activities! Please reach out to Ameil Shadid (405-919-2523) for more information about Butch's.

SPE YP Topgolf Halloween Costume Party!

Topgolf Centennial, 10601 E. Easter Ave., Centennial, CO 80112

October 27, 2017, 5:00 PM - 8:00 PM

Register Now

SPE – YP is kicking off the season with a Top Golf Halloween Event! Enjoy 3 hours of Top Golf, drinks, appetizers and prizes with friends and colleagues (non-members are welcome).

Registration Fee: \$35 per person. Register above, spots are limited!

Dress Code: Costumes are strongly encouraged!

Transportation: Party bus leaving downtown Denver at 4:15 PM (location TBD).

For sponsorship opportunities, please contact <u>Jessica Iriarte</u> and <u>Joey Hainsfurther</u>.

COMMUNITY OUTREACH

Do you want to share your passion for engineering with middle and high school students? Would you like to volunteer in the community with other SPE members? Do you enjoy educating local students about our industry? We need Community Outreach volunteers! If interested, please contact Ellen Scott, Community Outreach Officer at <u>ellen.scott@fractureid.com</u>.

CSM SPE MOCK INTERVIEWERS

Colorado School of Mines Fall 2017 Career Day is on Sept 12th.

Members of the CSM SPE student chapter need your help as industry professionals in sharpening their interviewing skills ahead of the big day.

Please donate an hour or two from your busy day to conduct mock interview sessions with the students on September 8th in downtown Denver.

Sign up using the Register button below. You may sign up for more than one time slot.

Register Now

HURRICANE HARVEY RELIEF

SPE Denver Red Cross Donations

The SPE Denver Section continues to accept donations for those affected by Hurricane Harvey. The section will be matching contributions up to \$5,000. Please help us reach our goal!

Click here to donate

Bonfils Blood Donations

The disaster on the Gulf Coast has presented a need for blood donations. Our friends at RMAG have communicated how you can donate blood here in Colorado. Bonfils is part of a 28 state network that will bring blood donations to emergency medical centers in Texas and beyond. There is a call for O negative (universal donor) and O posistive blood types. The link to Bonfils is below.

bonfils.org

Society of Petroleum Engineers - Denver Section

Americas 222 Palisades Creek Dr. Richardson, TX 75080-2040 USA Mid Valley City, Lingkaran Syed Putra

Asia Pacific Level 35, Gardens South Tower 1st Floor, Threeways House Fortune Towers, 31st Floor 59200 Kuala Lumpur, Malaysia

Europe 40/44 Clipstone Street London W1W 5DW UK

Middle East Offices 3101/2, JLT Area P.O. Box 215959, Dubai, UAE

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