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November 1, 2021

### GENERAL MEETING—Distinguished Lecturer.

#### Unified Well Spacing and Completion Design for Unconventionals – A Physics and Data-Driven Approach

Walter C. Dobbs, International Reservoir Technologies, Inc. and 2021/2022 SPE Distinguished.

Denver Athletic Club | 1325 Glenarm PI, Denver, CO 80204
Wednesday, November 17<sup>th</sup>, 2021, 11:30 PM – 1:00 PM
Early-bird registration deadline: November 15 at 5:00 PM |
Click "Register Now" for more details.

#### Tickets:

Members	\$35	Students	\$15
Non-Members	\$45	MiTs	\$15
Walk-Ins	\$45		

## **Register Now**

#### Abstract:

Development of unconventional plays requires an early election of horizontal well targeting and spacing. As operators fine-tune development plans, changes to that initial framework can take years to implement due to long lead times for land, permitting, and planning. However, hydraulic fracturing design remains a more flexible design element, representing a powerful force for optimization.

With a combination of accessible physics-based modeling and data analysis, engineers can see through the noise of multi-variate systems to create high-confidence integrated well spacing and completion designs for frontier and mature field development and for campaigns that have been drilled but not yet stimulated. This approach mixes long-standing reservoir engineering practices with developing ideas about how to represent the hydraulic fracturing process and response.

A Dynamic Stimulated Reservoir Volume modeling workflow constrained against treatment, flowback, and production data enables engineers to interpret the most efficient stimulation fluid volume and forecast performance for any system. Model predictions and field data are unified in an elegant visualization that illuminates a complex multi-well design space. Insights about the impacts of



- In this Issue... - <u>SPE - General Meeting - DL</u>
- SPE Young Professionals
- SPE Completions Study Group
- SPE Membership Survey
- SPE Community Outreach
- SPE Members in Transition
- <u>SPE Industry Partners</u>



geology and reservoir conditions highlight the potential for design customization across the play.

In stacked plays, the application of these techniques becomes even more important. This workflow was developed and applied extensively in the Denver-Julesburg Basin Niobrara play. The asset team validated the approach against a 70-well field trial then used it to decipher regional performance and ultimately to post-appraise and design drilling and completion campaigns for the most efficient use of capital.

#### **Biography:**



Walter Dobbs has spent over 25 years interpreting and forecasting reservoir behavior in support of programs designed to maximize oil and gas recovery and investment returns. He specializes in dynamic reservoir modeling, well performance analysis, and reservoir fluids characterization and has participated in field studies of conventional and unconventional plays in several North American and

worldwide basins.

Walt is passionate about using the practice of reservoir engineering to reveal unique stories told by the dynamics of petroleum reservoirs. He holds BS and MS degrees in Petroleum Engineering and is a registered Professional Engineer in Colorado, Texas, and Wyoming.

# YOUNG PROFESSIONALS—LUNCH & LEARN

#### UNDERSTANDING AND MITIGATING DOWNHOLE CORROSION AND WEAR FAILURES

Rob Davis, Chief Technology Officer & Co-Owner, Western Falcon.

Liberty Oilfield Services | 950 17<sup>th</sup> Street. Ste. 2400, Denver, CO 80202

Thursday, November 11<sup>th</sup>, 2021, 11:30 PM – 1:00 PM **FREE!** Pizza and soft drinks will be provided, courtesy of Liberty Oilfield Services.

## Register Now

#### Abstract:

A discussion on different types of corrosion and wear (and their associated mechanisms) followed by an overview of commercially available mitigation techniques, including their practical downhole applications are the focal points of this talk. Commonly accepted practices and myths about downhole corrosion and wear mechanisms, and the importance of using preferred life extension procedures and products to maximize the Mean Time Between Failures (MTBF) by solving the root cause(s) of downhole failures are also included. Available techniques used to determine root causes for downhole failures will also be reviewed. Finally, this talk includes an overview of some useful material selection guidelines for metallic and nonmetallic materials, chemical treatments, mechanical methods, liners and coatings that are currently used downhole, focusing on the advantages and limitations of each approach. The primary objective of this work is to assist subsurface, completion, production, artificial lift and enhanced recovery engineers in understanding and avoiding expensive downhole corrosion and wear failures cost effectively.

#### **Biography:**

Rob spent the last forty years (started in 1980) of his career evaluating the interaction of materials with different service environments and comparing the most cost-effective selection strategies to control corrosion and degradation of material properties. Rob began his career as a research engineer recreating various industrial service environments and studying their effects on metals, plastics, coatings and elastomers primarily for the oil and gas industry.

He was the Technology Director, Western Hemisphere at Tuboscope for ten years prior to his current position as Chief Technology Officer at Western Falcon in Houston, Texas USA. At Western Falcon, Rob has developed four new commercial thermoplastic liners to internally protect tubulars from corrosion and wear. He has been awarded four patents and has two pending patents for internal pipe liner technology applications. Additionally, Rob manages the quality testing and technology ventures at Conestoga Supply Co. relating to their steel oil country tubular products.

Rob is a member of NACE (Now AMPP), ASM, ACS, and the Energy Rubber Group. Rob is the Charter and Current Chairman of NACE TEG-524X on Downhole Coatings and Liners and Past Chairman of NACE STG 33 for Nonmetallic Materials in Oil and Gas Production.

### COMPLETIONS STUDY GROUP

# Water Management in the Rockies: Outlook, Trends, ESG and Way Forward *Ryan Hassler.*

Tydi'i Tassier.

• Dominion Towers | 600 17<sup>th</sup> Street. Ste. 2300. Denver, CO 80202

Tuesday, November 23<sup>rd</sup>, 2021 11:45AM – 1:00PM

## Register Now

#### Abstract:

**Discussion Topics:** 

- How does a positive drilling and completion outlook in the Rockies affect the way water is handled?
- What learnings are to be had from increasing regulatory restrictions in the Permian pertaining to the Rockies?
- E&P behavior in an ESG focused operating landscape
- Latest in water management trends and developments for Rockies' operators.

#### **Speakers:**

Ryan Hassler is a Senior Analyst on the Rystad Energy Shale Intelligence team, specializing in oilfield services research and market intelligence. Ryan joined Rystad in January 2019, coming from a background in the Canadian oil and gas industry, working in operations and engineering roles for heavy oil and oil sands mining producers. In this role, he is the lead analyst covering the US L48 water management market while also contributing to US Land drilling and completions forecasting and the frac sand market. After spending two years in Houston, TX, Ryan currently sits in Denver, Colorado, and holds a BASC in Chemical Engineering from the University of British Columbia in Vancouver, Canada.

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

# SPE—Denver Chapter 2021-2022 Membership Services Survey!



## **Denver Section**

Help us to serve you better? Tap the picture above to respond! Or contact <u>Eric Lyche</u> directly. <u>Here</u>.

### SPE—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:**



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

Date: November 16<sup>th</sup>, 2021 Time: 6:15 am – 8:30am Location: Lawrence Street Community Center | 2222 Lawrence Street, Denver, CO 80205

Limit: 10 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 at the Denver Rescue Mission. 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. Volunteers must be vaccinated.

Please get in touch with community outreach team member Nico Cosca for more details!

### Register Now

#### Denver Metro Regional Science & Engineering Fair "Speak with a Scientist" Series

**Date:** November 9<sup>th</sup>, and December 2<sup>nd</sup>, 2021 **Time:** 6:00 pm – 7:00 pm **Location:** Virtual

Limit: 4 volunteers/session Free

#### **Description:**

Want to help students discover their passion for science? Well, now is your chance! Join DMRSEF for virtual chats with students to talk about your career path, what kind of work you do, and advice on charting their own educational or career paths. Each 1-hour Zoom session will include brief presentations by STEM panelists, followed by time for a question-and-answer period.

Please get in touch with community outreach team member Julie Tannehill for more details!

### **Register Now**

#### RMPC 2021 Zoo Lights Holiday Party

Date: November 17<sup>th</sup>, 2021 Time: 5:30 pm – 10:00 pm Location: Denver Zoo | 2300 Steele St, Denver, CO 80205

Member tickets: 2 for \$50, 4 for \$85

#### **Description:**

The Rocky Mountain Pipeliners Club and Colorado Oil and Gas Association have rented out the ENTIRE Denver Zoo! We hope you and your family are able to join us and have a chance to experience the 30th annual Zoolights, the Pipeliners way! Click on register now to be redirected to the event website. SPE members are eligible for the member discount. When you add your tickets to your cart, just select Society of Petroleum Engineers as your referring organization. Hope to see you there!

Please get in touch with community outreach team member Katrina Baer for more details!

## **Register Now**

#### SPE Supports Our Next Generation

**Date:** November 19<sup>th</sup> and December 9<sup>th</sup>, 2021 **Time:** 8:30-9:30am and/or 10:35-11:35am (multiple shift times) **Location:** Hinkley High School | 1250 Chambers Rd, Aurora, CO 80011 or Virtual

Limited volunteers: 6 volunteers per time slot Free

#### **Description:**

Please Hinkley High School in Aurora offers students the opportunity to participate in an engineering course-track. Please take advantage of this opportunity to mentor students in a variety of ways! Female, individuals of diverse ethnic backgrounds and individuals with unique career paths (not just engineers) are encouraged to volunteer!

November 19th 8:30-9:30am: Participate in a Q&A sessions with Hinkley High School's senior class. Be prepared to answer questions about your career path and give students advice on things they may want to consider when choosing what to study in college.

November 19th 10:35-11:35am: Participate in a Q&A sessions with Hinkley High School's freshman class. Be prepared to answer questions about your career path and give students advice on things they may want to consider when choosing what to study in college.

December 9th 8:30-9:30am: Meet with Hinkley's senior high school student STEM project teams, hear their proposed problem statements, ideas, and help provide guidance for proposed project.

Please Contact Community Outreach Team-member, Nico Cosca, for more details!

## **Register Now**

Watch this space for additional upcoming volunteer opportunities in the Denver area.

## JOINT EFFORT— SPE Denver Section and Rocky Mountain MiT

There is a new effort afoot to help Rocky Mountain region oil industry professionals affected by the industry downturn that has been amplified by the pandemic. Several professional societies have banded together to launch Rocky Mountain Members in Transition, or MiT. This is an outgrowth of the MiT effort by the Society of Petroleum Engineers (SPE) in Houston that the Association of American Petroleum Geologists (AAPG) has joined. Other associated Rocky Mountain organizations now include SPE, AAPG, COGA, DWLS, RMAG, WEN, WOGA, and the University of Colorado, Denver GEM Program. The purpose is to help association members amid a career transition. For more information, please contact Susan Nash at <u>snash@aapg.org</u> or Terrilyn Olson at <u>tmolson8550@gmail.com</u>.

#### **Upcoming Events:**

#### Members in Transition Webinar: RESERVOIR EVALUATION AND CO2-ENHANCED OIL RECOVERY FEASIBILITY STUDY OF THE KITTY FIELD

Date: November 4<sup>th</sup>, 2021 Time: 12:00 pm MDT Location: Online Webinar via RingCentral

Free

#### **Description:**

Carbon capture, utilization, and storage (CCUS) will play an important role in the future to reduce future carbon dioxide emissions as energy companies move forward towards reaching goals of achieving "net zero" energy generation. A major component of CCUS is determining how and where to store or sequester CO2. Deep underground geological formations are recognized as some of the best options for storage of CO2. Depleted oil and gas fields provide excellent places to store CO2. These fields typically have an abundance of critical infrastructure such as wells, gathering and injection systems, and other facilities already in place, as well as an institutional understanding of the subsurface, that make these ideal places to store the CO2. In addition, in many cases, the CO2 can be utilized as a working gas for enhanced oil recovery. In the United States, over 80 CO2-EOR projects have been initiated, with many of those being technical and financial successes, with incremental oil recoveries of more than 10% of original oil in place. Registration is available on RMAG's website here:

## **Register Now**

#### Panelists:

Brian Black is the Geoscience Manager with MI3 where he has worked for the past 7 years. He has more than 20 years of experience as a geologist working in a variety of different roles in the oil and gas industry, including field development, exploitation, exploration, project management, and geologic interpretation. He has worked on projects in many fields in North America as well as internationally. Spanning his career, Brian has worked with large oil and gas companies, small operators, governmental agencies, and as an independent consultant. He has worked on several enhanced oil recovery projects including CO2-EOR, chemical flooding, and enhanced waterfloods. As part of his work at MI3, Brian has worked with several different Indian Tribes in the United States to help them promote tribal sovereignty and manage their own mineral estates, including oil field operations and mineral development. Brian is a member of the American Association of Petroleum Geologists, Rocky Mountain Association of Geologists, Tulsa Geological Society, and is a member and a past board member of the Wyoming Geological Association. He graduated with a Master's degree in Geology from Brigham Young University with an emphasis on clastic sedimentology and stratigraphy. He has presented his work at several local and national industry meetings. Brian has lived in California, Utah, Brazil, Texas, and Wyoming, He now makes his home in Colorado where he enjoys spending time outdoors, working around the house, playing sports (especially basketball and soccer), and traveling with his family. He is married with 4 kids and a dog.

#### Please get in touch with Members in Transition SPE liaison Shishir Shivhare for more details! shishir.shivhare@sproule.com

## SPE—Denver Section Industry Partners in Geosciences



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#### Society of Petroleum Engineers - Denver Section

AmericasAsia PacificEuropeMiddle East222 Palisades Creek Dr.Level 35, Gardens South Tower1st Floor, Threeways HouseFortune Towers, 31st Floor

#### Nov 2021 Newsletter

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59200 Kuala Lumpur, Malaysia Lu

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