

14-15 AUGUST 2023

GRAND HYATT

DENVER, COLORADO



Refracturing: A Proven Strategy to Maximize Economic Recovery

Refracturing creates highly attractive opportunities to use existing wellbores for additional hydrocarbon recovery without having to drill a new well, reducing environmental impact. Within a given field, the completion techniques typically evolve leaving many wells with stranded volumes of commercial hydrocarbons. Re-entry and re-stimulation is a proven approach to economically recover those previously stranded resources.

Refracturing parent wells has also become a valuable option for mitigating the negative impacts of fracturing interaction from infill wells or child wells leading many operators to co-develop refracturing of projects alongside new drill activity. Potential improved performance of new drill wells, protection of existing parent wellbores, ESG synergies, and capital efficiencies are among the reasons that some operators have adopted this strategy. This workshop creates a venue for attendees to engage with subject matter experts on a variety of technologies, well conditions and lessons learned. This workshop is an opportunity to network as well as to learn the newest developments.



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Technical Agenda

SUNDAY, 13 AUGUST

All functions take place in the Atrium Tower Pinnacle Club - 38th Floor.

1730-1900 **Welcome Reception** **Crystal Peak**

MONDAY, 14 AUGUST

MORNING EVENTS

Technical sessions located in Capitol Peak Ballroom.

0700-0800 **Registration Check-in Breakfast** **Prefunction Crystal Peak**

0800-0810 Chairperson's Welcome and Introduction

0810-0840 **Keynote: Refracs in the Eagle Ford: A Devon Energy Perspective** **Brian Schmitt, Devon**

0840-1010 **Session 1: Selection Process for Refracturing Candidates and Program Management** **Chairs: Kevin Eichinger, BKV Corporation Neil Modeland, Halliburton**

If at First You Don't Succeed, Frac Again: A Review of Unconventional Refracs

Ray Ellis
Liberty Energy

Integrated Well Performance Analysis Methodology to Prioritize Refracturing Candidates

Eric Bryan,
DeGolyer & McNaughton

A Review of the Selection Process for Refrac Candidates

Bob Barba, Triple R Energy Partners

1010-1030 **Coffee Break**

1030-1200 **Session 2: Intra- and Inter-well Fracture-driven Interactions Between Horizontal Wells** **Chairs: Sam French, BKV Corporation Dick Leonard, ProTechnics**

BKV Barnett New Well and Refrac Co-Development to Optimize Value

Philip Lee, BKV Corporation

Casing Damage Potential in Refracturing

George King, GEK Engineering

Mitigation of FDIs In the NEPA Marcellus Shale

John Stell, BKV Corporation

1200-1300 **Lunch** **Crystal Peak**

AFTERNOON EVENTS

1300-1430 **Session 3: Completions and Coiled Tubing Intervention** **Chairs: David Traugott, NOV Eivind Moen, Comitt**

Thru Tubing Cleanouts and Acidization in Unconventional Wells

Jason Burke, ConocoPhillips

Hybrid Expandable Liner System: A Cost-Effective Alternative to Bullhead

Ken Day, BKV Corporation

Advancements in Coiled Tubing Technologies for Extended Reach Horizontal Wells in North America

Jeremy Workman, NOV

1430-1500 **Coffee Break**

1500-1630 **Session 4: Future and Emerging Technologies** **Chairs: Dustin Ellis, NCS Multistage Eivind Moen, Comitt**

Beyond Aphrons: How Structuralized Microfoams Maximize Clean Out Efficiency & Refrac Liner Success

Eddie Valverde, Emerald Surf Sciences

Liner Tie Back Technology Opens Up Refrac Candidate Opportunities: A Case Study

Cameron Radtke NewGen

DOE HFTS #1 Phase 3-EagleFord Refracs, A Review of the Fracture Diagnostics (SWPM, Fiber and Modelling)

Karen Olson, Well Data Labs

1630-1800 **Networking Reception and Poster Session**

Poster Session
Chairs:

Robert Coon, PetroQuip Energy Services

Neil Modeland, Halliburton
Jason Baihly, SLB



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TUESDAY, 15 AUGUST

MORNING EVENTS

0700-0800	Breakfast	Crystal Peak
0800-0930	Session 5: Diversion and Zonal Isolation	Chairs: <i>Luis Castro, Baker Hughes</i> <i>Kevin Eichinger, BKV Corporation</i>
	Beyond Bullheads: Isolation and Diversion Techniques for Modern Refracs	<i>Aaron Burton, ProTechnics</i>
	Improving Connectivity and Placement using Microproppant	<i>Terry Palisch, Carbo Ceramics</i>
	A Cost Effective Approach to Refracturing - Temporary Lateral Squeeze Using Particulates	<i>Nick Koster, DiverterPlus</i>
0930-1000	Coffee Break	
1000-1130	Session 6: Refrac Design and Technique Selection	Chairs: <i>Steve Asbill, Foundation Energy</i> <i>Sam Schroeder, ConocoPhillips</i>
	Refrac'n Refracs	<i>Jamie McEwen & Melody Zhang, ConocoPhillips</i>
	A Success Story: Screening and Optimizing Refracs in the Eagle Ford	<i>Dave Ratcliff, ResFrac</i>
	Rejuvenate the Largest Shale Gas Field of China with Casing Refracturing Method	<i>Rong (Hannah) Han, Halliburton</i>
1130-1230	Lunch	Crystal Peak

AFTERNOON EVENTS

1230-1400	Session 7: Diagnostics and Surveillance	Chairs: <i>Dick Leonard, ProTechnics</i> <i>David Traugott, NOV</i>
	Understanding Well Integrity for Refrac Operations	<i>Charles Bourgeois, Dark Vision</i>
	RA Tracer: A Radioactive Perspective on Refracs	<i>Tyler Williams, Devon</i>
	Using Existing Wellbore Data to Improve Refrac Success	<i>Kevin Wutherich, Drill2Frac</i>
1400-1415	Coffee Break	
1415-1545	Session 8: Panel: If I Could Do It All Over Again	Moderators: <i>Dustin Ellis, NCS Multistage LLC</i> <i>Sam French, BKV Corporation</i>
		Panelists: <i>Tyler Williams, Devon</i> <i>Steve Asbill, Foundation Energy</i> <i>Jamie McEwen, ConocoPhillips</i> <i>George King, GEK Engineering</i>



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ALCOHOL POLICY

SPE recognizes the legitimate serving of alcoholic beverages in the process of conducting business and social activities. We also recognize that the use and consumption of alcohol carries with it the requirement for all attendees to consume those beverages responsibly.

COMMERCIALISM

In remaining consistent with workshop objectives and SPE guidelines, commercialism in presentations will not be permitted. Company logos should be used only to indicate the affiliation of the presenter(s).

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Attendees will receive 1.6 CEUs. One CEU equals 8 contact hours of participation. CEUs will be awarded through SPE Professional Development for participation and completion of an SPE workshop. A permanent record of a participant's involvement and awarding of CEUs will be maintained by SPE.

DOCUMENTATION

Following the workshop, a URL containing released copies of the workshop presentations will be available to all attendees.

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WORKSHOP FORMAT

Workshops maximize the exchange of ideas among attendees and presenters through brief technical presentations followed by extended Q&A periods. Focused topics attract an informed audience eager to discuss issues critical to advancing both technology and best practices.

Many of the presentations are in the form of case studies, highlighting engineering achievements and lessons learned. In order to stimulate frank discussion, no proceedings are published and members of the press are not invited to attend.

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