FracGeo
The Future of Shale Management, Today

Software Demo

URTeC 2017 Booth Presentation Program

MONDAY

10:05 - 10:40	Adaptive Fracing and Frac Hit Risk Mitigation Enabled by Geomodeling and Geomechanical Simulation Driven Engineering Workflow
11:00 - 11:30	FracPredictor Software Demo: A Holistic Approach for Engineers and Geoscientists to Model Completions and Well Spacing in Unconventional Reservoirs
12:05 - 12:40	FracPredictor Software and Niobrara Case Study: Geosteering Guided by Seismic Driven Geologic and Fracture Modeling
12:45 - 1:15	DrillPredictor Demo: Adapt Frac Design to Geomechanically Similar Rocks to Improve Frac Performance Using Only Surface Drilling Data
2:00 - 2:30	Natural Fracture Proxies and Continuous Fracture Models in the Wolfcamp
2:40 - 3:05	Successful Data Analytics Needs Relevant Information - Predicting Niobrara Production using Artificial Intelligence
3:10 - 3:45	FracPredictor Software and Eagle Ford Case Study - Geologically and Geomechanically Constrained Frac Design and Well Spacing Optimization
4:00-4:30	FracPredictor Software Demo: A Holistic Approach for Engineers and Geoscientists to Model Completions and Well Spacing in Unconventional Reservoirs
5:05 - 5:35	Optimizing Well and Frac Stage Spacing To Avoid Lateral And Vertical Frac Hits: Application to the Wolfcamp and Eagle Ford
6:00- 6:45	DrillPredictor Demo: Adapt Frac Design to Geomechanically Similar Rocks to Improve Frac Performance Using Only Surface Drilling Data

TUESDAY

9:10 - 9:45	Adaptive Fracing and Frac Hit Risk Mitigation Enabled by Geomodeling and Geomechanical Simulation Driven Engineering Workflow
10:10 - 10:55	DrillPredictor Demo: Adapt frac design to geomechanically similar rocks to improve frac performance using only surface drilling data
11:10 - 11:40	FracPredictor Software Demo: A Holistic Approach for Engineers and Geoscientists to Model Completions and Well Spacing in Unconventional Reservoirs
12:05 - 12:40	DrillPredictor Demo: Adapt Frac Design to Geomechanically Similar Rocks to Improve Frac Performance Using Only Surface Drilling Data
12:45 - 1:15	Optimizing Well and Frac Stage Spacing To Avoid Lateral And Vertical Frac Hits: Application to the Wolfcamp and Eagle Ford
2:00 - 2:30	Natural Fracture Proxies and Continuous Fracture Models in the Wolfcamp
3:10-3:40	FracPredictor Software and Niobrara Case Study: Geosteering Guided by Seismic Driven Geologic and Fracture Modeling
4:00 - 4:30	Successful Data Analytics Needs Relevant Information - Predicting Niobrara Production using Artificial Intelligence
5:00 - 5:30*	Paper URTeC 2688755: Geomechanical Modeling of Time-Dependent Strain in the Bakken and Implications of Stress Shadow Interactions Between Hydraulic Fractures
	Presented by Packers Plus
5:35 - 6:00	Paper URTeC 2693870: Completion Optimization While Drilling - Geomechanical Steering Towards Fracable Rock Using Corrected Mechanical Specific Energy

WEDNESDAY

9:05 – 9:40	Adaptive Fracing and Frac Hit Risk Mitigation Enabled by Geomodeling and Geomechanical Simulation Driven Engineering Workflow
10:15 - 10:45	DrillPredictor Demo: Adapt Frac Design to Geomechanically Similar Rocks to Improve Frac Performance Using Only Surface Drilling Data
11:00 - 11:30	FracPredictor Software Demo: A Holistic Approach for Engineers and Geoscientists to Model Completions and Well Spacing in Unconventional Reservoirs

Presentation Summaries on Reverse

Presentation Summaries

Overview: Adaptive Fracing and Frac Hit Risk Mitigation Enabled by Geoscience and Fracture Geomechanical Simulation Driven Engineering Design

An overview of the new technologies that will enable E&P companies to rebound in Shale 2.0 through the integration of geophysics, geology and geomechanical simulation with frac design and reservoir simulation to allow the execution of adaptive fracing which accounts for all the causes of stress gradients to achieve the highest number of successful frac stages and optimal well spacing.

FracPredictor Software Demo: A Holistic Approach for Engineers and Geoscientists to Model Completions and Well Spacing in Unconventional Reservoirs

A demonstration of the software and technologies used by geoscientists and engineers to combine geomodeling and geomechanical simulation to constrain frac design and address well interference issues.

FracPredictor Software and Niobrara Case Study: Geosteering Guided by Seismic Driven Geologic and Fracture Modeling

A live case study using a Niobrara example to explore the potential of seismically-driven geomodelling to capture geomechanical properties to be used as landing zone and geosteering indicators.

DrillPredictor Demo: Adapt Frac Design to Geomechanically Similar Rocks to Improve Frac Performance Using Only Surface Drilling Data

A demonstration of the DrillPredictor™ module. This technology corrects real-time surface drilling information for losses along the drillstring, and computes from these measurements geomechanical properties and a fracture index while drilling. This can be used to quickly optimize completions.

Natural Fracture Proxies and Continuous Fracture Models in the Wolfcamp

Don't have an FMI in every well? Using continuous fracture models, fracture proxies can be computed, propagated, and validated through your entire reservoir. A Wolfcamp case study demonstrates this workflow.

Successful Data Analytics Needs Relevant Information - Predicting Niobrara Production using Artificial Intelligence

As O&G joins other industries in the application of Artifical Intelligence (AI), many pitfalls can be avoided. AI is a tool, and not an all-knowing solution to be haphazardly deployed on mountains of data. A Niobrara case study highlights the role geoscientists play in guiding powerful AI tools to predict untapped production in a legacy field.

FracPredictor Software and Eagle Ford Case Study - Geologically and Geomechanically Constrained Frac Design and Well Spacing Optimization

A live case study using an Eagle Ford example to demonstrate the elegance of a constrained frac design approach from geomechanical simulation, the resulting depletion volume, and how this impacts well spacing decisions.

Optimizing Well and Frac Stage Spacing To Avoid Lateral And Vertical Frac Hits: Application to the Wolfcamp and Eagle Ford

Well interference, especially frac hits, is a growing concern as infill wells are completed in unconventionals around the world. Understanding the mechanisms driving both the vertical and lateral fracture growths, and poro-elastic effects, is critical to mitigating the risk of well interference. Wolfcamp and Eagle Ford examples are presented to highlight various challenges, and the simulation tools necessary to address them.

Paper URTeC 2693870: Completion Optimization While Drilling - Geomechanical Steering Towards Fracable Rock Using Corrected Mechanical Specific Energy

Completion Optimization While Drilling (COWD) marks a departure from traditional frac design workflows. COWD allows geoscientists to steer using the bit, and stay in geomechanically ideal rock through real-time understanding of geomechanical properties. This information is immediately in the hands of completions engineers who can quickly design stages and clusters to target similar rock and increase efficiency.

Paper URTeC 2688755: Geomechanical Modeling of Time-Dependent Strain in the Bakken and Implications of Stress Shadow Interactions Between Hydraulic Fractures
Presented by Packer Plus

In the ongoing and industry-wide efforts of predicting the effects of hydraulic fracturing, numerous methods have been explored and optimization methodologies attempted. Recent collaborative work done by geomechanics experts at FracGeo and the Fracture Science Group at Packers Plus Energy Services have yielded results that incorporate what we know and go on to introduce key physical parameters that describe previously-undescribed, near-well physics and the phenomena of unsteady stress state interactions caused by stress shadowing. Please join us at our booth for a presentation by Neil Peterson, Sr. Geoscience Advisor from Packers Plus, where the concepts of stress dynamics over time and the energy dynamics of stress shadowing will be explored along with recently completed work.