

SEG

September 16–18, 2019 | San Antonio, TX

Presentation Schedule Booth 3634

BOOTH TALK ABSTRACTS

Completion and Wellbore Geomechanics in High Stress Settings—A Case Study from the Vaca Muerta Formation

Observations from the hydraulic fracturing of two horizontal wells in the Vaca Muerta are presented. We show that the initial estimates of SHmax from sonic logs were not nearly as large as required to explain the reactivation of shallow-dipping thrust faults and wellbore stability issues. Real-time moment tensor inversion and geomechanics provide the detectability and mitigative solutions that reduce negative economic impacts for better field development.

Determining Optimal Completion Design Using a Multi-Well Downhole Array

A well-designed array is used to monitor single-stage hydraulic treatments in the Canyon Creek Formation. Completions evaluation of the result leads to several recommendations including appropriate job size, completions order, and perforation suggestions.

Frac Hits: Parent-Child Well Interaction

Infill drilling and hydraulic fracturing of new wells are placing wells at risk of suffering premature production declines. In some areas of the Permian, frac hits have caused child wells to deliver a 30% lower recovery rate than their parents. Some parent wells impacted by frac hits never fully recover and, in the worst cases, permanently stop producing. We discuss the known causes of this issue, as well as the tools and analysis that are currently available, to help you detect and mitigate frac hits.



ATTEND A TALK

You could WIN a gem of a prize!

Horizontal Well Orientation and Spacing—A Vaca Muerta Case Study

Results from four wells in the Vaca Muerta provide insight on preferred horizontal well orientation, spacing, and landing zone, which helped to establish the feasibility of a permanent, life-of-field array installed during the pilot phase of field development.

Increase NPV and ROI by Using Tank Development to Estimate Drainage Volume

Full-field development with high wellbore density in multiple target zones poses challenges regarding the interaction between wellbores and the decrease in recovery per section. Microseismic-based reservoir simulation is used to understand the draining volume and to identify optimum wellbore spacing.

Lunch & Learn: FracRx—How FracRx Helps Increase ROI

Learn how FracRx shows you how to make more money with your fracs by formulating the best outcome prescription. FracRx focuses on producing more dollars, while other solutions focus on SRV.

Microseismic Bedding-plane Slip Theory – Requires a Very Slippery Slope or a Very Large SHmax

There is much discussion on associating microseismic activity with the reactivation of bedding planes near the hydraulic fracture tip. Yet evidence for bedding-plane slip has not been observed in cores of stimulated rock volumes, and a consensus on how to integrate bedding plane slip in fracture and reservoir models has not been established. We will demonstrate geomechanical criteria for when and where to interpret microseismic data as bedding-plane slips and the importance of using microseismic data to simulate and forecast reservoir performance.

Production Performance in Tight Well Spacing

Real-time and post-processing analysis of the results from a wide range of data sets, including microseismic monitoring to production data, show how the tight well spacing and the resulting well communication during stimulation leads to the well interference during production.

Wellbore Damage During Fracing - Detection and Mitigation with MicroSeismic

From the outset of unconventional development with horizontal wells, microseismic monitoring has revealed the reactivation of pre-existing natural faults. With increased frac intensity, well and stage density the incidence and risk of wellbore damage from these faults is on the rise. Real time microseismic monitoring allows for the observance of this reactivation and the opportunity to take steps to mitigate the risk.

Well Spacing Configuration Critical to Well Performance

To better understand well communication, we applied an integrated workflow to quantify the effect of various well and completion designs on the well performance of unconventional shale reservoirs. The applied workflow offers a new systematic approach of field development for E&P companies aiming to understand optimal well spacing and location for new pads for improved economics of the field.

SEG 2019 Presentation Schedule | Booth 3634

MONDAY, SEPTEMBER 16 (10:00 AM – 6:00 PM)

Time	Topic	Presenter
10:05 am	Frac Hits: Parent Child Well Interaction	Asal Zeynal <i>FracRx Team Leader</i>
10:30 am	Wellbore Damage During Fracing— Detection and Mitigation with MicroSeismic	Peter M. Duncan <i>Microseismic, Inc. President & CEO</i>
11:00 am	Production Performance in Tight Well Spacing	Arman Nejad, PhD <i>FracRx Reservoir Engineer</i>
11:20 am	Increase NPV and ROI by Using Tank Development to Estimate Drainage	Asal Zeynal <i>FracRx Team Leader</i>
11:45 am	Determining Optimal Completion Design Using a Multi-Well Downhole Array	Jon McKenna, PhD <i>FracRx Geological Engineer</i>
12:15 pm	Well Spacing Configuration Critical to Well Performance	Arman Nejad, PhD <i>FracRx Reservoir Engineer</i>
1:00 pm	Completion and Wellbore Geomechanics in High Stress Settings—A Case Study from the Vaca Muerta Formation	Jon McKenna, PhD <i>FracRx Geological Engineer</i>
1:30 pm	Horizontal Well Orientation and Spacing - A Vaca Muerta Case Study	Asal Zeynal <i>FracRx Team Leader</i>
2:00 pm	Challenge Bowl World Finals Grand Hyatt: Lone Star Ballroom, Salon A	Peter M. Duncan <i>Microseismic, Inc. President & CEO</i>
3:00 pm	Frac Hits: Parent-Child Well Interaction	Asal Zeynal <i>FracRx Team Leader</i>
3:20 pm	Completion and Wellbore Geomechanics in High Stress Settings – A Case Study from the Vaca Muerta Formation	Jon McKenna, PhD <i>FracRx Geological Engineer</i>
3:45 pm	Production Performance in Tight Well Spacing	Arman Nejad PhD <i>FracRx Reservoir Engineer</i>

SEG 2019 Presentation Schedule | Booth 3634

TUESDAY, SEPTEMBER 17 (9:00 AM – 6:00 PM)

Time	Topic	Presenter
9:05 am	Wellbore Damage During Fracing— Detection and Mitigation with MicroSeismic	Peter M. Duncan <i>Microseismic, Inc.</i> President & CEO
9:35 am	Horizontal Well Orientation and Spacing - A Vaca Muerta Case Study	Asal Zeynal <i>FracRx Team Leader</i>
10:00 am	Production Performance in Tight Well Spacing	Arman Nejad PhD <i>FracRx Reservoir Engineer</i>
10:20 am	Frac Hits: Parent-Child Well Interaction	Asal Zeynal <i>FracRx Team Leader</i>
10:40 am	Determining Optimal Completion Design Using a Multi-Well Downhole Array	Jon McKenna, PhD <i>FracRx Geological Engineer</i>
11:00 am	Increase NPV and ROI by Using Tank Development to Estimate Drainage	Asal Zeynal <i>FracRx Team Leader</i>
12:00 pm	Lunch & Learn: FracRx - How FracRx Helps Increase ROI	Peter M. Duncan <i>Microseismic, Inc.</i> President & CEO
3:10 pm	Well Spacing Configuration Critical to Well Performance	Arman Nejad PhD <i>FracRx Reservoir Engineer</i>
3:30 pm	Increase NPV and ROI by Using Tank Development to Estimate Drainage	Asal Zeynal <i>FracRx Team Leader</i>
4:00 pm	Completion and Wellbore Geomechanics in High Stress Settings—A Case Study from the Vaca Muerta Formation	Jon McKenna, PhD <i>FracRx Geological Engineer</i>
9:00 pm	Presidential Jam - Grand Hyatt: Texas Ballroom, Salon A/B Come see our former SEG Presidents including our very own CEO Peter Duncan take the stage	

WEDNESDAY, SEPTEMBER 18 (9:00 AM – 4:30 PM)

Time	Topic	Presenter
9:05 am	Wellbore Damage During Fracing— Detection and Mitigation with MicroSeismic	Peter M. Duncan <i>Microseismic, Inc.</i> President & CEO
9:35 am	Production Performance in Tight Well Spacing	Arman Nejad PhD <i>FracRx Reservoir Engineer</i>
10:00 am	Increase NPV and ROI by Using Tank Development to Estimate Drainage	Asal Zeynal <i>FracRx Team Leader</i>
12:00 pm	Completion and Wellbore Geomechanics in High Stress Settings – A Case Study from the Vaca Muerta Formation	Jon McKenna, PhD <i>FracRx Geological Engineer</i>
12:20 pm	Frac Hits: Parent-Child Well Interaction	Asal Zeynal <i>FracRx Team Leader</i>
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