

DRILL2FRAC NEWSLETTER

DEPLETED FRACTURE IDENTIFICATION UPDATE



Volume 1 / Issue 3

UPCOMING EVENTS

July 22-24 2019

**Unconventional Resources
Technology Conference – URTeC
2019**

Drill2Frac's technical experts will be on hand to answer questions and provide demos of our latest technological successes in Denver in booth 749.

August 19, 2019

**SPE Webinar: Using Well
Heterogeneity as an Advantage to
Designing Stage Specific Diverter
Strategies**

Kevin Wutherich will be presenting strategies to optimize diverter operations for more efficient completions.

Drill2Frac Tackles DFI:

Q&A on D2F's Depleted Fracture Identification Process

D2F is leading the way in the parent/child interaction arena. Depleted Fracture Identification (DFI) produces predictive and actionable results using the same drilling data that creates our OmniLog® lateral profile to precisely locate areas of localized depletion. These areas are most often associated with fractures connected to a parent well. This technology can be used as a frac-hit mitigation technique, to reduce completion costs, and to understand the fracture growth that occurred in a parent well.

COMPLETED 30+ WELLS IN 4 BASINS

Since the introduction of our DFI service, the demand has soared.

In a recent WorldOil Webinar, we reached over 600 industry leaders wanting to expand their knowledge of Parent/Child interactions. A link to the webinar is available to view at Drill2Frac.com/news/.

During and following the webinar, attendees were given the opportunity to send questions. Below is a list of some of the questions asked and answers provided:

Q: Do any additional tools need to be run downhole?

A: No. Drill2Frac's technology uses drilling data that is already available. In fact, you can do look-back analysis on wells that were drilled in the past as long as the drilling data is available.

Q: Could your process predict the depletion from stacked parent wells?

A: We have seen this in one trial already. If there is a localized depletion signature of any substance, we should be able to see it, regardless of where the parent well is located.

Q: Could some of the identified conductive fractures shared between parent/child wells be natural fractures with large aerial extent? Any way to tell if a shared conductive fracture is natural or created during completion?

A: The process described can only measure localized depletion. It will be up to operators to interpret whether these are associated by induced fractures or fault re-activation. With that being said, we have seen one example where we believed the depletion was caused by a natural feature. There were 2-3 large depletion signatures across each well that all lined up in an azimuth different than the smaller depletion signatures. It was believed that these larger depletion events may have intersected a conductive natural feature.

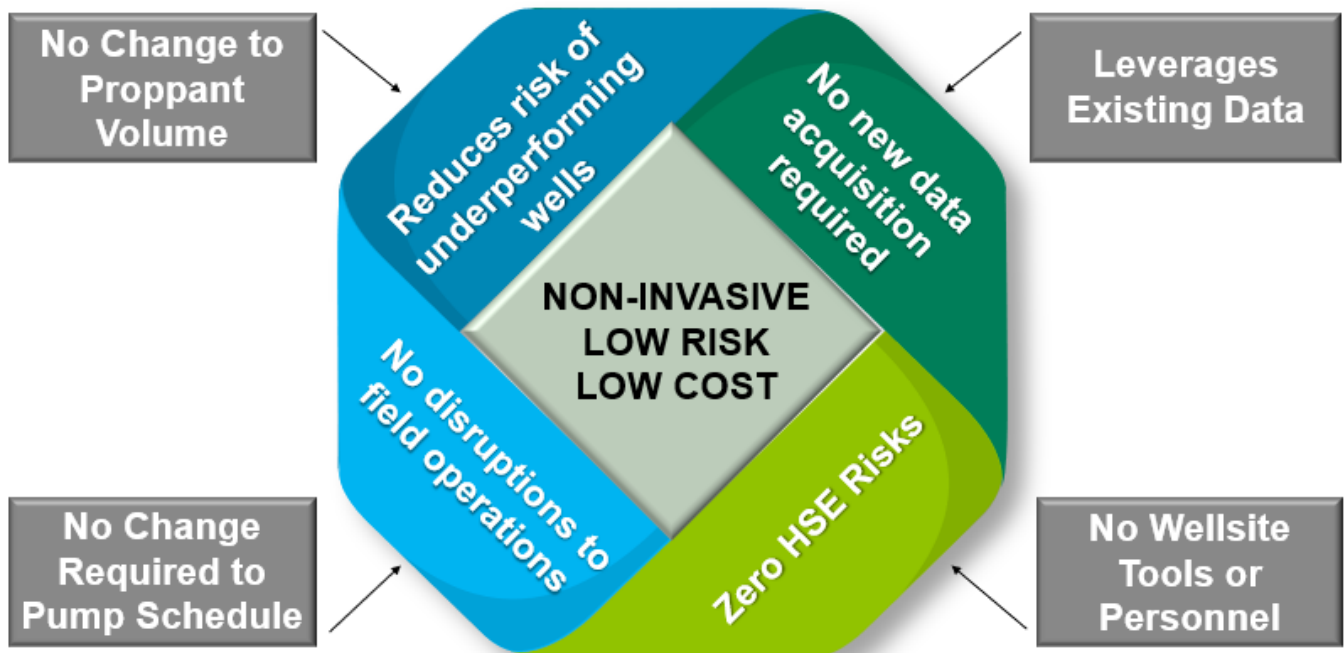
Q: Can such studies help in optimizing the well spacing for development?

A: This is one of the main applications envisioned for this process. One can deduce the extent of fracture growth from the previous well, which could definitely lend some guidance to well spacing decisions.

Q: What's the furthest distance that this minimal 100 psi depletion has been measured from the parent well?

A: We have seen this level of depletion as far as 3000'.

Non-Invasive | Low-Risk | Low-Cost



Drill2Frac delivers a unique approach to more efficient fracs that lead to better producing wells. There is no change required to the operations schedule because no additional tools are required, no additional personnel at wellsite, and no changes are made to the pump schedule from well to well.

CLIENT TESTIMONIALS

*“Our team was very pleased with how the Drill2Frac’s technology **helped the well’s frac treatment compared to a previous well where it was not used.** The Drill2Frac well used over 14k less bbls of water and there were no screen outs compared to one costly screen out in the offset well. Overall, Drill2Frac’s well pumped as planned, placing 385k lbs more sand than the offset well. We look forward to continuing work with Drill2Frac.”*

- Operational superintendent

*“In a Wolfcamp project Drill2Frac helped us to successfully reduce operating time by 13.4%. **Analyzing rock and reservoir properties along the lateral, we were able to increase stage lengths and maintain average cluster spacing, employing dissolvable diverters.** Production also increased 3.8%, and we enjoy working with the Drill2Frac’s subject matter experts”.*

- Senior Completions Engineer,

*“Drill2Frac demonstrated that even small changes in rock properties can impact the final fracture geometry and which perforation clusters are stimulated stage to stage. Despite the difficulties encountered, Drill2Frac analyzed the drilling data in the horizontal, **helped to interpret pressure measurements during stimulation and showed the influence of heterogeneity on fluid distribution.** Drill2Frac is now part of our completion plan”.*

- Operational Engineer