

Pair your simul-frac wells, stage by stage, with scientific precision.

Our exclusive process elevates simultaneous fracturing to a new level of stimulation efficiency.

The simultaneous fracturing (simul-frac) technique delivers an incredible advancement in completions efficiency. A single frac crew splits the stimulation treatment to frac two paired wells concurrently, which enables a significant improvement in lateral feet completed per day. As a result, this technique can slash completion times on a multiwell pad by several days – or even a matter of weeks. This, in turn, can save you hundreds of thousands of dollars in operational costs. However, it's important that you don't outweigh your completions savings with losses in production.

The science of matching frac stages between two wells using NextTier's LateralScienceSM engineered completions.

In simul-frac operations, the goal is to closely pair two wells, stage by stage, according to similarities in rock strength. This strength is measured in terms of the rock's mechanical specific energy (MSE). However, horizontal wells on the same pad – even those in close geological proximity and with similar landing depths – often display vast differences in rock strength between wells.

If the concurrently fractured stages wells aren't properly matched according to MSE, the majority of the treatment follows the path of least resistance: the stage with lower-strength rock. This leaves the stage with higher-strength rock far understimulated, which significantly reduces the overall effectiveness of simul-frac treatments and ultimately lowers your long-term production. That's where the LateralScience method comes in – providing targeted insight to match stages more effectively and boost reservoir response.

Promote optimal injectivity between paired wells.

Because of the inherent risk of uneven injectivity, simul-frac operations can often leave one well understimulated, while its partner well gets overstimulated. This can adversely impact production.

For the cost of a few bridge plugs, we'll help you do it.

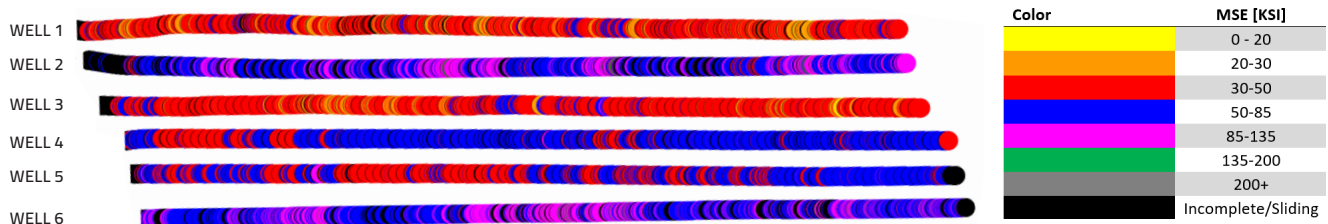
Our proprietary LateralScience method promotes the ideal 50/50 injection flowrate between paired wells. It's a small investment that can lead to huge improvements in placing the treatment where it's needed.

The quick, cost-effective, reliable tool to maximize simul-frac performance.

The LateralScience method uses the drilling data you already have to calculate MSE along the wellbore. It's an unbeatable approach to help you improve ultimate reservoir production by:

- Pairing stages between two wells, based on MSE profiles, to optimize treatment compatibility
- Guiding the placement of perforation clusters along the length of each individual stage to improve the treatment within each stage
- Minimizing the risk of poor injectivity, screenouts and other treatment issues

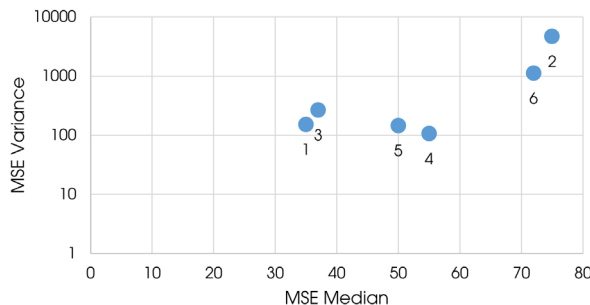
With the LateralScience method, there's no need to commission expensive, time-consuming downhole logs – and you can review a detailed wellbore visualization within hours of drilling the lateral.



LateralScience visualization of a six-well pad, showing detailed MSE profiles for each well.

Statistical insight. Flexible options. Better results.

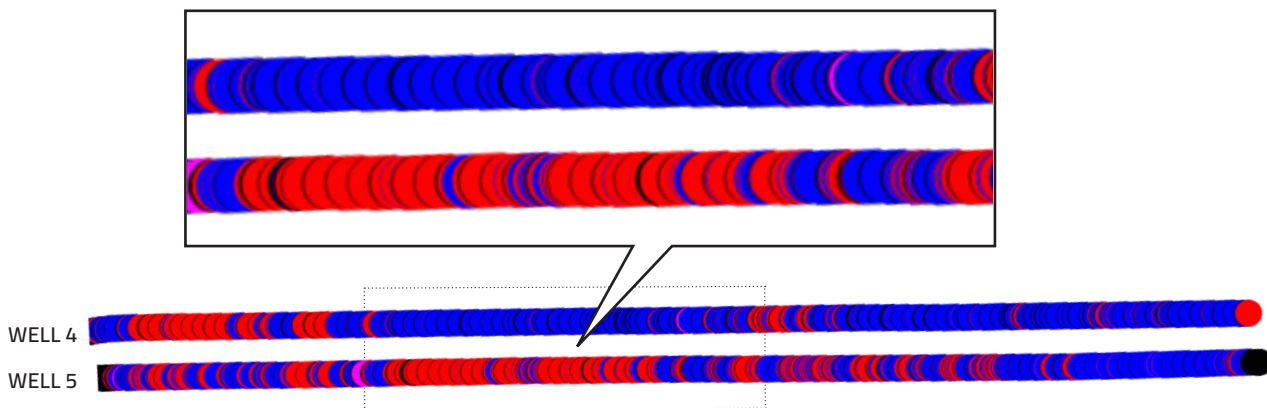
To help us select the best-matched stage pairings with uncompromising accuracy, our engineers conduct a quantitative analysis to map the MSE distributions for each wellbore. Using our six sample wells (shown on the previous page) as an example, the most effective initial pairings – based on the closest MSE matches among the toe stages – were determined to be Wells 1 and 3, Wells 2 and 6, and Wells 4 and 5.



LateralScience statistical well-cluster analysis, driven by the wells' standard MSE deviation and variance.

Targeted insight to maximize MSE comparability and boost production – stage by stage.

Since a well's MSE can differ drastically within a few feet, our LateralScience-derived data goes a step further – to easily identify potential incompatibilities between localized sections of wells that were previously paired. The corresponding sections of Wells 4 and 5, as indicated here, provide a perfect example.*



Statistical, quantitative analyses identify incompatible MSE profiles between corresponding sections of paired wells.

In cases like these, our LateralScience-derived data gives us the power to identify these issues in advance. Then, we can switch well pairings as needed, throughout the completion process, to promote better matches between individual stages. As we progress up the wellbore, we can make a variety of adjustments to maximize MSE comparability by stage, continually promote an ideal flowrate split, and improve injectivity:

- Engineered placement of bridge plugs
- Targeted application of linear gels, crosslinked gels, friction reducers, etc.
- Engineered placement of perforation clusters
- On-the-fly tuning of the treatment schedule

**Many localized MSE incompatibilities are not evident in the supplemental, color-coded MSE visualization tool. Only our statistical, quantitative analyses provide the necessary detail to guide modifications to the original well pairings.*

Boost lifelong productivity for every well on the pad.

If you're looking to optimize frac-fluid placement in each stage of every simul-frac well, take the proactive approach. Our LateralScience method provides a cost-effective, preemptive completions solution to improve productivity throughout the life of your wells.