

Packers Plus Case Study



StackFRAC HD a success in the Devonian Shale

18-Stage StackFRAC HD Multi-Stage Fracturing System increases reservoir access in Kentucky

Background

The Devonian Shale is located around the Appalachian Basin, which has the longest drilling history in the U.S. Natural gas was found in 1815 near Charleston, West Virginia and since then thousands of wells have been drilled in this region; however, most of these wells were shallow. Estimates of natural gas are high in the Devonian Shale, but this has been tempered by low recovery rates in the range of only 10%. The introduction of new technology, such as the Packers Plus multi-stage fracturing systems, has allowed for deeper and longer horizontal wells improving recovery rates and overall exploitation of this reservoir.

The Challenge

An operator working in the Devonian Shale was looking to prove out multi-stage completions technology in preparation for drilling and completing longer laterals in the area. Extending the reach of their open hole laterals was necessary to meet the operator's objectives of optimizing production and lowering costs.

The challenge was to find a multi-stage completions system with the capacity for additional stages to cover the entire length of the extended reach laterals.

The Solution

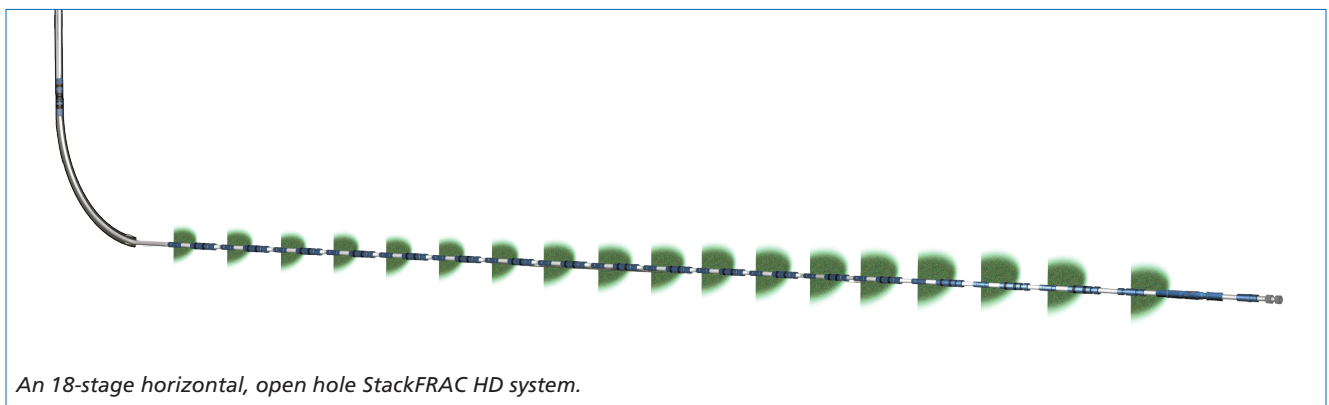
Packers Plus recently launched their new StackFRAC® HD™ "High Density" Multi-Stage Fracturing System, which has improved staging technology allowing for more stages in a single system. With several successful runs both in Canada and the U.S., Packers Plus knew that StackFRAC HD would provide the ideal solution for the operator.

An 18-stage, 4 1/2" StackFRAC HD system was designed for a 6 1/4" open hole horizontal well. The well design was for a total depth of 6,325 ft, a lateral length of 3,425 ft, and the average length between the stages was approximately 200 ft.

The Results

All 18 stages were fractured and completed in one day. These were gas fractures using half a million standard cubic feet of nitrogen per stage. The operator was pleased with the outcome and

as a result, Packers Plus will be running additional StackFRAC HD systems for this operator in the Devonian Shale.



An 18-stage horizontal, open hole StackFRAC HD system.