

Case Study

StackFRAC HD hybrid system stimulates 50 stages in less than 2 days

UNITED STATES, NIOBRARA
STACKFRAC HD SYSTEM

Background

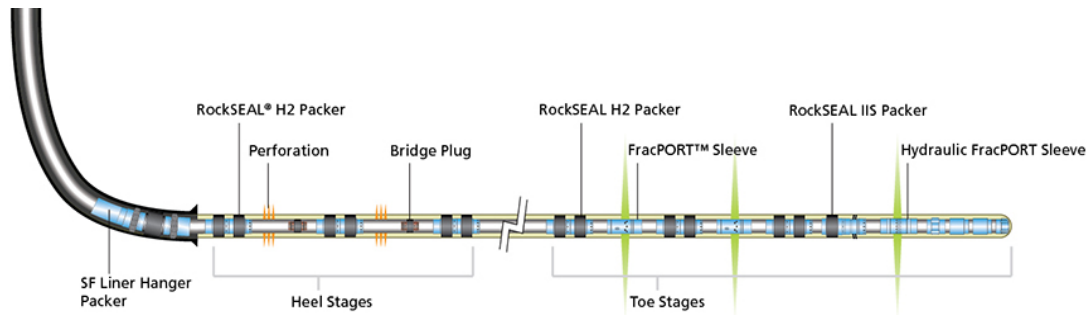
The Niobrara formation is located in the Rocky Mountain region across Colorado and Wyoming. Containing both source shale and a carbonate-rich chalk reservoir, the Niobrara is known for its high natural fracture density and operators in the area tend to target zones with this characteristic.

Challenge

An operator working in Weld County, Colorado, was interested in increasing lateral length while maximizing stage density on wells in the Niobrara formation. At the time, the operator was averaging 20 stages per well at a lateral length of 4,328 ft. This operator wanted to continue using open hole, multi-stage completion systems in the extended reach laterals to provide specific zonal isolation while exploiting the natural fractures within the formation.

Solution

Packers Plus designed a high stage count completion strategy for the operator that would take advantage of the operational efficiency of ball-drop completion technology and provide an unlimited stage count. Considering the operator's completion design rates, a 50- and 51-stage system were designed and installed that implemented the StackFRAC® HD system at the toe of the well until a full bore inner-diameter sleeve was achieved. In the heel of the well, RockSEAL® H2 packers were used in conjunction with an open hole, plug-and-perf completion method.



Results

Both wells were successfully stimulated within two weeks following the installation. All of the stages were stimulated as designed and each well was completed in less than 2 days, saving the operator significant operational time and cost when compared to a 50-stage well completed using solely plug-and-perf methods.

As all Packers Plus systems are modular, the combination of a StackFRAC HD system and a plug-and-perf system can be run into the wellbore together, enabling the customized design of a targeted completion program. The combination of these two methods increases direct reservoir contact and can maximize stage density by decreasing stage spacing. Packers Plus is the innovator of multi-stage completion systems and is an industry leader in designing and manufacturing technology-based solutions for a variety of completion solutions.