

Case Study

Montney operator achieves high stage count stimulation with minimal operation time deploying StackFRAC HD-X

CANADA, MONTNEY
STACKFRAC HD-X SYSTEM

An operator working on the British Columbia side of the Montney formation deployed the latest iteration of the StackFRAC® HD-X ball-activated system that can include ball seat increments as small as 1/40-in., maximizing reservoir coverage with 60-stage open hole completions and delivering high-rate stimulation in minimal operational time.

The completion program was run across four wells and the ePLUS® Retina Monitoring System confirmed that activation balls landed in every FracPORT™ H3 Sleeve of each system and each sleeve successfully shifted open, providing confidence that the stimulation treatment was delivered as designed to increase the chances of improving ultimate recovery throughout the life of the well.

Challenge

As operators target deeper reservoirs with longer laterals, they require completion systems that can deliver high stage counts and tight spacing for a more effective stimulation that will result in better production. Higher stage counts can introduce higher operational costs and stimulation time, so operators must find completion solutions that strike the right balance between increasing stage count and maximizing operational efficiency.

Solution

The StackFRAC HD-X system was specifically designed to provide high stage count completions and enable optimal treatment rates by reducing wellbore ID restrictions compared to previous iterations of the system. This next generation system was engineered with ball seat increments exceeding the industry standard of 1/16-in. and the latest version can include increments as small as 1/40-in. By increasing the ID of the completion system, operators are able to achieve the optimal pump rate for their stimulation program – even at the toe of the well – and proprietary erosion protection ensures each activation ball will land on its corresponding ball seat.

Packers Plus has been a leader in lower completion technology since 2000 and the engineering advancements of StackFRAC HD-X are the result of more than 20 years of

continuous innovation. This ball-activated completion system enables a stimulation program to be pumped from start to finish in one continuous operation and is backed by a fully integrated QA/QC process to verify manufacturing precision and operational success at the wellsite.

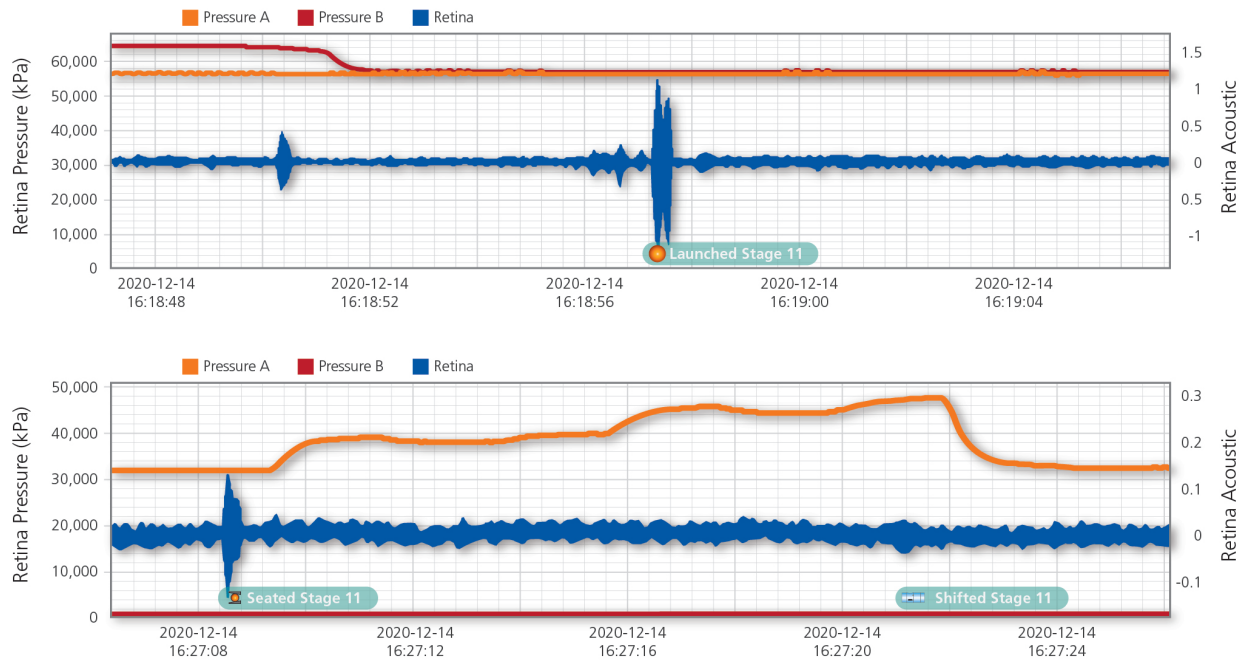
Results

	Well 1	Well 2	Well 3	Well 4
Lateral Length (m)	2,469	2,742	2,978	2,792
Pump Rate at Toe (m3/min)	8.7	8.3	6.3	7.3
Max Pump Rate (m3/min)	12.2	12	12	12
Total Fluid Pumped (m3)	31,105	32,790	30,782	35,328
Total Proppant Delivered (t)	5,008	5,005	4,992	4,991
Total Pumping Time (hr)	54.3	34.4	58.2	70.0

Across four wells in the Montney formation, the operator deployed 60-stage StackFRAC HD-X open hole systems to maximize reservoir coverage and minimize operational time, enabling the stimulation programs to achieve the highest rate of return possible on each well.

Each system was run on a 4.5 to 5.5-in. tapered L80 liner with ball seat size increments ranging from 1/16-in. to 1/40-in. This well design enabled the operator to run a 2.0-in. ball seat as the smallest size at the toe of the well and achieve optimal pump rates. Each 60-stage system was completed successfully and downhole operations were verified with the ePLUS® Retina Monitoring System. An activation ball was confirmed to land on every seat and each sleeve successfully shifted open in all four StackFRAC HD-X systems. Dissolvable activation balls were used in each well to eliminate millout, further reducing operational time and cost.

Packers Plus provides field-proven lower completion solutions – such as StackFRAC HD-X – designed to provide higher production and cost-effective operations. These solutions include more than 300,000 ball-activated sleeves that have been installed and stimulated worldwide in a variety of applications. For more information about StackFRAC HD-X and other completion solutions, [visit packersplus.com](http://packersplus.com).



An ePLUS Retina chart from one stage of the four-well project that shows confirmation of the activation ball launch, ball seating in the FracPORT H3 Sleeve and the sleeve shifting open for stimulation.