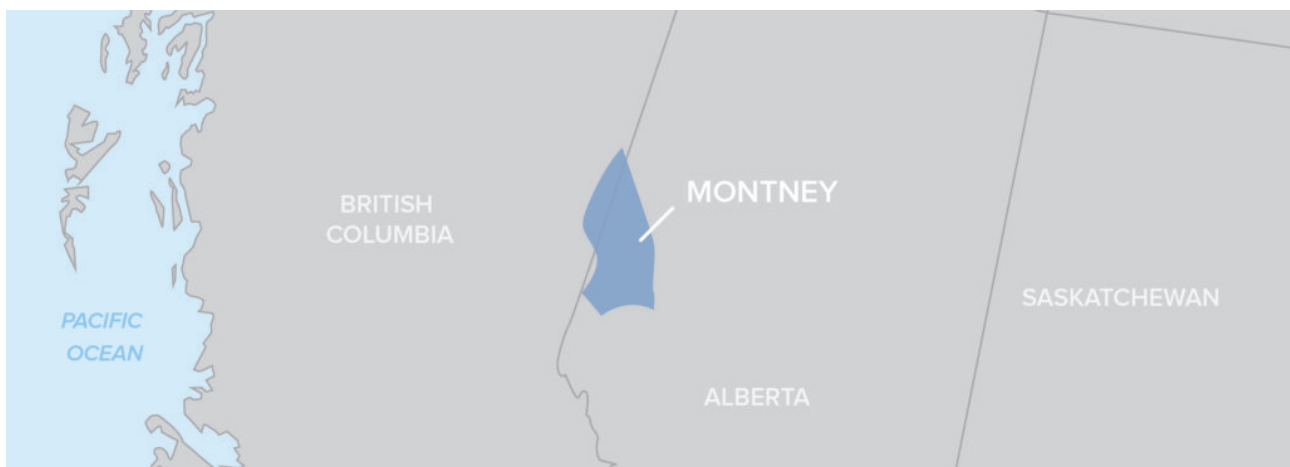


Case Study

Montney operator achieves top tier returns with StackFRAC HD-X

CANADA, MONTNEY
STACKFRAC HD-X SYSTEM

An operator expanding development in the Montney formation has been refining its completion techniques with positive results. Using StackFRAC® HD-X, production has steadily improved over the last several years and recent wells have exceeded expectations.



Challenge

A junior operator with over 900 potential drilling locations in the Montney has been working to develop acreage as efficiently and economically as possible. One of the goals was to increase stage count to improve reservoir coverage during stimulation, while still gaining the benefits of continuously pumped operations.

Solution

The operator has moved to the next generation of sliding sleeve systems — StackFRAC HD-X — to maximize reservoir coverage and enhance production. Sliding sleeve completions, such as StackFRAC HD-X and its predecessors, are operationally efficient and cost effective for four main reasons:

- The stimulation can be completed from start to finish in one continuous pumping operation
- The first stage is activated using a hydraulic sleeve, which does not require an intervention such as coiled tubing to access the toe
- The ball for each subsequent stage is pumped in the flush of the previous stage, lowering

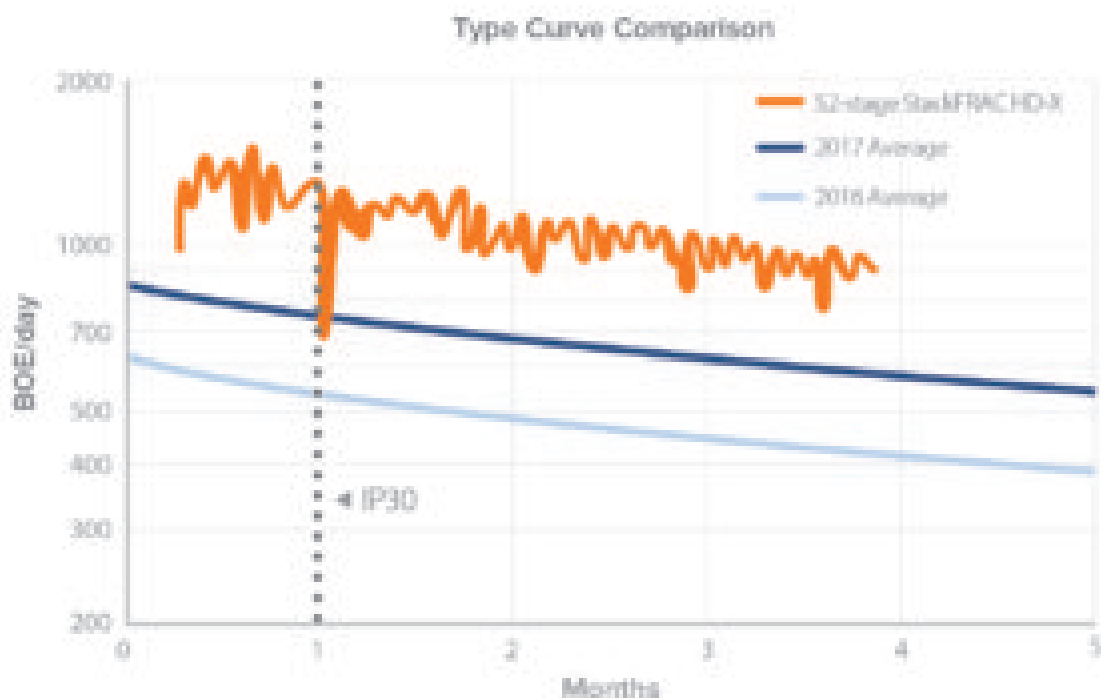
fluid volumes, potentially eliminating nonproductive time, and reducing overall completion time

- Finally, degradable balls can further improve efficiency by eliminating the need for millout, which saves significant time and equipment costs

StackFRAC HD-X offers the proven quality and reliability of StackFRAC HD while surpassing 1/16-in. seat increments to enable ultra high density, high stage count completions. A fully integrated quality control process is used to verify manufacturing precision and ensure operational success. This includes dimensional confirmation up to 1/10,000 of an inch, sleeves designed specifically to prevent erosion, and an anti-erosion coating to further minimize risk.

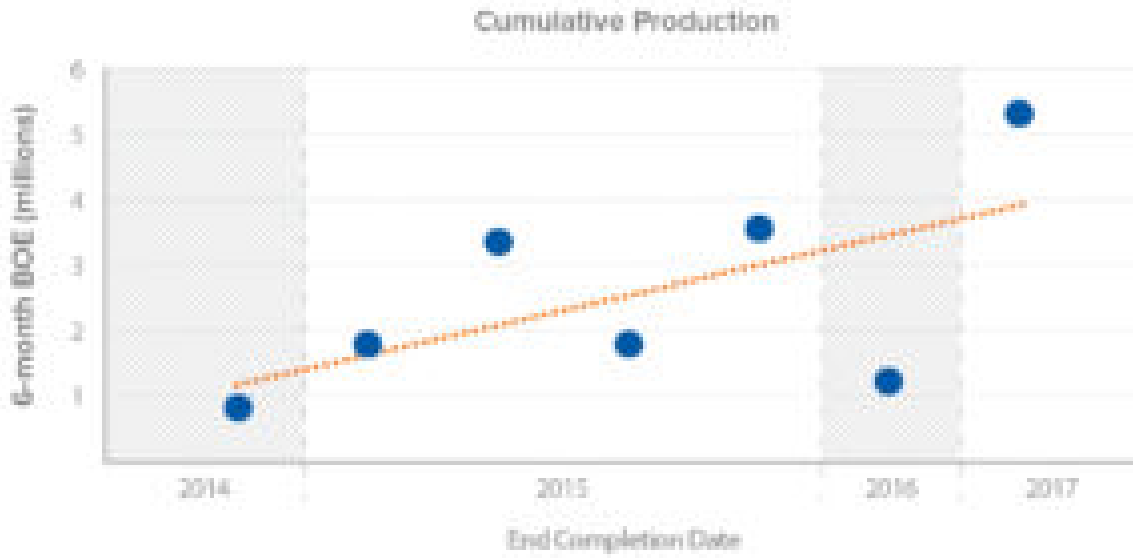
Results

A recent 52-stage well with a measured depth of 3,550m, including 1,450m of lateral length, was stimulated in a continuous operation that averaged 1.5 hours/stage of pumping time. The well's IP30 was over 130% above the operator's average 2016 IP30 type curve.



This well and others have surpassed the operator's production expectations. With high returns relative to the industry average, the operator reported that their revenue had more than doubled since the previous year. A comparison of their wells over the last few years shows a trend of improvements in production at the

6-month mark.



The operator continues to optimize completions by implementing pad drilling, longer laterals, and with plans to further increase frac intensity. StackFRAC HD-X has been run by dozens of operators in a variety of formations in Canada, and has often been shown to provide significantly better production and cost-effective completions. To see other case studies or for more information, see packersplus.com.