Northwest Alberta

HALLIBURTON

Operator increases drawdown in high oil cut and high GOR wells

High flow gas separator proves performance and economic value in multi-well pad field trial

CHALLENGE

- Mitigate foaming problem
- Improve pump efficiency
- Determine best type of gas separator

SOLUTION

 Run a field trial to compare high flow gas separator with regular gas separator system

RESULT

- 43% higher gas / oil ratio
- 12% drawdown increase
- Reduced number of stages for faster, more cost -effective operation

Overview

An operator drilling in Northwest Alberta was struggling with drawdown in high oil cut and high gas/oil ratio (GOR) wells due to foaming. The low density fluid was getting past the separators and reducing efficiency in the pump. The idea was to deploy two equal systems into similar wells on a multi-well pad and monitor the results of a system with high flow separators versus regular gas separators. This field trial led to favorable results for the high flow separator and ended up saving the operator time and money by adopting the winning solution.



Challenge

Previously, the method employed to manage this problem was over-staging the pump to make up for the inefficiency created by the foamy fluid. However, it was incurring more cost and increasing the length of system use. Summit ESP® was commissioned to find a more efficient, cost-effective solution.

Solution

While the surface flow rates did not necessarily call for high flow separators, Summit ESP personnel observed that the volume coming into the separators was very high. The field trial was conducted to further evaluate the conditions and compare high flow separators with regular gas separators. The two-stage, high flow gas separator proved itself in this trial with increased drawdown while handling a higher GOR.

Result

The operator can now run fewer stages and has the advantage of a more efficient, shorter system that will draw the well down faster. This improved method saved the operator money on the install, and the drawdown will increase cash flow. Because we pushed for a better solution, the operator was pleased and will continue using Summit ESP for future projects.

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