



Radial Drilling Offers Argentinian Operator Substantial Productivity Increases in the Neuquen Region

Lateral jetting technique significantly increases completion effectiveness compared with conventional fracturing, and exceeds all expectations when used in conjunction with fracturing.

CHALLENGE

Improve production in existing wells by applying unconventional radial jetting, and examine its effectiveness when combined with a conventional fracture. Operations to take place during normal well work-over.

SOLUTION

Apply a sequence of laterals placed to effectively maximize incremental oil flow and the transfer of fracturing horsepower.

RESULTS

Production rate increases of between 100% to 700%, with a significant reduction of water cut.

Large percentage of unproductive & under performing wells

Operating in the Tordillo eolic sands and dolomite, the operator needed to improve production through work-over optimization of cemented vertical wells. Three under performing wells in the Neuquen region were chosen.

Surface core tests and analysis indicated good formation response to stimulation fluids, opening additional flow channels not normally seen with their conventional completion.

Effective solution through sequenced lateral placement.

In two of the wells BoMo18 & PB32, the operator decided to evaluate the effectiveness of sequential placement of laterals in addressing low production rates associated with conventional completions. In one well, CB312, lateral placement was followed by a 600 sack proppant fracture.

All three wells were producing 5 M3/day with a 50%-60% water cut.

The laterals were systematically placed utilizing gyro azimuth orientation to allow delivery of maximum natural flow returns to the main wellbore and to surface. Laterals were achieved using fluid volumes no more than 1,000 liters per lateral and configured for zero formation invasion.

100% - 700% higher production without loss of efficiency or added cost.

Following lateral placement in BoMo18 & PB32, the wells flowed back at an increased volume of 10 M3/day.

Following lateral placement and fracking of CB312, a flow of 40 M3/day was achieved, with a water cut reduction to 20%.

The Operator confirmed this was the best production flow ever achieved in this field. As a result, this operator continues to apply the technique on additional wells.

