



CHALLENGE:

A Calgary based, mid-size oil producer working in southwest Saskatchewan was looking for a unique solution that would allow them to frac through coil with a high enough flow rate to be successful. The client required purpose-built technology that would enable them to reach a total measured depth up to 3,100m (10,710ft) for a number of their challenging horizontal wellbores.

EXECUTION:

STEP was able to provide the client with a viable answer by supplying a large-capacity masted coiled tubing unit that would carry 3,200m (10,500ft) of 73mm (2-7/8") coiled tubing. This allowed the client to evolve their completions from half frac ports and half cemented liner, to 100 per cent cemented liner. STEP's large-capacity coiled tubing unit allowed the client to save money by changing their completions technique and has since been a driving factor behind the company's multi-year track record of production and reserves growth. STEP's engineering team worked closely with the producer to evolve their fracturing procedure; in doing so, the client was able to improve the speed of their completions – knocking nearly 12 hours off of each well – and reduced the environmental impact by dramatically reducing fresh water consumption.

In addition to solving the client's main coiled tubing challenge, STEP provided a number of other cost/time saving solutions:

1. DIRECT COST SAVINGS

- STEP's integrated solution knocked 12 hours off the completion per well, saving the client time by adding efficiencies to their multi-well completion program (contributing to a 20 per cent decrease in completion costs).
- STEP took over the installation and running of coil connectors - eliminating the cost of a third party tool hand on location.
- STEP eliminated the need for a pressure truck on location by using its own fluid pumping unit. STEP's fluid pumping units are fully integrated with redundant twin quintaplex pumps, making it simple and easy to pump down coil while holding pressure on the annulus at the same time.
- STEP eliminated the need for a stand alone acid truck, because STEP's advanced pumping solution was able to inject the required acid more efficiently and cost effectively.

2. INCREASED EFFICIENCIES

- STEP provided two sets of BOPs for the client's multi-well pad completions. This eliminated two hours of pressure testing between wells by having the second BOP tested and ready while the first job was completed.

Project Scope: Fracturing through coil

Location: Shaunavon, Saskatchewan

String Size: 73mm (2-7/8")

Number of Wells: 81 as of June 2014

Total Measured Depth: All wells approximately 3,100m (10,170ft)

Date: August 2013

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