CASE HISTORY

Unconventional Resources

PosiFrac Straddle System

MULTIPLE OPEN HOLE FRACTURE OPERATION IN DUAL LATERAL WELL

Over 100 stages in one well, PosiFrac Straddle System enables positive placement of multi-zone open hole fracture operation in dual lateral horizontal well in Southeastern Saskatchewan.

CHALLENGES: A client operating in Southeastern Saskatchewan wanted to perform open hole fracture operations on a dual lateral horizontal well. Both legs are 6-1/4” in. (159 mm) diameter with total depth of around 10,000 ft (3,031 m). It is common practice in the region to drill one or two horizontal laterals and hydraulically fracture the reservoir in order to maximize production from the middle member of the Bakken formation. An important aspect of the operation is controlled, positive placement of the fractures in pre-determined intervals in the correct lateral.

SOLUTION: TAM provided a solution which utilizes a combination of the PosiFrac Straddle System and Single Set retrievable Bridge Plug. The PosiFrac Straddle System is a multi-set tool designed to isolate and fracture a zone between two inflatable packers. Using PosiFrac, TAM was able to space out the tool for a 15 ft (5 m) interval and move up 60 ft (20 m) for each subsequent set for a total of 59 frac zones in the first lateral. The Single Set retrievable Bridge Plug was set and served as a “door stop” in the second lateral. Once the operation was completed in the first lateral, another bridge plug was run to block entry. The first bridge plug was retrieved from the second lateral and the PosiFrac Straddle System was run in. A total of 59 stages were pumped in the second lateral. In this well, a total of 118 intervals were hydraulically fractured.

RESULTS AND BENEFIT:

By using a combination of TAM’s PosiFrac Straddle System and Single Set Bridge Plug, the client was able to significantly increase production by selectively stimulating multiple stages in each lateral with positive indication that both legs were fractured per the well program. This reduced operating cost and saved rig time compared to alternative methods. The PosiFrac Straddle System is currently being used on an ongoing basis for multi-zone open hole fracturing operations in the region.