

Case History: HydroPull™



Tempress HydroPull™ Tool Replaces Competition and Sets Records in Canada as a “Game Changer”

Case Study, Duvernay Formation, Alberta, Canada

The Tempress HydroPull™ in a Seven Well Program versus a Competitive Agitation Device

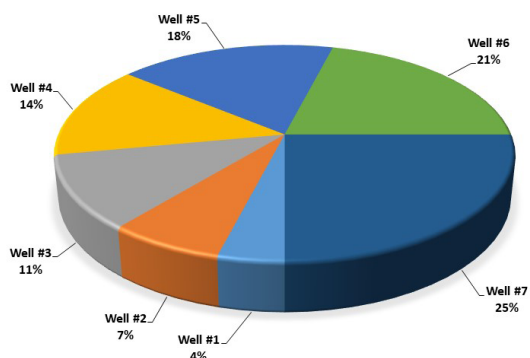
- **Realized Up to 25% Increase in Lateral Length**
- **Gained Almost 4,300 ft. (1,301 m) Additional Lateral Length Beyond Previous Lockup**
- **Earned Highest Plug Milling Efficiency in the Duvernay Formation**
- **Performed Single Trip Plug Millouts with No Wiper Trips**
- **Achieved the Lowest Friction Coefficient of 0.19 in Western Canada**

A major operator in the Canadian Duvernay Formation required milling of dissolvable plugs in extremely tortuous laterals. Competitive friction breaking tools proved ineffective in reaching the toe of these types of wells due to friction lockup, calculated using a friction factor as high as 0.28. The operator asked a Canadian well intervention specialist to utilize the HydroPull™ tool to perform plug millouts in a seven well program. The operator requested that the service company establish metrics to track the performance of the HydroPull over the seven well program.

After completion of the program, the HydroPull exceeded all expectations with an average job time of 55 hours per well and realized significant well bore gains over previous millout operations, vastly improved milling efficiency to the highest in Western Canada, operated with the lowest friction coefficient of 0.19, and achieved repeatable millout times of 4 to 6 minutes per plug with manageable cutting sizes.

The operator incorporated the HydroPull into its routine well interventions because of its reliability and power calling the HydroPull a true “game changer.”

PERCENTAGE INCREASE IN LATERAL LENGTHS BEYOND FRICTION LOCKUP



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