

Case History: HydroPull™



Tempress HydroPull™ Tool Replaces Competition in Woodbine Plug Millout

Case Study, Woodbine Formation, Brazos County, TX

- Casing 5 ½-in. 23 lb./ft.
- PBTB 16,635 ft. MD
- 2 ¾-in. Coiled Tubing

An independent operator with property in the Woodbine Formation in East Texas attempted to utilize a competitive friction breaking tool to millout 56 composite frac plugs in a horizontal lateral approximately 8,000 ft. long to a total measured depth of 16,635 ft. The competitive fluidic flow tool was initially called out to mill all 56 composite frac plugs. After repeated attempts at pumping friction reducing chemicals, lockup prevented the underpowered fluidic tool from moving the BHA forward past plug 43 at 14,900 ft. MD. The BHA was tripped out of the hole and Oil States Energy Services (OSES) Thru Tubing group was called out to replace the competition.

OSES Thru-Tubing group rigged up the BHA and entered the 5 ½-in. casing. The job was conveyed on 2 ¾-in. QT 1000 grade coiled tubing and the 3 ½-in. BHA measured a total length of 28.58 ft. consisting of a slip-on coiled tubing connector, a dual back pressure valve, a set of jars, a hydraulic disconnect, a screen sub, a 3 ½-in. High Flow-High Impact Tempress HydroPull, a 3 ½-in. high flow-high torque motor and a 4 ½-in. Varel tri-cone rock bit.

A 10 bbl gel sweep followed the milling of each plug. Once milling operations commenced, the wellhead pressure ranged from 2,600 to 2,800 psi and the pump pressure ranged from 5,000 to 6,700 psi.

Plugs 44 to 56 were milled without incident and with zero motor stalls in 6.5 hours with an average plug milling time of 5.1 minutes per plug.

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