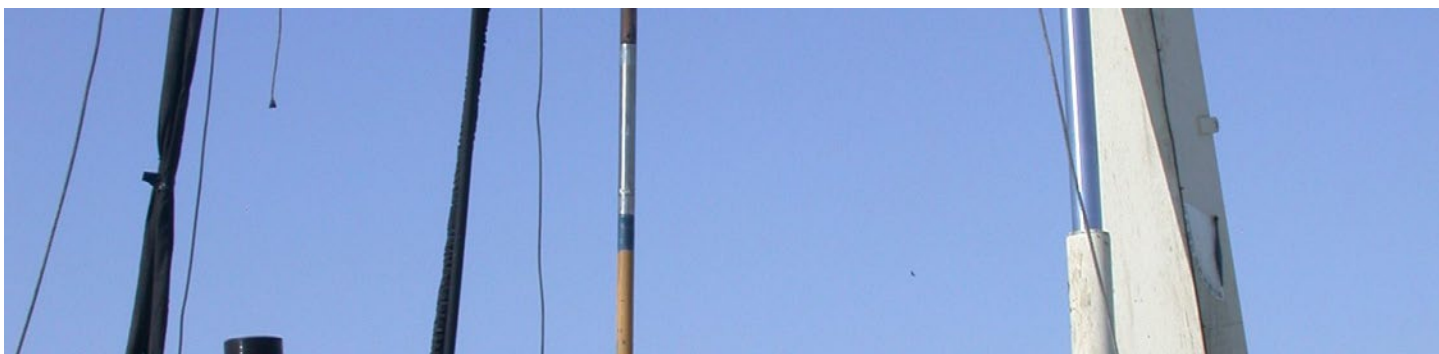


Case History: HydroPull™



66 Plugs Drilled in Permian Basin Well in a Single Run with a HydroPull™ Tool

Case Study, Spraberry Trend, Midland County, TX

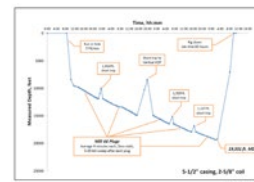
- Casing 5 ½-in. 20 lb./ft.
- KOP 8,400 ft. TVD; PBTD 19,331 ft. MD
- 2 ⅝-in. Coil Tubing
- 66 Composite Plugs

This job with a major Permian Basin operator involved milling out a total of 66 composite bridge plugs from a 10,000 ft. lateral in a 19,331 ft. MD horizontal well. The liner was 5 ½-in. and the job was run on 2 ⅝-in. CT. The 3 ⅛-in. BHA consisted of a motor head assembly, hydraulic disconnect, screen sub, 3 ⅛-in. High Flow-High Impact Tempress HydroPull™, 3 ⅛-in. Oil States Energy Services motor and a 4 ⅝-in. tri-cone rock bit. Water with friction reducer was pumped at 3.5 bpm increasing to nearly 4.0 bpm towards the end of the lateral. The wellhead pressure ranged from 1,300 psi to 2,650 psi and the pump pressure ranged from 3,400 psi to 5,700 psi.

All 66 plugs were milled without incident and gel sweeps and short trips were utilized to ensure a good cleanout of well debris.

This job was completed in a single HydroPull™ run with an average plug milling time of 9 minutes per plug.

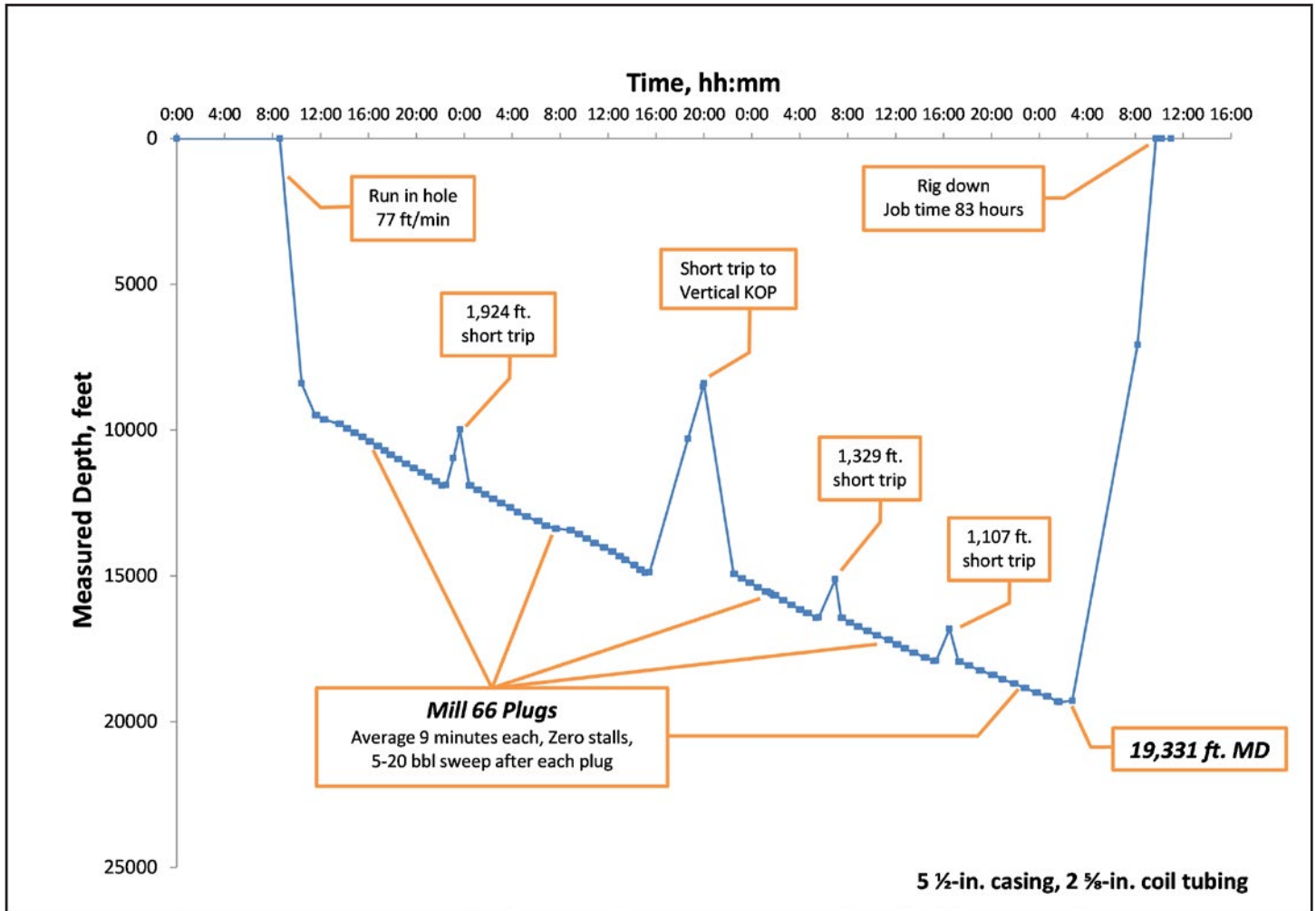
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66 Plugs Drilled in Permian Basin Well in a Single Run with a HydroPull™ Tool



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