

Case History: HydroPull™



Record Setting 94 Frac Plugs Milled with a HydroPull™ Tool - *Single Run without Short Trips*

Case Study, Midland Basin, Martin County, TX

- Casing 5 ½-in. 20 lb./ft.
- TD 22,657 ft. MD
- 2 ⅝-in. Coiled Tubing
- **94 Frac Plugs**

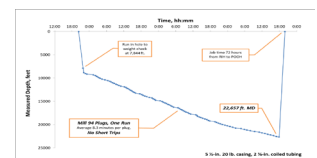
A major Midland Basin Operator called on the Tempress HydroPull tool to mill **94 frac plugs** in a horizontal lateral almost 14,000 ft. long to a total measured depth of 22,657 ft. This well was one in a five-well pad, each containing more than 90 frac plugs. The casing was 5 ½-in. and the conveyance method 2 ⅝-in. coiled tubing. The 2 ⅞-in. BHA consisted of a weld-on coil connector, dual back pressure valves, a hydraulic disconnect, a Tempress Water Bypass Sub, a Tempress Screen Sub, a 2 ⅞-in. High Flow-High Impact Tempress HydroPull, a 2 ⅞-in. high torque motor and a hybrid roller cone bit.

High viscosity gel sweeps in volumes of 10 bbls were pumped at a flow rate of 4.25 to 4.50 bpm and followed the milling of every fifth plug. No short trips were utilized to clean debris from the wellbore due to the powerful annular pulses supplied by the HydroPull.

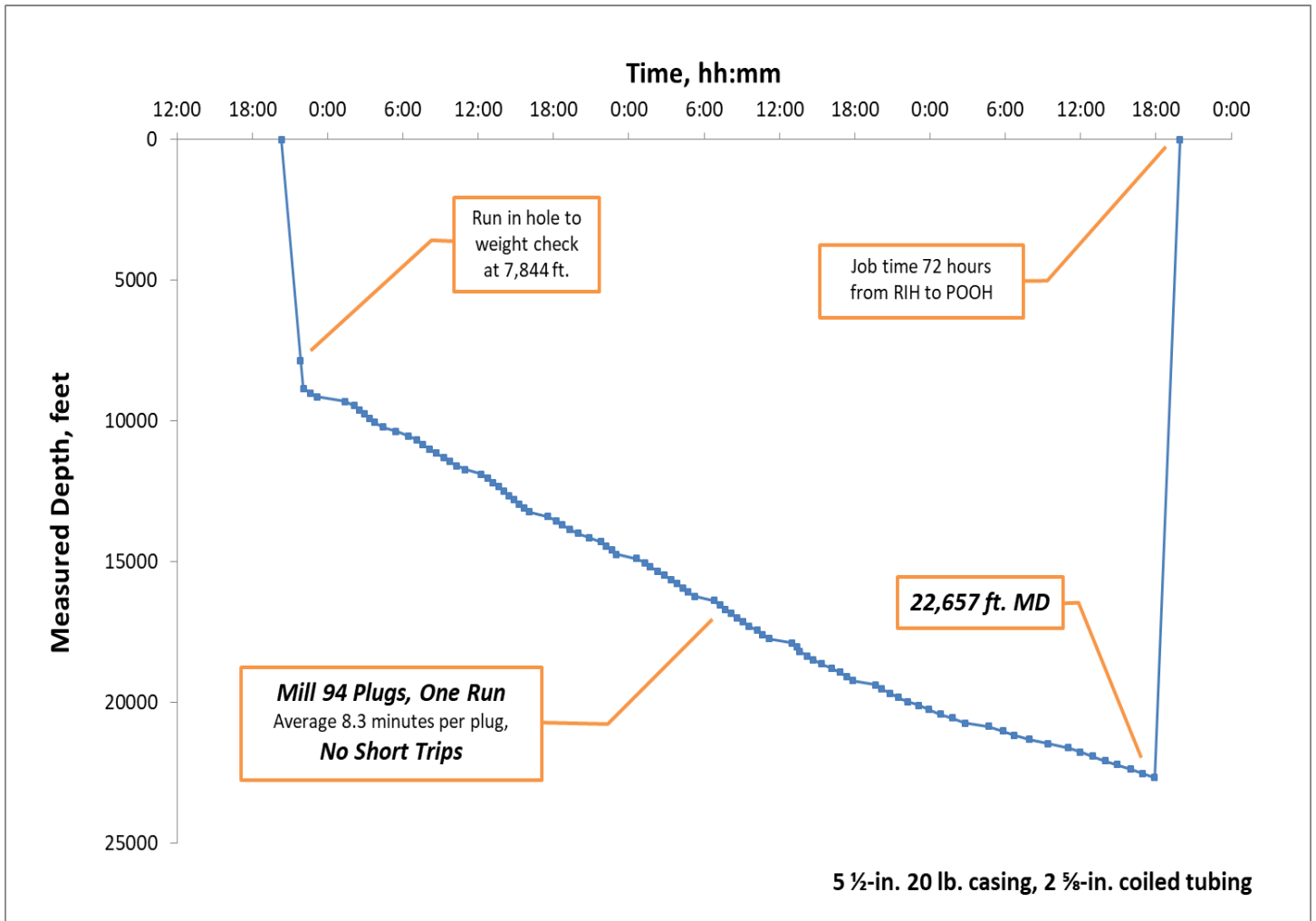
All **94 frac plugs** were milled with minimal motor stalls and assisted by a consistent 1,000 to 2,000 lbs. set down weight supplied by the HydroPull tool. The wellhead pressure ranged from 300 to 500 psi and the pump pressure ranged from 2,700 to 3,500 psi.

All **94 frac plugs** were milled in less than 66 hours at an average plug milling time of 8.3 minutes per plug.

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