

Case History: HydroPull™ SC Stimulation and Cleanout



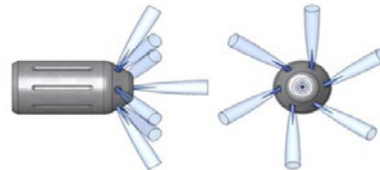
Extended Reach Solvent Placement Using HydroPull SC with 1 1/2-in. Coiled Tubing in 6 1/8-in. Openhole

This job required re-entry into a 6 1/8-in. (155 mm) diameter horizontal openhole from 4,760 ft. to 8,070 ft. (1,451 m to 2,460 m) MD to place solvent. The horizontal section was 3,313 ft. (1,010 m) long.

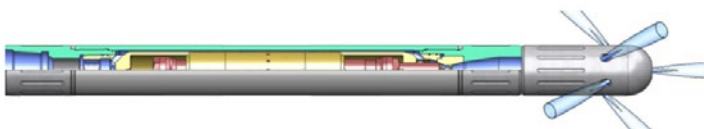
Prior attempts to enter this well with 1-in. (25 mm) continuous rod failed at 6,230 ft. (1,899 m) MD. The casing was 2.44-in. (62 mm) ID, requiring a 1 1/4-in. (43 mm) Tempress HydroPull™ SC Stimulation and Cleanout tool configured with a powerful four-jet nozzle pattern. The job was run on 1 1/2-in. (38 mm) coiled tubing and the Tempress tool was operated at 1.3 bpm (207 lpm) and at feed rates of 30 to 65 ft./min. (9 m/min to 20 m/min).

The final 1,000 ft. of wellbore (305 m) to TD was entered at 10 ft./min. (3 m/min) with snubbing forces well below the 1 1/2-in. (38 mm) coiled tubing limits. The solvent was placed at the toe of the well and allowed to soak for 24 hours. The well was re-entered with the HydroPull™ SC tool the following day. Commingled fluid (0.7 bpm [111 lpm] water and 525 scf [14.9 m³] nitrogen) was pumped to lift the solvent from the well.

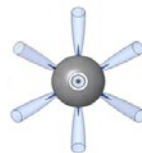
The HydroPull™ tool extended the lateral reach of the coil by 20% or 690 ft. (210 m) in this well.



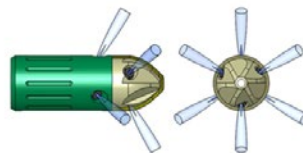
Forward Firing Nozzle Bullnose Option



Tempress HydroPull™ SC Stimulation and Cleanout Tool



Side Firing Nozzle Bullnose Option



Carbide Hammer Bit Option

TEMPRESS®

OIL STATES Energy Services