



Weatherford®

REAL RESULTS

MacDrill™ Motor Successfully Mills Obstruction in Canadian Thermal Well after Other Attempts Fail

Objectives

- Perform a coiled-tubing cleanout inside an obstructed 4-1/2 in. slotted liner in a thermal well with a bottomhole temperature of more than 572°F (300°C). Previous attempts to push through the obstruction had been unsuccessful.

Results

- Weatherford's 2-7/8 in. OD *MacDrill* high-temperature hydraulic motor was used for clean-up operations even though the temperature in the well exceeded the motor's maximum rating.
- The bottomhole assembly with the *MacDrill* motor was deployed into the well on a 2-in. coiled tubing workstring. Nitrogen and fluids were pumped at 13 gal/min (50 L/min), enabling the motor to reach the obstruction at 2,723 ft (830 m).
- Milling commenced, punched through the obstruction and successfully cleaned the well to total depth. There was no damage to the motor.

Value to Client

- The *MacDrill* motor and its ability to perform in high bottomhole temperatures enabled Shell to develop the well as planned.
- Because the *MacDrill* motor is 50% shorter than conventional motors, it enabled easier transportation and faster rig up, saving time and money.



Weatherford's *MacDrill* motor is a revolutionary high-temperature hydraulic motor for milling and well-cleaning operations. The motor works on the positive-displacement principle but features a stainless-steel stator rather than the elastomers found in conventional motors. With no elastomer in the stator, the motor can operate at temperatures up to 500 F (260 C) and can be powered by hydrocarbon-based solvents, acids, and gases.

Client

Shell Canada

Location

Peace River, Alberta, Canada

Well Type

Thermal land well

Bottomhole Temperature

More than 572°F (300°C)

Products/Services

- 2 7/8-in. *MacDrill* motor
- 3 3/5-in. chomps mill

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