



Weatherford®

REAL RESULTS

Weatherford Thru-Tubing Services Restores Production in a Shut-In Geothermal Well

Objectives

- Remove scale deposits from the inside of a 7-in. perforated liner to restart production without quenching the well.

Results

- Weatherford was approached by a third-party company to help propose a coiled-tubing solution using thru-tubing tools as a faster and more effective method for removing the scale deposits.
- Weatherford deployed a 2 7/8-in. OD MacDrill® motor and JAWS™ underreamer along with a temperature-rated slip-style coil connector and a Weatherford motorhead assembly.
- Scale was first encountered at 2,493 ft (760 m). The coiled-tubing unit pumped comingled air and water through the MacDrill motor and JAWS underreamer to mill out the scale deposits to total depth.
- As the scale was removed, the well started to flow again, at which point the pumping train was switched to straight water.
- Within three days of Weatherford's arrival on site, well production was restored to a rate of 3 MW per hour.

Value to Client

- Weatherford thru-tubing services enabled the well to quickly and cost-effectively resume production. Use of a land rig for a similar operation had taken 28 days, at a cost of approximately US \$1 million.
- During the time saved by the coiled-tubing solution, the well produced an additional 1800 MW.
- By avoiding quenching, this operation extended the life of the well.



The Weatherford MacDrill motor features a stainless steel stator that enables the tool to operate in high-temperature wells.

Location

Taupo, New Zealand

Well Type

Onshore geothermal

Hole Size and Angle

8-1/2 in., 48.2°

Production Casing Size

9 5/8 in., 47 lb/ft

Perforated Liner Size

7 in., 29 lb/ft

Bottom Hole Pressure (BHP)

2600 psi (17,926 kPa)

Bottom Hole Temperature (BHT)

536°F (280°C)

Measured Depth

7,359 ft (2,243 m)

True Vertical Depth

6,096 ft (1,858 m)

Products/Services

- Weatherford thru-tubing services
- MacDrill motor
- JAWS underreamer
- Weatherford motorhead assembly (MHA)

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