

Wireline Services Delivers Essential Data on Wellbore Nearly 4-in. Larger Than Expected in Less Than 2 Days

Objectives

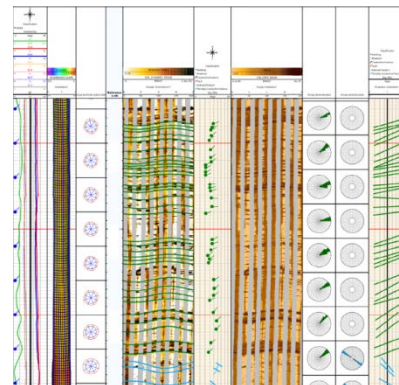
- Obtain high-quality formation data in an onshore, geothermal well with an irregularly shaped and inconsistent borehole.
- Produce a caliper log and resistivity images from the more than 2,297-ft (700-m) zone to identify unique formation characteristics for better reservoir understanding.

Our Approach

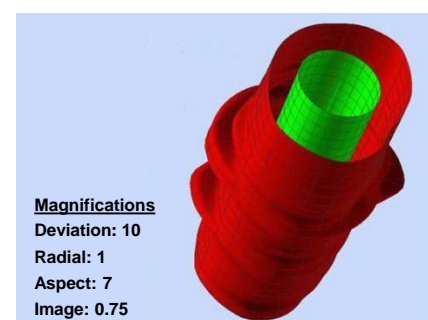
- The Weatherford team deployed the Compact™ microimager (CMI) in memory mode to record accurate measurements and detailed fullbore images.
- The team expected the borehole diameter to be 8.5 in. (216 mm); however, during logging operations they discovered that the diameter measured more than 12 in. (305 mm) over the entire section.
- The arms of the CMI adapted to the shape and condition of the wellbore and made continuous pad-to-formation contact, which resulted in excellent image and caliper data.
- Weatherford interpretation and processing services evaluated and delivered all the data sets in less than 48 hours. The data enabled the client to observe the borehole size and shape; identify bedding and faults; quantify and characterize natural and stress-related fractures; observe complex tectonic structures, lithological changes, and sedimentological features; and analyze structural and stratigraphic characteristics.

Value to Client

- The CMI enabled the operator to acquire critical formation data despite the imperfect borehole and unexpected diameter of more than 12 in.
- Interpretation and processing services delivered full, high-quality sets of openhole log data in less than 2 days.



Weatherford provided excellent high-resolution imaging and efficient log interpretation that enabled high-quality reservoir characterization for fast operational decisions.



The above screenshot from the three-dimensional analysis shows the more than 12-in., irregular, measured borehole (red) and the assumed 8.5-in. borehole (green).

LOCATION

Europe

WELL TYPE

Onshore, geothermal

FORMATION

Low metamorphic rock and carbonates

HOLE SIZE AND ANGLE

Expected: 8.5 in., vertical
 Actual: >12 in., vertical

RUN LENGTH

>2,297 ft (>700 m)

PRODUCTS/SERVICES

- Wireline services
- Interpretation and processing services
- Compact microimager (CMI) tool

