

Close Partnership, Specialized Technologies, Operational Efficiencies Delivered Best-in-Class Geothermal Wells in Germany

Objectives

- Collaborate closely with a project management company to deliver efficient and effective project delivery of geothermal drilling projects.

Our Approach

- Weatherford and the project management company drew on more than 17 years of continuous cooperation to outline a detailed project plan. Both teams were based in Germany, enabling efficient communication, a shortened response time, and a single point of contact.
- Experts from Weatherford and the project management company re-interpreted the 3D seismic data and developed a more efficient geosteering strategy anchored by the GuideWave® azimuthal resistivity tool and the ShockWave® sonic tool.
- The GuideWave azimuthal resistivity tool provides deep-reading measurements that enable accurate navigating and landing of horizontal wells within geologic targets.
- The ShockWave sonic tool provides robust and reliable LWD sonic data for key real-time applications such as seismic time-depth correlation, pore-pressure determination, and porosity evaluation.
- To drill the geothermal wells, Weatherford experts recommended the Magnus® rotary steerable system (RSS). This motorized, push-the-bit RSS incorporates non-elastomeric piston seals in the mud-actuated pads, enhancing mechanical integrity in the harsh drilling environments of geothermal wells.
- Working together, Weatherford and the project management company delivered the geothermal drilling project in Germany in record time.

Value to Customer

- The combined experience from Weatherford and the project management company delivered a best-in-class tripping performance: 0 to 16,486 ft (0 to 5,025 m) measured depth (MD) in 47 days.
- The efficiency of the field personnel resulted in a 45% faster bottomhole assembly (BHA) pickup and preparation for drilling operations.
- The tripping time in the cased-hole environment was 1,640 to 2,624 ft/hr (500 to 800 m/hr). The in-house maintenance team lowered the repair hours to 0.1% (vs. 3%).
- The combined expertise, management, and coordination of the two teams delivered the project approximately 15% to 30% faster than planned.



Collaborating with geothermal experts from around the world, Weatherford enables customers and partners to successfully harness geothermal energy wherever they are.

LOCATION

Bavaria, Germany

WELL TYPE

Geothermal

HOLE SIZES

Multiple

CASING SIZES

Multiple

LINER SIZES

Multiple

TEMPERATURE

>212F (>100°C)

MEASURED DEPTH

>16,404 ft (>5,000 m)

PRODUCTS/SERVICES

- Integrated Services and Projects
- Magnus RSS
- GuideWave azimuthal resistivity tool
- ShockWave sonic tool
- Tubular running services
- Openhole and cased-hole logging
- Cementing accessories
- Geosteering with logging-while-drilling tools
- Directional drilling

