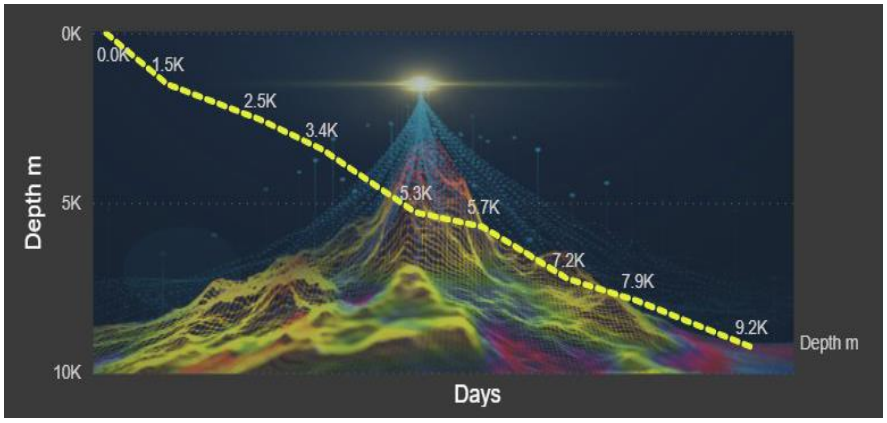
Motorized Magnus® RSS Delivers First Geothermal Well in Vienna Basin, Enhances Operational Efficiency, Reduces NPT in Support of Development Strategy



Total meters drilled across the three wells.

Objectives

- Drill three directional geothermal wells in Vienna, Austria, targeting the Aderklaa Conglomerate formation.
- Key challenges included:
  - Navigating shallow, unconsolidated gravel layers with extended tangent sections at inclinations up to 50°
  - Achieving effective hole cleaning while using low-viscosity drilling fluids
  - Mitigating surface noise interference in an urban environment
  - Drilling and logging the target formation to ensure reservoir evaluation.

Our Approach

- Weatherford deployed a motorized Magnus rotary steerable system (RSS) to meet directional drilling objectives while minimizing surface noise in the urban environment. The motorized configuration enabled higher downhole RPM for efficient drilling performance, while maintaining low surface RPM to reduce acoustic impact. The Magnus RSS provided precise directional control from kickoff through the build section and ensured consistent trajectory across extended tangent intervals.

LOCATION
Vienna, Austria

WELL TYPE
Geothermal

HOLE SIZE AND ANGLE
12 1/4 and 8 1/2 in.
52° inclination,
9,481 ft (2,890 m) tangent

PRODUCTS/SERVICES
- Magnus RSS
- MFR propagation resistivity tool
- AZD azimuthal density tool
- TNP thermal neutron porosity LWD tool

Weatherford®

© 2025 Weatherford. All rights reserved.

Motorized Magnus® RSS Delivers First Geothermal Well in Vienna Basin, Enhances Operational Efficiency, Reduces NPT in Support of Development Strategy

Our Approach (continued)

- In the first well, unanticipated gravel zones generated high vibration levels, resulting in premature wear on the bottomhole assembly (BHA) components and drill bit damage. To address this, a comprehensive driller's roadmap was developed for the remaining wells to proactively manage vibration during drilling and tripping operations. A check-trip strategy was also introduced during long hold sections to improve hole cleaning and facilitate effective cuttings removal at planned intervals.
- For formation evaluation of the Aderklaa Conglomerate at high inclination, Weatherford field personnel deployed the MFR® propagation resistivity tool, the AZD® azimuthal density tool, and the TNP™ thermal neutron porosity LWD tool within the same motorized RSS configuration. This enabled high-quality data acquisition in a single run, even under challenging high-angle conditions.

Value to Customer

- By deploying a motorized Magnus RSS to drill complex directional intervals in this basin for the first time, the operator marked a key milestone in geothermal drilling performance. All three well profiles were delivered according to plan, with no premature trips for tool failures throughout the campaign.
- A personalized driller's roadmap, developed in response to challenges encountered on the first well, enabled safe and efficient drilling operations with no unscheduled events in the subsequent wells. Full coverage logging of the Aderklaa Conglomerate was achieved using LWD tools integrated within the motorized BHA, ensuring high-quality formation evaluation in a single pass.
- This integrated solution enhanced operational efficiency, reduced nonproductive time (NPT), and delivered critical formation insights to support the operator's geothermal development strategy.

Weatherford®

© 2025 Weatherford. All rights reserved.

Weatherford products and services are subject to the Company's standard terms and conditions, available on request or at weatherford.com. For more information contact an authorized Weatherford representative. Unless noted otherwise, trademarks and service marks herein are the property of Weatherford and may be registered in the United States and/or other countries. Weatherford products named herein may be protected by one or more U.S. and/or foreign patents. Specifications are subject to change without notice. Weatherford sells its products and services in accordance with the terms and conditions set forth in the applicable contract between Weatherford and the client.