

Magnus® Saker RSS Drills 4,800-ft Section With Zero Failures, Demonstrates Exceptional Endurance in Gas Drilling Conditions

Objectives

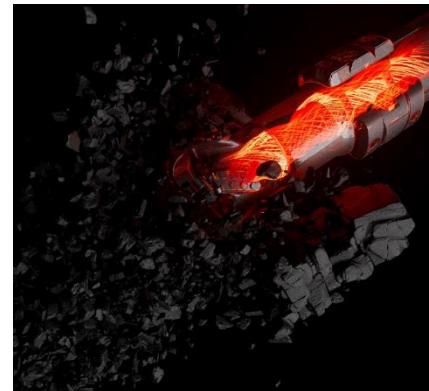
- Execute a complex re-entry sidetrack involving decompletion, whipstock, kickoff, and drilling a complete curve section.
- Drill the entire 5 7/8-in. section in two runs using a high-reliability rotary steerable system (RSS) solution.
- Qualify the Magnus Saker RSS as a fit-for-purpose rotary steerable solution for gas drilling applications.
- Build trajectory from vertical to 72° inclination with planned 2.5–3.0°/100 ft (30 m) dogleg severity (DLS).
- Maintain reliable performance in 115 pcf mud weight with extended drilling hours.
- Land the wellbore 10 ft (3 m) TVD inside the target zone.

Our Approach

- Applied a full gas bottomhole assembly (BHA) strategy focused on stability, directional precision, and long-duration survivability.
- Selected the Magnus Saker RSS, equipped with a near-bit gamma ray sensor, for its ruggedized mechanical design, reliability in high mud weight applications, and independent pad control.
- Utilized the HEL™ hostile-environment-logging measurement-while-drilling system to maintain high-quality telemetry and directional measurements under extreme downhole conditions.
- Optimized bit design and drilling parameters with the operator to preserve DLS, minimize dysfunction, and maintain the planned trajectory.

Value to Customer

- Drilled the entire 5 7/8-in. section in the planned two runs, eliminating unplanned trips and reducing operational exposure in a high-risk, deep-gas environment.
- Demonstrated exceptional system endurance with 450 operating hours in 115-pcf mud weight, far exceeding typical survivability of RSS and MWD systems in gas applications and delivering uninterrupted performance throughout the field test.
- Maintained consistent toolface control and high-quality, real-time measurements, enabling confident directional decisions and ensuring accurate execution of the planned trajectory.



The Magnus Saker RSS delivers a step-change in drilling performance by extending run length, increasing dogleg capability, and enabling real-time trajectory control in demanding environments. The RSS reduces operational risk while optimizing well placement to provide consistent performance from spud to TD, run after run.

LOCATION

Middle East

WELL TYPE

Development, producer

FORMATION

Dolomite, sandstone

TEMPERATURE

250°F (120°C)

PRESSURE

12,000 psi (82.7 MPa)

TOTAL DRILLING HOURS

317 Hours

TOTAL OPERATING HOURS

450 Hours

PRODUCTS/SERVICES

- Magnus Saker RSS
- HEL™ MWD system



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Value to Customer (continued)

- Delivered 317 drilling hours with an on-bottom ROP of 15.3 ft/hr (4.6 m/hr), improving overall drilling efficiency and reducing section time as compared to historical gas drilling performance.
- Mitigated vibration-related dysfunction, protecting downhole tools and enabling a stable curve section with precise landing 10 ft (3 m) TVD inside the target zone.
- Validated the Magnus Saker RSS as a high-endurance, gas-capable solution, providing the operator with a reliable alternative for gas drilling applications.

