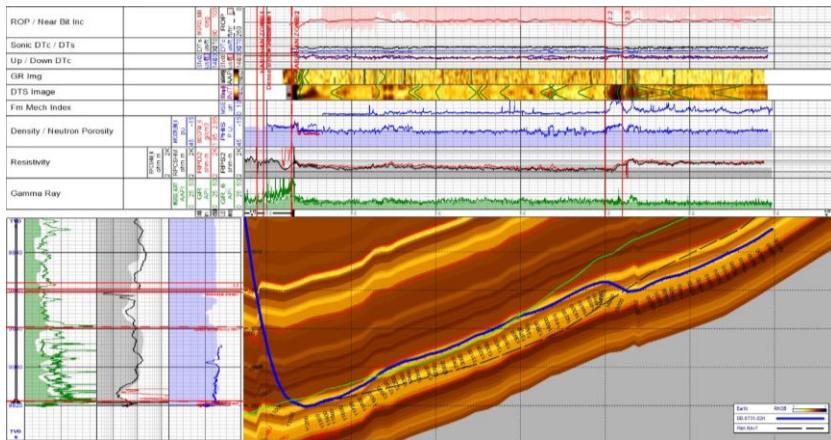


High-Risk to High-Value

Magnus® Saker RSS Maximizes Reservoir Contact in High-Temperature Carbonate Layer, Saves 7.4 Days



Despite facing challenges such as severe up dip, a very thin reservoir, and ECD limitations due to high mud weight, the Magnus Saker RSS achieved the second-best ROP record for the 6-in. hole section across the reservoir.

Objectives

- Re-enter and sidetrack the well to drill a horizontal producer in the thin carbonate reservoir.
- Navigate high-temperature, high-strength carbonates while maintaining drilling stability.
- Achieve precise wellbore placement within a narrow, structurally complex reservoir target.
- Manage tight equivalent circulating density (ECD) and differential-sticking risks under high mud weight.
- Deliver the section quickly and reliably despite short-notice planning and the requirement for source-less directional tools.

Our Approach

- Deployed the Magnus Saker rotary steerable system (RSS) for high-torque steering, fast directional response, and smooth wellbore delivery in high-strength carbonates.
- Used CrossWave™ real-time sonic to interpret dip continuously and steer confidently within the thin carbonate reservoir.
- Adopted a source-less directional workflow to meet customer requirements while minimizing survey-related delays.

LOCATION

Middle East

WELL TYPE

Development, producer, horizontal

FORMATION

Carbonates

PRODUCTS/SERVICES

- Magnus Saker RSS
- CrossWave azimuthal sonic tool
- MFR™ resistivity tool
- HEL™ hostile-environment-logging measurement-while-drilling system

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Our Approach (continued)

- Monitored ECD and drilling dynamics in real time to maintain stability under high mud weight and avoid sticking risks.
- Optimized the trajectory to maximize reservoir contact while honoring strict dogleg severity (DLS) limits for future intervention.
- Provided 24/7 engineering support to ensure fast decisions and flawless execution under compressed timelines.

Value to Customer

- Saved 7.4 rig days, reducing operating costs by \$440,000 USD, driven by a 71% ROP improvement over the field average.
- Delivered a smooth, low-tortuosity wellbore that supports efficient completion and future coiled-tubing stimulation, protecting long-term production value.
- Maintained precise placement within the thin carbonate reservoir, increasing reservoir contact by approximately 5% and reducing dense-formation crossing from approximately 500 to 205 ft (152.4 to 62.4 m).
- Ensured stable, trouble-free drilling in >270°F (132°C) high-strength carbonates with zero nonproductive time (NPT) and no stuck-pipe events, reducing operational risk.
- Enabled confident real-time geosteering through continuous sonic dip interpretation, helping the customer maximize reservoir exposure in a structurally complex, up-dip environment.

