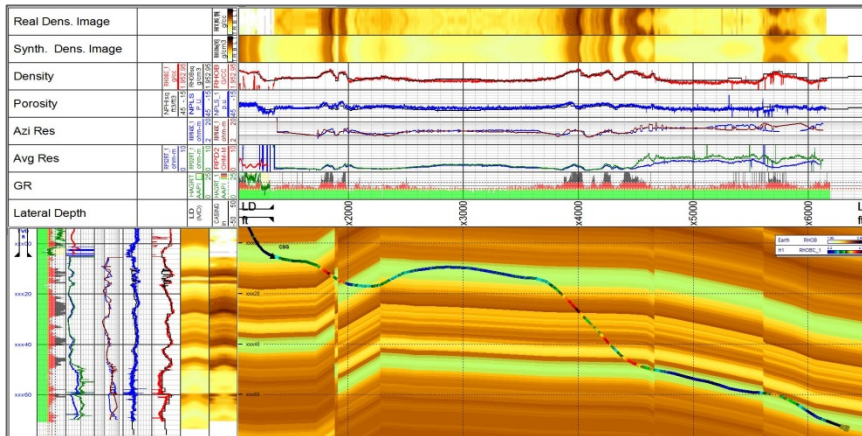


# GuideWave® Azimuthal Resistivity Tool Delivers Smooth Trajectory With 100% Sweet Spot Contact in Two Narrow Target Zones



Using the GuideWave tool and AZD sensors, Weatherford provided a final real-time model that indicated successful well placement in a complicated reservoir with many faults.

## Objectives

- Geosteer a 6-in. horizontal well in a formation with structural uncertainties, including faults and an abrupt dip.
- Land the well at a 2,000-ft (610-m) measured depth (MD) in two porous target zones: a 7-ft-thick (2.1-m-thick) upper target and a 5-ft-thick (1.5-m-thick) lower target.

## Our Approach

- The Weatherford team gathered offset well data for a prejob analysis and performed forward modeling for logging-while-drilling (LWD) tool responses.
- The team deployed the GuideWave azimuthal resistivity tool and AZD® azimuthal density sensors.
- During drilling, the team provided continual recommendations to the client. This real-time guidance resulted in timely corrections for a smooth trajectory.
- Real-time responses from the GuideWave and other LWD tools confirmed a change in the dip from 0.2° at 6,320 ft (1,926 m) to 0° at 9,400 ft (2,865 m), which made the average dip between 0.5 and 1°.

## Value to Client

- Using the GuideWave tool enabled the client to reduce uncertainty while drilling, steer a smooth trajectory, and maintain 100% contact in both target zones.
- Geosteering led to nearly 2,000 ft (610 m) of contact in each target zone.

**LOCATION**  
Middle East

**WELL TYPE**  
Onshore, horizontal, oil producer

**HOLE SIZE AND ANGLE**  
6 in., 89°

**LINER SIZE AND TYPE**  
7 in.

**TEMPERATURE**  
200°F (93°C)

**DEPTH**  
5,000-ft (1,524-m) lateral

### PRODUCTS/SERVICES

- Directional and performance drilling
- Geosteering services

\* GuideWave is a registered trademark of Weatherford in the US. AZD is a registered trademark of Weatherford in the US and Colombia.

