IES and LWD Services Provide High-Quality Data to Guide Drilling Through a Complex Well

**Objective**
- Obtain and analyze wellbore stability, pore pressure, and fracture gradient data to guide drilling in a geologically complex, tectonically stressed well.

**Our Approach**
- The Weatherford interpretation and evaluation services (IES) team met with the operator to review offset well histories and analyze their geomechanics to understand past drilling and instability issues.
- Using the well histories, the team developed a predrill mechanical earth model of the planned well to inform the drilling program.
- The logging-while-drilling (LWD) team deployed the CrossWave® azimuthal sonic tool, the AZD® azimuthal density sensor, and the BAP™ bore and annular pressure sensor.
- The real-time logging information from the LWD tools enabled the operator to better understand the rock behavior while drilling, navigate the challenging geomechanics, and reach target depth safely.

**Value to Customer**
- The IES team analyzed offset well histories to inform the drilling program. As a result, the LWD services team acquired high-quality data without well control issues or lost time while drilling.
- Compared to previous operations in nearby offset wells, Weatherford IES and LWD services saved the operator US $200,000 in one well.

**LOCATION**
Middle East

**WELL TYPE**
Onshore, oil producer

**FORMATION**
Shale

**BOTTOMHOLE TEMPERATURE**
143°F (62°C)

**PRESSURE**
4,360 psi (30.1 MPa)

**DEPTH**
5,200 to 7,000 ft (1,585 to 2,133 m)

**PRODUCTS/SERVICES**
- Interpretation and evaluation services
- Geomechanical analysis
- Predrill consulting
- Earth modeling
- CrossWave™ azimuthal sonic tool
- AZD™ azimuthal density sensor
- BAP™ bore and annular pressure sensor