



Weatherford®

REAL RESULTS

At-Bit Measurement System Reached TD in Basal Sand Well with Zero NPT, Reduced Sliding Rate from 55% to 32.5%

Objectives

- Determine core-point measurements that will provide the foundation for future geosteering projects within the first section of a horizontal development well.
- Deliver inclination and azimuth measurements that are within 25 ft of the bit, gamma ray readings within 40 ft of the bit, and resistivity levels within 50 ft of the bit.

Results

- Weatherford deployed the At-Bit Measurement System sub with the smooth-path rotating stabilizer (SRS) downhole motor. The tool supported sensor placement near the bit.
- The directional work was optimized to build a curve of 11.71 ft per degree, building up to 87° inclination. This continued until a 90° inclination and an azimuth of 61° were established. The well was drilled to total depth in 1.2 days.

Value to Client

- Sensor-distance requirements were met and the section was drilled with zero nonproductive time (NPT). The operation provided high-quality logs and an excellent foundation for future geosteering procedures.
- The operation reduced sliding to 32.5% in the 87° build inclination, which is an improvement compared to previous sliding rates of up to 55%.



The Weatherford At-Bit Measurement system captures real-time, on-the-fly inclination and azimuthal gamma ray measurements inches from the bit. Unlike traditional motor telemetry systems, the At-Bit Measurement System—located below the motor—provides rapid data transfer between the sensors and the measurement-while-drilling (MWD) tool via the hard-wired mud motor. When used together, the inclination and gamma ray measurements enable faster decision making and precise geosteering, which can result in increased hydrocarbon recovery.

Location
Colombia

Reservoir Type
Basal Sands

Section Size
8-1/2 in.

Well Type
Horizontal Development

Total Depth
4,720 ft (1,439 m)

Products/Services

- At-Bit Measurement System
- Multi-Frequency Resistivity Tool
- Measurement-while-Drilling Tool
- Hostile Environment Logging System
- Drilling Services

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