Geo-Pilot® XL 9600 RSS Delivers Record Footage in Single Run and Saves $1.5 Million

Location: Offshore Angola

Overview

From a platform in 1,200 feet of water, the objective was to drill a new producer well to 22,698 ft. MD at 73.5° of inclination, evaluate the well with a logging-while-drilling quad combo (LWD), and obtain 25 planned pressure points using a GeoTap® pressure tester. The well would penetrate a predominantly shale formation, with sandstone in the reservoir section, where maximum circulating temperatures could reach 247°F.

In order to power through the long 12 ¼-inch hole section while obtaining the required pressure measurements and logging data, Sperry Drilling services recommended running a Geo-Pilot® 9600 XL rotary steerable system (RSS), and LWD suite including the GeoTap® tester.

This assembly drilled 16,803 ft. to reach the total depth in a single run at 22,698 ft. MD, with an average rate of penetration (ROP) of 108 ft./hr. This surpassed the previous best single-run footage of 14,831 ft., while additionally obtaining the planned 25 GeoTap® pressure measurements.

The result of taking just 155 drilling hours compared to the planned 210 hours for this interval, and by enabling the 25 formation pressure tests to be obtained in a single run, this record-length run saved a bit trip, or two days of rig time, for an estimated savings to the operator of $1.5 million.

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<th>CHALLENGES</th>
<th>SOLUTIONS</th>
<th>RESULTS</th>
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<td>• Drill and evaluate 16,803 ft interval in one BHA run</td>
<td>• Geo-Pilot XL 9600 rotary steerable system with quad combo LWD</td>
<td>• Record 16,803-foot run with 25 pressure tests acquired as planned</td>
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<td>• Obtain 25 formation pressure tests while drilling</td>
<td>• GeoTap® formation pressure tester</td>
<td>• Single BHA run with GeoTap pressure tester saved a bit run and an estimated two days of rig time, approximately $1.5 million</td>
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Benefits

- The ruggedized design of the Geo-Pilot XL rotary steerable system can overcome a range of harsh drilling conditions. Equipped with a TEM™ torsional efficiency monitor, the Geo-Pilot XL system provides instant warning of the onset of stick-slip. This system helps deliver precise wellbore placement, maximum reservoir exposure and maximum durability.

- With the GeoTap LWD formation tester, it is possible to obtain real-time direct pore pressure measurements while drilling, with the accuracy and precision comparable to that of wireline formation testers. Save time and money by reducing rig down time associated with wireline testing.