

## CASE STUDY

# OMEGA<sup>X</sup> REDUCES LATERAL UNCERTAINTY AND RIG TIME FOR OPERATOR OFFSHORE ANGOLA, SAVING \$97,000

### ▶ TECHNOLOGY

- Omega<sup>X</sup>™ solid-state drop gyro system

### ▶ APPLICATION

- Wellbore placement
- Extended-reach drilling

### ▶ LOCATION

- Offshore Angola, Africa

### INDUSTRY CHALLENGE + OBJECTIVE

An operator drilling offshore Angola noted a high risk of magnetic interference in a well, which would impact their ability to place the well accurately within the reservoir. MWD surveys were collected in the 17½- and 12¼- x 13½-in. hole sections. To verify the accuracy of the MWD data, the operator decided to run our Omega<sup>X</sup> solid-state drop gyro system. Additional objectives included reducing rig time and improving lateral uncertainty over both MWD tools and conventional gyro tools.

## TECHNOLOGY + SERVICE SOLUTION

- The Omega<sup>X</sup> system was chosen for its ability to provide more accurate wellbore information and improved reliability versus previous solutions.
- The Omega<sup>X</sup> system eliminates a significant amount of survey time versus an equivalent wireline run.
- The Omega<sup>X</sup> system's dual sensor probes allow two surveys across the same area, improving data integrity and providing better wellbore representation.
- Extremely fast data acquisition, efficient power usage, and increased reliability allow maximum flexibility to optimize surveying during various stages of wellbore construction and production.

## RESULTS + VALUE DELIVERED

- The Omega<sup>X</sup> system provided multishot survey data in both the 17½- and 12¼- x 13½-in. hole sections of the subject well while tripping out of hole with the drillstring assembly. Dropped in memory gyrocompass mode, the system collected surveys during connections to minimize rig time.
- Previous use of conventional gyro systems had been made more difficult by their sensitivity to shock, requiring the operator to adjust the pump schedule. The more rugged solid-state sensor package in the Omega<sup>X</sup> system removed this limitation, allowing the drop speed to be increased and TD to be reached more rapidly ahead of tripping out of hole.
- The Omega<sup>X</sup> system decreased lateral uncertainty by 70 meters versus the original MWD surveys and 20 meters versus conventional gyro surveys. The reduced ellipse of uncertainty allowed the operator to significantly improve wellbore positioning and drill into the next section with confidence in reservoir placement.
- Compared to an individual wireline run for a traditional gyro survey, the drop gyro saved at least 12 hours of rig time. Based on an estimated dayrate of \$194,000, this yielded \$97,000 in savings.

