

CASE STUDY

QUEST GWD USED FOR FIRST TIME IN AFRICA, IMPROVING WELLBORE PLACEMENT AND SAVING 3 HOURS OF RIG TIME

▶ TECHNOLOGY

- Quest™ gyro-while-drilling (GWD) system
- SPEAR™ solid-state sensors

▶ APPLICATION

- Wellbore placement
- Collision risk mitigation
- Remote operations

▶ LOCATION

- Angola, Africa

INDUSTRY CHALLENGE + OBJECTIVE

An operator in Angola needed to survey two sections of a well to ensure accurate placement and reduce the risk of wellbore collision. In addition, the operator hoped to reduce rig time and implement remote operations for monitoring drilling operations and survey quality verification. The operator had previously run our GWD70 system, but given their objectives, we recommended running the Quest GWD system instead. This was the first run globally for this operator and the first run for Quest GWD in Africa.

TECHNOLOGY + SERVICE SOLUTION

- We suggested implementing our Quest GWD system, powered by SPEAR solid-state sensors.
- The solid-state SPEAR sensors measure the earth's rotational rate precisely and accurately.
- The sensors are able to handle harsher downhole environments when compared to conventional GWD systems.

RESULTS + VALUE DELIVERED

- The Quest GWD system was preconfigured in the third-party service company's workshop. The system was then deployed in the 22-in. section with a motor and MWD tool and in the 17-in. section with an RSS, array resistivity compensation system, and MWD tool.
- All operations were supported remotely from a remote operations center in Aberdeen, with only one survey specialist onboard for any contingency operations.
- We collected 21 surveys while drilling the 22-in. section and 63 surveys in the 17-in. section. There was no NPT or disruption to the BHA, and post-job testing confirmed that all downhole data conformed to the error model.
- Faster survey timing using the Quest GWD system saved approximately 3 hours of rig time versus previous systems.
- The Quest GWD system survived the harsh drilling environment and required no battery change through more than 105 hours downhole and 16 days of standby time.

