

CASE STUDY

QUEST GWD PROVIDES 75% TIME SAVINGS, DEFINITIVE REAL-TIME WELLBORE PLACEMENT, AND EOU REDUCTION WHILE DRILLING

▶ TECHNOLOGY

- Quest™ gyro-while-drilling (GWD) system
- OMM Outrun Memory Multi-shot
- SPEAR™ solid-state sensors

▶ APPLICATION

- High-accuracy wellbore surveying
- Wellbore placement
- Extended reach drilling

▶ LOCATION

- Malaysia

INDUSTRY CHALLENGE + OBJECTIVE

An operator in Malaysia was required to drill a long ERD well planned in a due east direction for accurate placement in the reservoir section. Target sizing was essential to the success of the project. The operator also requested a high accuracy real-time definitive wellbore placement system that was capable to drill the section for an extended period of time. We advised running our solid-state Quest GWD system to TD the section, and then collect an Outrun Memory Multi-shot while tripping out the hole to address the operator's challenges.

TECHNOLOGY + SERVICE SOLUTION

- We suggested implementing our Quest GWD system, powered by SPEAR solid-state sensors in the 12.25" and 8.5" hole section.
- The OMM - Outrun Memory Multi-shot survey feature was activated in the 12.25" section allowing additional data collection and further reduction of the EOU (Ellipse of Uncertainty).
- 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.
- The reduced power consumption of Gyrodata SPEAR sensors allows the operator to drill long sections without the need for frequent battery trips.

RESULTS + VALUE DELIVERED

- The Quest GWD system was successfully implemented with the third-party service company's MWD system (required for RSS assemblies).
- The Quest GWD system's extended battery life allowed for 322 hours Total Time Below Rotary Table in 12.25" hole section and 294 hours of surveying in the 8.5" hole section with no battery trip required. A cumulative depth of 4,532.15 meters were surveyed across both hole sections.
- The reduced survey time of the Quest tool allows for survey collection during drillpipe connections. Quest GWD survey speed created a 75% time savings when compared to Legacy GWD90 systems.