

CASE STUDY

QUEST GWD ENABLES SUCCESSFUL CASING EXIT AND WELL PLACEMENT IN WEST TEXAS

▶ TECHNOLOGY

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

▶ APPLICATION

- Wellbore placement
- Casing exit

▶ LOCATION

- Culberson County, West Texas

INDUSTRY CHALLENGE + OBJECTIVE

An operator in West Texas had just completed a whipstock orientation and requested that we assist with the casing exit to drill the sidetrack. The operator needed a technology that would allow them to kick off from the whipstock and exit the casing while drilling ahead until clearing magnetic interference. In addition, the operator needed to minimize additional spend to ensure that the well stayed with AFE. We recommended running our Quest GWD system as part of the directional BHA as a solution.

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.
- The shorter SPEAR sensor package, loaded into a compact collar, allows greater steerability and sensor placement closer to the bit without the need for non-mag.

RESULTS + VALUE DELIVERED

- We enabled the operator to successfully kick off from the whipstock, exit the casing, and drill through an area of magnetic interference (approximately 1,800 ft) to TD without needing to worry about the quality of the data. All surveys passed QC, and there were no issues or NPT associated with the Quest GWD system.
- By using the Quest GWD system, we eliminated the need for a typical side-entry package and wireline unit, saving substantial rig time and reducing HSE risk. At just under 4 minutes at each stand down for a gyro survey with toolfaces, they were back to drilling shortly after. Conventional wireline tools would have taken at least 2 hours to get back to drilling after each connection.
- Using the Quest GWD system provided the operator with positional certainty, helping to ensure that the well met its directional objectives and was placed correctly within the reservoir. Despite some shock and vibration through the section, the system remained within tolerance due to its enhanced ruggedability.

