

CASE STUDY

QUEST GWD ALLOWS OPERATOR TO SUCCESSFULLY SURVEY DIRECTIONAL WELL IN MAGNETIC ENVIRONMENT AND MITIGATE WELLBORE COLLISION RISK

► TECHNOLOGY

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

► APPLICATION

- Directional drilling
- Wellbore placement
- Collision risk mitigation

► LOCATION

- Marcellus Shale

INDUSTRY CHALLENGE + OBJECTIVE

An operator was recently drilling a directional well in the Marcellus Shale when they encountered an issue with the EM MWD tool. To troubleshoot the MWD tool and redeploy the BHA would have caused substantial NPT and incurred unwanted costs that could have pushed the well over AFE. As such, the operator decided to run our solid-state Quest GWD system to survey the section without concern for the magnetic environment as well as to ensure wellbore placement accuracy and collision risk mitigation.

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.
- At only 19 inches long, including memory and data processing, the Quest GWD sensor package and electronics allow greater flexibility related to landing in different BHA designs and configurations

RESULTS + VALUE DELIVERED

- The two independent surveying instruments used as part of the Quest GWD system ensured gross error detection and survey accuracy.
- The operator was able to use the Quest GWD system to provide survey data in the magnetic environment near surface and throughout the section of concern.
- The Quest GWD system mitigated wellbore collision risks to optimize well spacing on the pad.
- The operator successfully eliminated the downtime and associated financial burden of troubleshooting the MWD tool.

