CASE STUDY

OMEGA^{X} REDUCES ELLIPSE OF UNCERTAINTY BY 67% AND CORRECTS WELLBORE PLACEMENT BY 144 FT

TECHNOLOGY

- Omega^{X}™ solid-state gyro system

APPLICATION

- Directional drilling
- Extended-reach drilling (ERD)

LOCATION

- Middle East

INDUSTRY CHALLENGE + OBJECTIVE

An operator in the Middle East was drilling a series of ERD wells from a multi-well pad. Since an accurate survey to determine the correct wellbore placement was critical for success of the project, the operator surveyed all wells in the field from surface to TD using gyro continuous survey technology on wireline. The objective of the gyro survey was to identify the final wellbore placement accurately and reduce the ellipse of uncertainty (EOU) due to the complexity of the field with multiple wells.

The well had been drilled to TD at 26,140 ft with a horizontal section from 5,600 to 26,140 ft. Gyrodata presented the advantages of deploying the Omega^{X} drop gyro system, and the operator decided to utilize Omega^{X} for the survey.

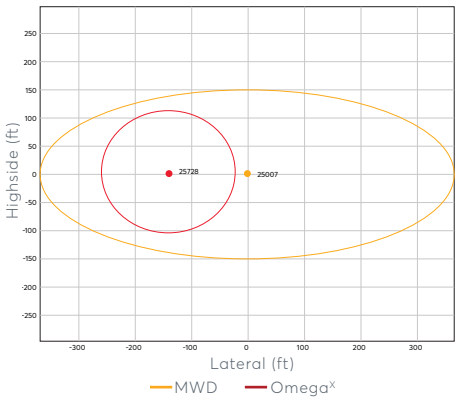
TECHNOLOGY + SERVICE SOLUTION

- Powered by SPEAR™ solid-state gyro technology, the Omega^{X} system was chosen for its ability to provide more accurate wellbore placement, improved reliability, and saving rig time versus any surveying solution on the market.
- The Omega^{X} system was deployed in a drop configuration, which negated the need for wireline equipment and personnel.

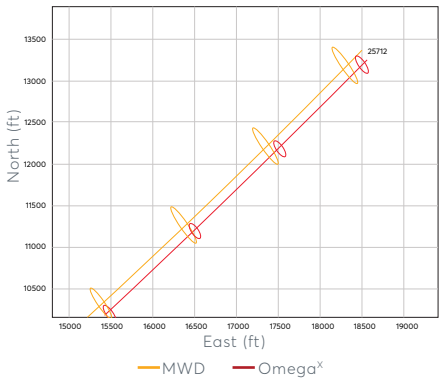
RESULTS + VALUE DELIVERED

- The Omega^{X} survey moved the wellbore position by 144 ft at TD versus the MWD surveys, which were corrected for BHA sag and in-field referencing.
- The Omega^{X} survey saved the operator approximately 30 hours of rig time versus a comparable wireline gyro run and reduced the EOU by 67% versus the corrected MWD surveys, giving the operator better spacing for future field development and anti-collision analysis
- The Omega^{X} system provides new opportunities to increase the accuracy of the operator's survey program within their ERD developments.

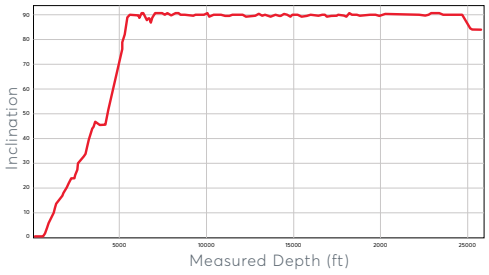
Ellipse of Uncertainty



Ellipse of Uncertainty



Well Profile



gyrodata