CASE STUDY

OMEGA^{X} PROVIDES CRITICAL WELLBORE COLLISION RISK MITIGATION WHILE ELIMINATING NEED FOR SECOND SURVEY RUN IN CASPIAN SEA, SAVING RIG TIME

TECHNOLOGY

- Omega^{X}™ solid-state drop gyro system
- SPEAR™ solid-state sensors

APPLICATION

- Wellbore collision risk mitigation
- Wellbore placement

LOCATION

- Caspian Sea

INDUSTRY CHALLENGE + OBJECTIVE

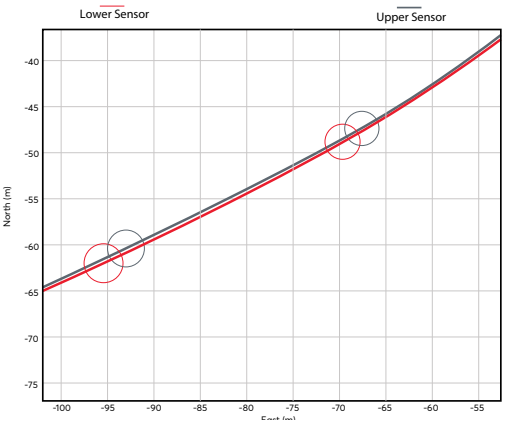
An operator in the Caspian Sea had stringent wellbore survey requirements, which included the need for survey redundancy. This requirement necessitated a minimum of three surveys in some well sections, particularly in areas where there was a high risk of collision with other wellbores. The operator's historical practices typically involved running two independent surveys, often incurring significantly more rig time. The operator sought a solution that would eliminate the excess rig time and mitigate the risk of wellbore collision while achieving the desired survey accuracy and redundancy.

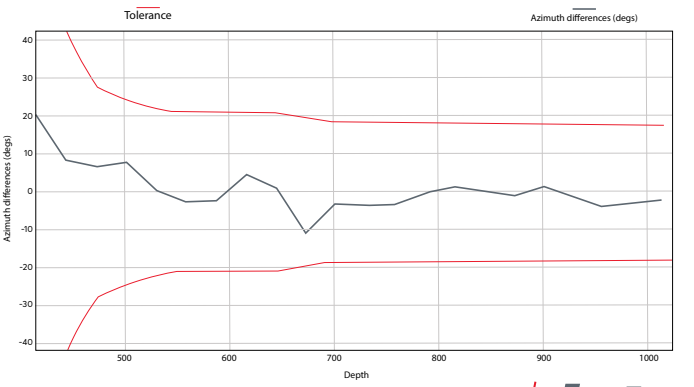
TECHNOLOGY + SERVICE SOLUTION

- We recommended that the Omega^{X} solid-state drop gyro system be deployed, as it surveys at all inclinations with significantly improved accuracy while allowing each toolstring to move independently.
- The system, powered by our SPEAR solid-state sensors, was selected due its twin-probe configuration, which met the operator's need for survey redundancy while eliminating the time and cost of two separate runs.
- In this case, the Omega^{X} system was dropped in replacement of a conventional spinning-mass, single-probe drop tool and a separate slickline-conveyed run in the same milling BHA.

RESULTS + VALUE DELIVERED

- The Omega^{X} system was successfully dropped in the 9⅝-in. casing section to a depth of 1015 m, providing highly accurate surveys for wellbore collision risk mitigation purposes.
- Due to the two independent surveys coming from the same system, we were able to easily provide quality control of survey misalignment, which was previously a challenge with different systems.
- The system's twin-probe configuration provided the required level of survey redundancy in a single run, allowing the operator to eliminate the historical requirement of two runs to achieve the same result. Time savings due to eliminating the rig-up of the conventional gyro and triggering the OMM were approximately 9.75 hrs.
- The Omega^{X} system also removed the potential for a dedicated contingency BHA/wireline survey. Under the original plan, if the drop gyro or OMM data did not correlate, or one misrun occurred, the rectification would have involved a dedicated BHA for a second drop gyro, or a wireline gyro run (8 to 10 hours). Due to running Omega^{X}, the OMM service could then act as the contingency option, providing confidence that the survey program could be fulfilled.





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