Real-Time Acoustic Evaluation of Cement Integrity Saves Operator USD 100,000

CAST-M™/RBT-M TOOL COMBINATION ENABLES FASTER, MORE-CONFIDENT CEMENT EVALUATION
OFFSHORE EGYPT

OVERVIEW
To ensure long-term cement integrity, a major oil company operating offshore in the Gulf of Suez needed to evaluate a 9.2-ppg lightweight slurry in a deviated 5-in. liner section. A quick data turnaround was necessary to decide the next course of action and avoid the expensive offshore rig standby costs. Halliburton proposed a Circumferential Acoustic Scanning Tool – Monoconductor (CAST-M™)/Radial Bond Tool – Monoconductor (RBT-M) combination to reduce uncertainty as fast as possible – with real-time answers. Data transfer and processing were performed in two hours, allowing the customer to make swift decisions about the cement conditions. A 9½-in. casing section was also logged in the same run using the inline centralizers, saving the equivalent of USD 100,000 in additional rig time by eliminating an extra run. This successful combination will be used to log all future wells in this area.

CHALLENGES
» Operator needed quick data turnaround to evaluate lightweight cement placement for planning next course of action
» Client required high confidence in data quality for informed decision making

SOLUTIONS
» A CAST-M™/RBT-M acoustic combination was recommended for real-time answers
» Two independent sets of acoustic data also increase confidence level in data accuracy

RESULTS
» Data transfer and processing were performed in two hours, allowing for quick decisions to be made
» Client saved USD 100,000 in rig time
» Client benefited from the improved accuracy of data, and plans to use this combination of tools to analyze cement on future projects

CASE STUDY
HAL 42007

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RESULTS

Through proper prejob planning with continuous customer interaction, data transfer and processing were performed in two hours, minimizing the wait time for the customer to decide on the action to be taken on the cement conditions. By running the CAST-M/RBT-M combination, the operator had a greater confidence from analyzing the two independent data sets -- data that previously was only obtained post-processing. The operator’s drilling department has since sanctioned the use of this technology combination for cement evaluation in all upcoming new well drilling.

A single 9½-in. casing section was also logged in the same run using the inline centralizers, saving rig time by eliminating an extra run. In all, this operation saved the equivalent of USD 100,000 in rig time by evaluating both casings in real time in one run.

The operator’s drilling manager noted, “Congratulations for the excellent cement jobs done for both production liners. Excellency of the job was proved by running the RBT-M and CAST-M tools through both liners. Special thanks to the Halliburton team for bringing up the RBT tool as a new technology, which will help us to evaluate cement jobs in slimhole liners and maybe save time in future jobs.”