Qmax TOOLS HIGH PERFORMANCE DURING CEMENT DRILLING AND WELLBORE CLEAN UP OPERATIONS IN A DEVIATED WELL WITH ONE TRIP

The client approved the Qmax WBCU tools 7" OD and 5" OD run in tandem for Wellbore Clean Up and cement drilling operations within 300 ft Liner 5" on one trip. After of the job the summary of operations of the well showed a successful operation and a saving of 18 hours in comparison to if the cement had to be drilled out on a separate designated drill out run.

➢ Well Information

Location: OnShore Colombia  
Well Name: Santo Domingo Norte 1 ST 2  
Initiation Date: December 15th of 2014  
Finalization date: December 20 of 2014  
Casing Size: Casing 7" OD and Liner 5" OD  
Hole Angle: 38.6°  
Total Depth: 9950 ft  
Drilling Fluid: 9.3 PPG Mud

➢ The Situation.

As a result of operational failure during cementing of liner 5", about 300 ft cement was left inside the casing. In order to avoid the risk of packing off, a minimum clearance between the liner 5" and cleaning tools for the drilling cement considering the length of the section and the inclination of the well, the customer had contemplated during this stage well completion make two separate trips for grinding cement and mechanical wellbore clean up.

➢ The Solution

The practical design of Qmax Tools which have scraper blades (right and left) inclined at 45 °, provides better cleaning efficiency to the inner wall of the coating and provides greater TFA for the flow of solid waste, especially during cement or plugs drilling operations. For this reason for wellbore clean up mechanical operations and drilling cement simultaneous it was recommended with BHA in Tandem, which was accepted by the client as a test.

➢ The Results

During the BHA run with Qmax WBCU Tools, the top cement was found at approximately at 8760 ft which represented a cement plug 300 ft in length, at this point parameters were recorded and milling began cement with the following parameters: 100 GPM, 2300 Psi, 60 RPM, 5 to 7 lbs-ft and ROP average 54.5 ft / min. two intermediate circulations were performed with pumping viscous pills and final bottom hole TD was 9060 ft.
Upon completion of the operations and with the BHA and Qmax tools Combo on surface, together with the client the output condition of tools work showing that completed successfully and with minimum wear is observed.