

The Simplicity of the PBL® Bypass System Allowed A Crew With No Previous Operating Experience To Successfully Run it By Following The Manual



Challenge

As part of their drilling program in a deep-offshore remote location in West Africa, an operator wanted to raise the BHA at TD to the 9 5/8 inch casing shoe and activate (open) the DSI PBL® Bypass Tool to circulate through at 800 gpm. This was meant to clean out the potential cuttings bed accumulated in the casing prior to running the first gravel pack completion assembly. The drilling crew had not run the PBL® Bypass System in some time.

Solution

The PBL® Bypass System's latest Operating Instructions were shared with the rig crew. Running a circulating sub was part of the service company's pre-job briefing and the customer's pre-run meeting, and the PBL® Bypass System was successfully tested in the workshop prior to being loaded out to the drilling rig.

Conclusion & Recommendation

The operator determined that, had the crew followed the step-by-step instructions in the Instruction Manual provided by DSI and sufficient time had been allowed for the activation ball to reach the ball seat, a significant pressure spike followed by a pressure drop would have been observed, indicating that the tool had opened.

The PBL® Bypass System demonstrated that it is a very simple tool to operate if the steps clearly outlined in the Instruction Manual are strictly adhered to. Furthermore, the Troubleshooting segment in the Operating Instructions provides remedial and contingent processes if and when any issues are encountered. And to top it all, the DSI PBL® dedicated Technical Support is also available 24/7 to assist if needed.

Execution

Once the crew reached TD, the hole was circulated clean (two bottoms up). The BHA was pulled to the previous casing shoe and the PBL® Bypass System was activated. The Directional Driller and Customer representative on the rig calculated the number of strokes required (1,600) at 250 gpm prior to dropping the vinyl activation ball to open the PBL® Bypass Tool.

After reaching 1,600 strokes, the flow rate was increased to 450 gpm to make sure the MWD tools were not pulsing anymore. The MWD was still pulsing, indicating that the tool had not been activated. It was decided to continue with the flow rate at 450 gpm until the ball reached and activated the PBL® Sub.

Meanwhile, a Conference Call between the rig and the DSI PBL® team was scheduled to ensure the success of the operation. Once the rig completed the deactivation process (i.e., two x steel deactivation balls dropped), the DSI PBL® support team recommended dropping another vinyl activation ball with 250 gpm and wait. After 20 minutes, a pressure drop was observed. Flow rate was then increased to check on the MWD and no pulse was observed at 450 or 600 gpm. Once it was established that the ball was on-seat and the PBL® Bypass System was activated, the operator resumed the operation.

