

The PBL® Bypass System Successfully Cleans a 1,500m Lateral Section of a Deepwater Well in West Africa



Challenge

An operator drilling a deepwater well in West Africa wanted to thoroughly clean the 1,500m long lateral section of the hole before running the completion. Because this was an expensive deepwater horizontal well, they needed an effective, highly efficient solution to minimize costs and risks.

Solution

The operator worked with the DSI team and determined that a 6¾ inch OD PBL® Multiple Activation Bypass System would be utilized to clean out the well. The tool would be activated in the horizontal section of the well once TD is reached, then the BHA would be pulled back to the 9½ inch liner shoe.

Conclusion & Recommendation

The PBL® Tool was successfully activated and deactivated in the horizontal section of the well. The hole was sufficiently cleaned, the BHA was POOH, and the completion assembly was successfully run to TD.

The PBL® Tool provided the perfect solution to clean the hole without the need for a dedicated trip with a clean-out assembly, hence provided the operator with an efficient solution to minimize costs and risks.

The operator was impressed with the tool's performance and determined that the PBL® Bypass System would be standard for all future lateral wells.

Execution

The well section geometry included:

- 9½ inch liner shoe @ 3,388m MD at 86.5°
- 8½ inch section TD @ 4,895m MD at 92.75°
- Geosteering throughout the 1,500m lateral section

At section TD, the well was circulated bottoms up. The BHA was backreamed out of the hole to the shoe. At the shoe, a few more bottoms up operations were performed, BHA RIH to section TD, circulated, and POOH to the shoe.

The PBL® Bypass Tool was activated to allow pumping of 1.15sg solid free mud to clean out the 9½ inch liner at 1,200 gpm. The activation ball was dropped and chased with 200 gpm flow rate to successfully activate the PBL® Tool.

The mud was then circulated and displaced. Two PBL® deactivation balls were dropped and chased with 300 gpm flow rate to deactivate the PBL® Tool, which was completed in 12 minutes.

