



PERFORMANCE BULLETIN

DSI PBL Bypass System saves thousands of dollars of rig time for an IOC by using the PBL Sub for BOP cleaning in an exploration well in Mexico.

Challenge

The DSI PBL circulating sub was requested by a major Drilling Services Company hired by an IOC to be utilized in a 12 1/4" hole drilling operation in shallow waters of the Gulf of Mexico. An 8-1/4" PBL sub was included in the BHA as a contingency for major mud losses; this tool allows pumping of high concentration LCM (770 kg/m³) but also can be used for hole and BOP cleaning operations with up to 2,000 GPM pumping rates through its two lateral ports (1.35in diameter each port) with a combined TFA of 2.863 in².

Solution / Execution

After drilling a total depth of 4,180m with a rotary steerable BHA and 588 hours of total circulating time, the operator decided to POOH the BHA with a fluid density of 1.84 g/cc. At 45 m from surface the company man with technical support from DSI field operator, decided to save rig time by activating open the PBL sub, dropping a 2-1/2" activation ball that reached the PBL sub after 3 min at 140 GPM and 230 psi. The wellhead and BOP cleaning operation was performed with the operative parameters of 20 rpm, 750 GPM and 432 psi. After 40 minutes of BOP cleaning the PBL sub was deactivated with 50 GPM and 2,900 psi.

The RSS and the 12-1/4" drill bit was eliminated from the BHA leaving the PBL assembled to be lowered and activated again at a depth of 26 m; it took 1 min to activate the sub for BOP and wellhead cleaning at 20 rpm, 700 GPM and 350 psi for 40 minutes.

After BOP's cleaning, preparations for casing running tools started.

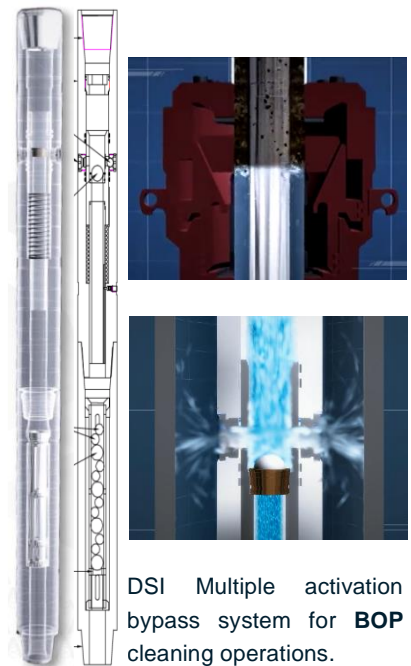
Conclusion & Recommendation

The time taken to break-up 8-1/4" directional BHA and make up new BHA for BOP cleaning is normally around 6 hours of rig time. By using the PBL sub for BOP cleaning the Operator was able to save all these 6 hours from rig time and also reduced the risk of injuring rig crew while handling elements from BHA.

The PBL multiple activation bypass system can save rig time by simply using it in BOP cleaning operations. The phrases like, efficient and cost effective are synonymous with DSI's services and technologies.



Jack-up rig for drilling in shallow water in Gulf of Mexico.



DSI Multiple activation bypass system for BOP cleaning operations.