# PERFORMANCE BULLETIN

# PBL® activated multiple times to deliver LCM and cure persistent losses for a major deep-water operator in Brazil

## Challenge

Control mud losses through the PBL® Bypass System, using high concentrations of LCM in the 12-¼" vertical hole section of an exploration well in a pre-salt environment without having to POOH to control losses.

## Solution

As a standard procedure for this traditional operator, the 8 ¼" PBL® Bypass System was included in the BHA to allow high concentrations of LCM to wellbore if losses were encountered.

## Execution

- PBL® Bypass System was successfully activated (1st activation @ 5,539m). Initially 110 PPB of LCM was delivered to stop losses. As losses persisted, another 150 PPB of LCM was delivered, and the tool deactivated. Losses controlled and drilling resumed. 13 hours activated.
- PBL® Bypass System was successfully activated (2nd activation @ 5,549m), 150 PPB of LCM was delivered to stop losses and the tool deactivated. Losses controlled and drilling resumed. 26+ hours activated.
- PBL® Bypass System was successfully activated (3rd activation @ 5,580m), 150 PPB of LCM was delivered to stop losses and the tool deactivated. Losses controlled and drilling resumed. 15 hours activated.
- PBL® Bypass System was successfully activated (4th activation @ 5,644m), 150 PPB of LCM was delivered to stop losses and the tool deactivated. Losses controlled and drilling resumed. 13 hours activated.
- PBL® Bypass System was successfully activated (5th activation @ 5,741m), 150 PPB of LCM was delivered to stop losses. Losses controlled and BHA successfully POOH. 48+ hours activated.

## Conclusion & Recommendation

Utilizing the PBL Bypass System as part of the drilling BHA saved four trips and resulted in huge cost savings for the client. Drilling through pre-salt layers, losses occur quite often, and given the complexity of drilling BHAs and high cost for drilling rigs, the PBL® Bypass System is highly recommended in these scenarios. Additionally, the use of an extended ball catcher sub is recommended as it offers increased cycle availability for the PBL® Bypass System, if required.

**The PBL® Bypass System demonstrated its value to the operator by delivering high concentrations of LCM to cure losses at multiple depths without the need to POOH. Utilizing the PBL Bypass System as a component of the drilling BHA saved four trips and resulted in huge cost savings for the client.**

BYPASS SYSTEMS
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