



## PERFORMANCE BULLETIN

# DSI PBL<sup>®</sup> BYPASS SYSTEM was successfully activated at zero circulation to re-establish circulation and free up the stuck drill string during a horizontal drilling operation in the Kingdom of Saudi Arabia

### Challenge

Our client contacted the DSI team in the Kingdom to explore options to activate the 4-3/4" PBL<sup>®</sup> in the stuck and plugged BHA in the 6-1/8" section. The operator was unable to reciprocate the drill string and there was no circulation. Previously, DSI successfully activated the PBL in a similar situation using the Fast Dart. However, due to this particular well's trajectory, and with the PBL being in the horizontal section of the well, it was determined that the activation dart, in this occasion, would most probably result in the dart to lay down on the low side, especially due to the inability to circulate. The PBL<sup>®</sup> Fast Ball would have been the best solution to activate the tool, however due to the fact that no Fast Ball was at hand on the rig location, other options had to be considered.



### Solution

After considering all options available, the decision was made to drop the Activation Ball and assist to convey the ball to the PBL<sup>®</sup> Ball seat using coiled tubing.

### Execution

- ✓ The Activation Ball was dropped, assisted and pushed by coiled tubing to the PBL<sup>®</sup> ball seat.
- ✓ After 7.2 hrs, the Activation Ball reached the PBL<sup>®</sup> ball seat at 8,874 ft depth, and with 2,900 PSI applied from surface, the PBL<sup>®</sup> was successfully activated.
- ✓ Circulation was re-established, and the well clean-up operations commenced.
- ✓ The well was circulated clean at 70 GPM, 1,500 PSI surface pressure, with a mud weight of 87 PCF.
- ✓ Due to the ability to circulate through the PBL, our client was then able to pump and displace several HCl acid pills [20% concentration].
- ✓ This resulted in the drill string becoming free and the ability to pull out of the hole avoiding any lost BHA.

### Conclusion & Recommendation

Great operational flexibility is achieved by having the DSI PBL<sup>®</sup> in the BHA. As lesson learned, the Fast Ball should be always be available on site for the first action to be taken in such high inclination well scenarios.