





# GOM operator utilises DAV MX<sup>™</sup> CircSub to cure persistent losses by pumping more than 880bbls of heavy LCM.

DAV MX<sup>™</sup> proved to be an important contingency tool, when used against persistent losses encountered by a GOM operator while drilling the 10-5/8" x 12 ¼" section. The tool was activated on three occasions with Standard Diverter Dart<sup>™</sup>, allowing a total of nine concentrated LCM pills to be pumped through it, while by-passing the BHA below. On each activation, the Smart Darts<sup>™</sup> were pumped down at over 150gpm and reached the valve in less than 20 minutes.

#### CIRCUMSTANCES

Operator's plan was to drill a 12  $\frac{1}{4}$ " section using a reamer assembly in a loss-prone zone. A 6-5/8" Reg. DAV MX<sup>TM</sup> CircSub with four, 0.75" nozzles, was placed in the BHA as a contingency against losses and for potential hole cleaning issues.

### THE CHALLENGE

Whilst drilling the section sizable losses (177bbl/h - Dynamic) were encountered, threatening the stability of the well. Losses had to be cured rapidly not to allow the well to get dangerously underbalanced. With a great amount of concentrated LCM pills lined up, the only way of spotting them was through the CircSub making sure that the BHA below would not be contaminated.

#### THE SOLUTION

The DAV MX<sup>™</sup> was opened on three separate occasions allowing a total of nine LCM pills (886bbls) to be pumped through. After each pill losses decreased gradually in severity to reach a safe level of 2bbls per hour. After the last pill was displaced, the string was POOH with the Standard Diverter Dart<sup>™</sup> still in place, allowing the rig crew to dry trip to surface.

#### COMMENTS

Initial dynamic losses of 177bbls/hr reduced to 2bbls/hr.



## **RIG & WELL INFORMATION**

Location & Date	GOM, Green Canyon, December 2015
• BHA	10-5/8" x 12-¼" RSS
Measured Depth (at the tool)	15,644ft
Drilling Fluid	

