PERFORMANCE BULLETIN

DSI PBL® Split Flow System Aids Hole Cleaning, Enabling 13 ⅜-in. Casing to Be Run in Slick Hole for UAE Operator

DSI
AN SBO COMPANY

Application

A major operator in the UAE requested the DSI PBL® circulating sub for a split flow application in their 16-in. hole section. During the operation, they planned to keep the PBL® closed but activate it at section TD if required. Once TD was reached, the team decided to activate the PBL® in split flow mode to improve hole cleaning through the ports of the circulating sub while cooling the BHA components during the trip out of hole. This approach helped save time on the pull-out operation by minimizing caving and tight spots.

The customer provided BHA design and hydraulic information to the DSI engineering team, who ran the DSI hydraulics program to confirm the feasibility of the required flow option.

Results & Benefits

Hole cleaning was achieved using 1,100–1,300 GPM. The hole was checked periodically during the POOH operation and was found to be slick, with no holdups. The 13 ⅜-in. casing was then run to TD with no obstructions.

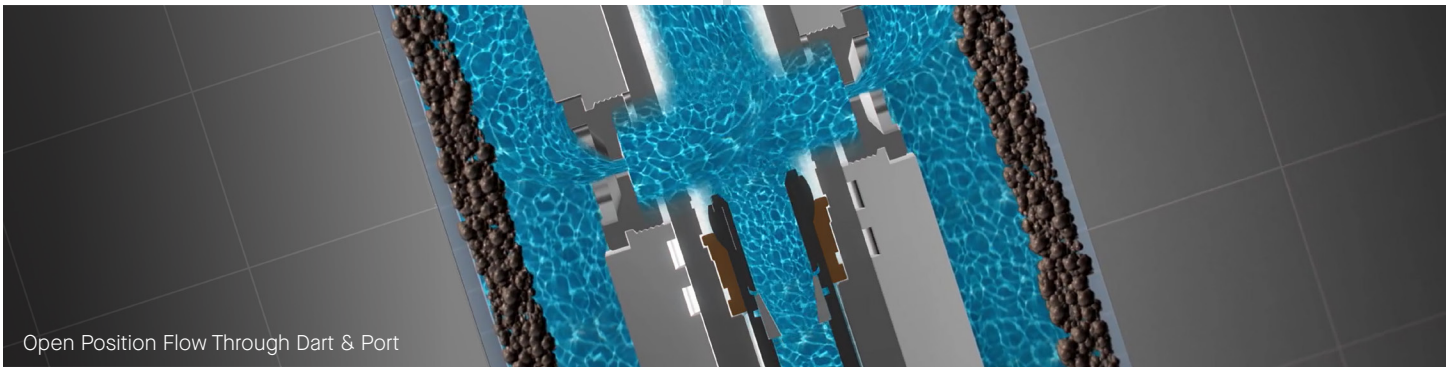
The success of this operation confirmed that DSI PBL®'s split flow configuration will be utilized on the client's upcoming projects.

PBL® Operation

After hanging up at 6,580 ft with the 13 ⅜-in. casing, the team decided to pull the casing out of hole and sidetrack. A 9 ½-in. OD DSI PBL® tool was then run in the 16-in. hole section with a rotary steerable system BHA, in conjunction with a hydraulic pipe recovery tool.

Prior to activating the PBL® tool, the 16-in. section was drilled to 8,328 ft. Based on previous tight-hole experience in the 16-in. interval, a 2.5-in. OD PBL® Split Flow Dart was dropped. The dart passed through the 8.25-in. OD × 2.757-in. ID sub without issue, landed on the PBL® seat, and successfully activated the tool.

Pump rate was gradually increased to 1,100 GPM at 3,680 psi (note: before dart drop, 1,100 GPM was recorded at 4,060 psi), allowing pumps to be further increased to 1,277 GPM. Circulation was performed to clean the hole, and the drill string was then pumped and backreamed to inside the 18 ⅝-in. casing shoe at 5,219 ft — without overpull.



Open Position Flow Through Dart & Port

PBL

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