

JetFlow® Balldrop Multi-Cycle Circulation Sub Performs Multiple Activations, Cures Severe Fluid Loss, Successfully Enables Operator to Reach Total Depth

Objectives

- Drill through a challenging formation while facing an anticipated, heavy fluid-loss zone.
- Precisely spot lost-circulation material (LCM) across the lost-circulation zone to mitigate fluid losses and re-establish circulation for normal drilling operations.

Our Approach

- Weatherford ISDT Specialists recommended incorporating the 6-3/4 in. (171.4 mm) JetFlow sub (with 10-cycle balldrop capacity) in the 8-1/2 in. (215.9 mm) drilling BHA for its ability to deploy LCM on-demand and cure heavy fluid-loss zones.
- While drilling ahead in the 8-1/2 in. hole section, the operator experienced heavy fluid losses approximating 200 bph. After sweeping the hole with a 50-bbl, hi-viscosity pill, the JetFlow sub was activated to deploy LCM directly into the fluid-loss zone.
- The BHA was then pulled out of hole to position the JetFlow tool directly against the problematic loss zone, where it was successfully activated.
- Once JetFlow was opened by balldrop activation, the ports were directly exposed to the annulus. Then a 50-bbl pill was loaded with 160-ppb LCM and spotted directly against the formation. After a flow check, the BHA was reciprocated while the LCM soaked.
- After circulating two times string capacity with fresh mud (80 bbls), fluid losses were greatly reduced, and the operator was able to trip back to bottom and commence drilling. JetFlow was then successfully deactivated using its specific balldrop sequence.
- JetFlow was activated (and LCM spotted) two more times before reaching well TD—each time greatly reducing fluid losses and allowing the operator to quickly resume drilling operations.

Value to Customer

- The operator successfully spotted a highly concentrated LCM pill on multiple occasions, utilizing simple balldrop functionality and re-establishing full circulation after experiencing heavy fluid losses. This allowed the operator to continue drilling operations to well TD.
- JetFlow operations helped avoid potential stuck-pipe scenarios, loss of circulation, and formation damage—while protecting sensitive BHA components from potential damage during LCM deployment.



The Weatherford JetFlow balldrop multi-cycle circulation sub optimizes drilling, completion, and P&A operations to increase efficiency and reduce non-productive rigtime. JetFlow adapts to function across several applications including LCM spotting, hole cleaning, and fluid displacements as well as blowout-preventer (BOP) and riser jetting.

LOCATION

Egypt

WELL TYPE

Oil Producer

FORMATION

Alamin Dolomite

HOLE SIZE

8-1/2 in. (215.9 mm)

HOLE ANGLE

28°

ACTIVATION DEPTHS

1st: 8,088 ft (2,465.2 m)

2nd: 8,300 ft (2,529.8 m)

3rd: 8,200 ft (2,499.4 m)

PRODUCTS/SERVICES

- Performance Drilling Tools
- JetFlow balldrop multicyle-circulation sub

