JetStream® RFID Circulation Sub
Saves Operator 1.5 Days of Rig Time Valued at $350,000

The JetStream RFID circulation sub has a large total flow area and no reduction in ID after actuation, which enables full through-bore flow and boosts annular velocity.

Objectives

- Actuate a circulation sub above a conventional underreamer without limiting the through-bore flow.
- Clean debris from the shoe track to prepare the liner for cementing.
- Clean the 6 1/2-in. pilot hole to prepare the section for enlargement.

Our Approach

- Weatherford deployed the JetStream sub above other bottomhole assembly (BHA) components that included a conventional underrreamer. Because the JetStream sub has a large inside diameter (ID) and no ball seats, the driller was able to access and use tools on the lower end of the BHA to perform multiple operations during the same trip.
- The team deployed preprogrammed RFID tags to actuate the JetStream sub above the liner. Using the split-flow position, the sub cleared large pieces of debris from under the shoe track.
- A second set of RFID tags actuated the JetStream sub a second time to clean the 6 1/2-in. pilot hole.
- A third party activated the conventional underreamer using a ball-drop method. The ball passed through the ID of the JetStream sub and reached the underreamer with no issue.

LOCATION
Caspian Sea

WELL TYPE
Offshore, oil

FORMATION
Chalk limestone

HOLE SIZE
6-1/2 x 8 in.

DEPTH IN
12,034 ft (3.668 m)

DEPTH OUT
12,053 ft (3,674 m)

PRODUCTS/SERVICES
JetStream RFID circulation sub

Weatherford®

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Our Approach (continued)

- The sub logged all downhole events throughout the operation, which lasted 219 hours. The data was stored in the tool's internal memory and automatically converted into a vertical strip chart, which enabled the operator to validate tool performance.

Value to Client

- The unrestricted ID and full through-bore flow of the JetStream sub enabled the driller to activate the sub and a ball-actuated underreamer in the same trip. By minimizing the number of trips, the JetStream sub saved the operator 1.5 days of offshore rig time valued at approximately US $350,000.
- The large total flow area of the sub promoted high annular velocity and turbulent flow, which contributed to better hole cleaning.
- By successfully clearing debris from the shoe track, the JetStream sub enhanced the quality of the cementing job, which improved wellbore integrity.

* JetStream is a registered trademark of Weatherford in the US.

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