Weatherford®

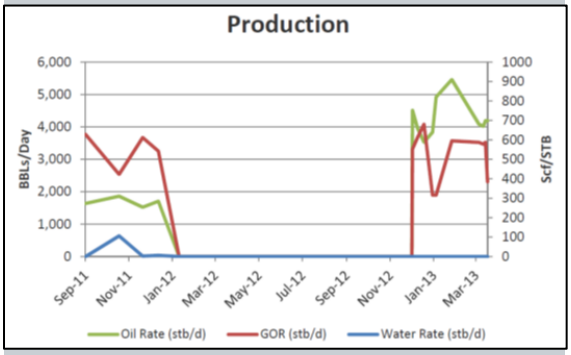
REAL RESULTS

MazeFlo™ Self-Mitigating Screens Eliminate Sand Production, Increase Oil Production

MazeFlo self-mitigating screen technology is patented by ExxonMobil and jointly developed with Weatherford. *MazeFlo* technology increases the reliability in sand-control completions by incorporating a maze design to constrain local sand ingress caused by screen damage without interrupting well production.

Objectives

- Restore production in a well shut-in due to high sand production.
- Provide a remedial sand-control solution that met the following criteria: fit within the liner inside diameter (ID), provided a large enough tubing size, was robust and able to handle the rigors of the installation, and, most importantly, could provide constant oil production without additional sand-management intervention. The well was a horizontal completion with 1,500 ft (457.2 m) of 4 1/2-in. predrilled liner that initially produced sand-free, but started producing sand. Historically, sand production was managed by progressively choking the entire well, but the well was shut-in due to low wellhead pressure and sand build-up downhole.



The graph shows that after the installation of *MazeFlo* technology, the oil production increased significantly and gas production remained similar. Water production and sand management were eliminated.

Results

- The operator selected *MazeFlo* self-mitigating screen technology. *MazeFlo*'s mechanism selectively chokes the sand production only at the breach of sand control. The remaining screen continues to contribute production unchoked.
- The well underwent a thorough and complete workover, including the installation of 50 *MazeFlo* screen joints with 150 *MazeFlo* compartments along the 1,500 ft (457.2 m) of horizontal predrilled liner.
- After the recompletion, the well was brought on-line successfully.

Value to Client

- Using the Weatherford *MazeFlo* self-mitigating screen technology enabled the operator to eliminate sand and water from the production, bringing the shut-in well back to production. The gas production remained similar to levels before shut-in, but the oil production increased more than three times.
- As of December 2013, twelve months after the *MazeFlo* startup, the well continues to produce sand-free and at oil-production rates higher than the prior rate.

Location
Nigeria, West Africa

Well Type
Offshore, horizontal, oil

Products/Services
- *MazeFlo* screens

Weatherford
John Sladic
Global Product Line Manager
Conventional Well Screen
john.sladic@weatherford.com

MAZEFLO