



FASTrak Prism service helped save 48 hours rig time

An operator developing a deepwater field in Central Africa needed to drill an extended-reach well intersecting two reservoir compartments and complete it for commingled production. A key challenge of the project was to design the best completion based on fluid characterization from each reservoir, and calculate how much each reservoir would contribute to total production.

Incomplete data could lead to suboptimal drainage of the intersected reservoirs, impacting the profitability of the project. Traditionally, to meet these objectives, the operator would use a wireline-conveyed testing and sampling service to acquire fluid samples and measure formation pressures and fluid properties. However, due to the challenging well profile, this option was unfavorable as it would require a lengthy and risky pipe-conveyed logging operation.

To meet the operator's fluid evaluation objectives, Baker Hughes, a GE company (BHGE), proposed using the **FASTrak™ Prism fluid analysis and sampling while drilling service**. The FASTrak Prism service—the latest in the FASTrak

suite of technologies—improves the speed and reliability of fluid identification. The service delivers comprehensive downhole fluid properties and measurements in real-time to enable in-situ reservoir characterization and the efficient capture of high volumes of representative fluid samples. The service also provides real-time formation pressure and mobility data for increased reservoir knowledge, enhanced drilling efficiency, and improved wellsite safety.

Working closely with the operator, BHGE developed a holistic plan that provided a complete formation evaluation suite while drilling, and that eliminated the rat hole in the same drilling run. The FASTrak Prism service collected multiple samples in each reservoir, meeting the operator's requirements for fluid volume and number of samples, and performed 33 formation pressure tests. The section was drilled to the target measured depth, with a final inclination of 90°. All tests were performed in the 8½-in. pilot hole with the FASTrak Prism pad oriented to the high side in the first reservoir and to the low side in the second reservoir prior to opening up to

Challenges

- Eliminate rig time and deployment risks associated with pipe-conveyed wireline sampling
- Comingle production from two reservoirs while accessing as much hydrocarbons as possible from each
- Obtain high-quality, single-phase samples and formation pressure tests from each reservoir

Results

- Helped save 48 hours rig time
- Acquired representative samples and formation pressures in a single drilling run
- Eliminated borehole stability risk by reducing openhole time
- Exceeded the initial production target by more than 30%



9½-in. hole size. The FASTrak Prism service obtained the fluid samples required to calibrate downhole flow meters and quantify the contribution of each reservoir to the total well production.

The combination of the latest reservoir navigation technology—the **VisiTrak™ reservoir navigation and analysis service**—steered the well into the pay zone while maximizing reservoir contact through the two target reservoirs. The **GaugePro™ Echo on-command digital reamer**, placed close behind the bit, drilled and reamed the rathole in the same run—removing the need for an

additional rathole elimination run, and the risks associated with increased borehole exposure. This combination of technologies resulted in rig time savings of 48 hours. Production output from the well has also been outstanding, exceeding the initial production target by more than 30%.