

# Halliburton Installs First VersaFlex® Big Bore System in Angola

# LINER HANGER SAVES OPERATOR THREE DAYS OF REMEDIATION AND ELIMINATED NPT RELATED TO SUPPLEMENTAL CASING ADAPTORS

LUANDA, ANGOLA

#### **CHALLENGES**

- » Operator had been historically experiencing nonproductive time (NPT) issues related to supplemental casing adaptors
- » Welded restrictions discovered inside the casing string

#### **SOLUTIONS**

- » VersaFlex® Big Bore system with integral hanger/packer design set and sealed in a single trip
- » Smooth-form exterior allowed hanger to move safely through tight tolerances and casing anomalies
- » System provided casing placement flexibility

## **RESULTS**

- » Operator saved potentially three days of remediation
- » Liner was set without any NPT, safety, or service quality issues
- » First installation of VersaFlex Big Bore system in Angola

#### **OVERVIEW**

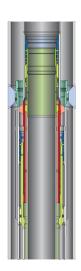
A major deepwater operator had been drilling offshore Angola for several years in an ongoing exploration campaign in two different blocks. Although the operator had supplemental casing adaptors in its stock, it was experiencing nonproductive time (NPT) related to casing hanger issues and needed a reliable solution to allow the hanger to move safely through tight tolerances and casing anomalies. Halliburton was tapped to install its VersaFlex® Big Bore system due to its robust hanger and running tool. The installation was a success, and the liner was set to depth – the first such installation in Angola.

#### **CHALLENGE**

The Angola operator was experiencing NPT issues specifically related to supplemental casing adaptors. It was discovered that there were welded restrictions inside the 20-in. casing. This presented concerns, since the liner hanger had to pass through a tight tolerance for more than 671 m (2,200 ft).

### **SOLUTION**

The VersaFlex Big Bore system was a natural fit for this application because the tool provided a liner-top packer and liner hanger in a single trip. The smooth-form exterior allowed the hanger to move safely through tight tolerances and casing anomalies. Additionally, unlike a casing hanger, the system can be set and sealed reliably anywhere in the parent casing, independent of, and without the need for, cement or a landing adapter to seat the hanger. Multiple sealing elements were preferred over the delicate external machined profile of the casing hanger. This provided unprecedented casing placement flexibility, because it is not necessary to hang-off at the wellhead. The robust running tools can withstand more than 100,000 ft/lb of torque, and have the ability to wash, ream, or drill the liner into position.



Supplemental Casing Hanger



VersaFlex® Big Bore Liner Hanger System

After thorough pre-job planning and careful examination of the casing between the operator and Halliburton, a VersaFlex Big Bore expandable liner hanger system was installed in 1,805 m (5,922 ft) of water depth from a drillship.

#### **RESULT**

The VersaFlex Big Bore system was deployed flawlessly without any safety and service quality issues. Most importantly, there was no NPT during the operation and three days of remediation were potentially avoided, saving the operator a significant amount of money, considering the uncertainties and risks associated with deep water.

With a 97.5 percent reliability performance rating, the VersaFlex Big Bore system helped Halliburton achieve a benchmark for its first installation in Angola's challenging deepwater environment.



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