

Case Study: Modified HPHT Set in Oil Based Mud

Challenge

A client in the North Sea required a deep-set well barrier to isolate reservoir pressure during well construction and also isolate water post-perforation. The barrier was to be set in 16.8ppg heavy weight mud and would act as a stopper for the perforating guns' drop-off system.

Solution

Interwell modified a High Pressure High Temperature (HPHT) bridge plug to provide a solution that would allow the plug to be set in heavy weight mud. A simulated verification test at Interwell's test facility in Aberdeen included the 16.6ppg oil based mud and a 360-500 HPHT complete with a 2.7 Hydrostatic Setting Unit (HSU). The system was successfully set and tested to 13,000psi.

The solution was then successfully run, set and pressure tested to 5,000psi and then left as a permanent barrier in the client's well.

Value Created

The client required a multi-purpose barrier to maintain well integrity during well construction and production. Interwell provided a VO rated bridge plug that was successfully set in heavy weight mud, was rated to differential pressures of 10,000psi, and was able to retain integrity following perforating operations.

Date:

February 2016

Region/Field:

North Sea

Key Capabilities:

- Patented metal to metal sealing support module and exclusive packer element technology
- Ideal for workover applications: well control barrier, packer for injection valve, fixed choke, etc.
- Slim design (small OD/ large ID)
- ISO 14310:2008 international standard grade Vo.

