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 for water isolation post-perforation. The barrier was to be set in 16.8ppg heavy weight Oil Based Mud (OBM), act as a stopper for the perforating guns’ drop-off system and be able to retain integrity following perforating operations.

Solution
A modified 360-500 High Pressure High Temperature (HPHT) retrievable bridge plug, complete with a 2.7” High Pressure Hydrostatic Setting Unit (HPHSU), was proposed to meet the client’s challenging requirements.

After a successful simulated verification test in the oil based mud, Interwell supplied the client with a V0 qualified solution, rated to a maximum differential pressure of 10,000psi and 180degC. The solution was successfully run, set and left as a permanent barrier in the well.

Value Created
The client required a V0 rated bridge plug that could be successfully set in oil based mud, was rated to differential pressures of 10,000psi and 180degC, and could 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 V0.