UNIQUE RIGLESS SUBSEA DECOMMISSIONING SOLUTION FEATURING SWAT™

InterMoor approached Claxton as partnership was key in considering an approach for the decommissioning of four wells, three in the Southern North Sea and one in the East Irish Sea; three wells having subsea wellheads and one having a mudline system.

THE PROBLEM

Operators are now under increasing pressure to develop clear late-life strategies to remain robust and profitable in a harsh margin environment. To achieve this, it's important that a reliable and expert decommissioning supply chain can be relied on for guidance and support.

THE SOLUTION

This union of Claxton's tooling and InterMoor's project delivery gave the operator a reliable and economical alternative against other proposals they received and SWAT™ provided the ideal product solution for this multi-well campaign.

Completed within 27 days, SWAT was deployed using the 'MV Island Valiant' vessel through an A-frame work over moonpool, landed on each wellhead and then used to carry out casing perforation and placement of the required cement barriers in each well.

Neil Watson, Product Leader, Claxton, said, "The three wells with subsea wellheads, used the SWAT Extension module to deliver the cement to the required location. This additional module enables us to set environmental barriers and intermediate barriers where required, increasing the number of wells that can be abandoned using rigless, vessel-based tools and delivers cost-saving opportunities to the client. As the fourth well was mudline, the Claxton mudline tooling was utilised consisting of the TA Cap Retrieval Tool (TACRT) and the low-pressure packer system. The TACRT was used to remove two temporary abandonment caps from the well. This tool has been specifically designed to be deployed from a vessel and utilises a bespoke joint connection to facilitate easy make/ break of extension joints. It is also capable of retrieving caps more than 100ft below mudline."

On arrival to the first well, it was noted by the team that it had an unreported connector, which meant the TACRT reaction can was not quite big enough to swallow the connector. The Claxton design team rapidly designed and manufactured a new reaction can in three days from their headquarters in Great Yarmouth. This did not cause any lost time as the vessel moved on to another well whilst the can was being fabricated and mobilised back to the rig. After the successful removal of the caps a low-pressure packer tool was used to recover muds, clean the well and cement.

Neil Watson, continues, "As well as the TACRT reaction can modifications that the Claxton team developed, a number of new innovations were tried and tested during this campaign. The SWAT Subsea vent valves for example were previously actuated by a remotely operated vehicle (ROV) and were updated to allow hydraulic actuation from surface, to minimize damage and save time. The low-pressure packer tool (LPPT) was used to cement mudline wells and had improved pressure ratings and efficiency, with the upper packer increased from 400psi to 1200psi up to 30" conductor and the lower packer increased from 1200psi to 5000psi with a range of 7"-16"."

THE RESULT

Vessel based projects allow flexibility in approach to deliver a work scope of this nature and when issues are encountered such as the unreported connector, it is possible to rapidly move location and continue work on an alternative well, whilst an engineering solution is being turned around.

The 'MV Island Valiant' vessel was able to transit from the Southern North Sea to the Eastern Irish Sea and become operational on the well within three days.

The combined onshore and offshore experience of Claxton and InterMoor to deliver a unique well abandonment capability, enabled the successful plug and abandoned of the four wells in the specified time for this campaign.

SWAT™ opens the opportunity for innovative, cost saving multi-operator campaigns.