ESSO AUSTRALIA LTD
BLACKBACK PHASE 1 DEVELOPMENT PROJECT
Placement of Subsea Flowline Jumpers, Bass Strait Australia

The Blackback project consists of three subsea wells interconnected with flexible flowlines in a daisy chain configuration and tied back by subsea pipeline to an existing offshore platform. The water depth at Blackback is approximately 420 metres.

ICON Engineering was awarded the contract to place the flowline jumpers on the seabed in designated locations such that they could be tied in later by ROV.

The project is unique in that the flowline placement was undertaken from the semi-submersible drilling rig Sedco 702. Traditionally, this work has been carried out from a dynamically positioned Diving Support Vessel. The method is cost effective since the rig is on site to drill the wells.

The flowline jumpers were loaded into ICON designed deployment frames for transport offshore. Prior to departure, the deployment methods were fully tested onshore and the flowlines hydrotested.

Flowline deployment Frames on the Workboat Deck

Offshore, each frame was lifted from the supply boat by the rig crane and lowered into the water. The frames were then passed over to the work wire of a second anchor handling vessel and lowered to the seabed.

After placement of the frames on the seabed, they were then lifted and oriented into the final position by the drilling rig using a stab in tool on the drill string. The jumpers were released by ROV and frames removed.

The work was completed without a hitch. The frames were deployed to the seabed in less than 12 hours while the rig was drilling. Final positioning and orientation using the ICON designed stabbing and orienting string was also completed with no problems using less than 12 hours rig time.

Lifting a frame from the vessel with the rig crane

Support for DFCS ROV Activities

An additional part of the work scope included the design and installation of significant modifications to the Sedco 702 to handle the large Diverless Flowline Connection System ROV that was used for the final flowline tie-in.

A large cantilevered ROV launch platform was installed on the port side of the rig. This allowed the ROV to be launched clear of the rigs pontoons.

Photo showing the ROV deployment frame on the port side of the Sedco 702

In addition, a subsea deployment system was devised using a winch and the rig's crane to lower umbilicals and tie-in equipment weighing up to 15 tonnes to the seabed. This required further deck extensions and considerable procedural engineering to allow the operation to be carried out safely.

The preparatory work was carried out under difficult conditions at the end of another operator's drilling program and during the tow to site. All work activities were completed on schedule and without incurring downtime, allowing the rig to commence the project activities immediately on arrival.

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