

WEST AUSTRALIAN PETROLEUM PTY LTD ROLLER SKATE JOINT DEVELOPMENT PROJECT

Monopod platforms installation and pipeline tow, Carnarvon Basin

The Roller and Skate oil fields are located in the Carnarvon Basin offshore Western Australia. The combined field development consists of 4 monopod platforms - Roller A, B, C and Skate, and two pipelines. One line carries three phase product to Thevenard Island whilst the other carries gas from Thevenard to the mainland.

These pipelines were 26 and 36 km long respectively and were constructed using the bottom tow method. At the time, this was one of the longest pipelines in the world constructed in this manner.

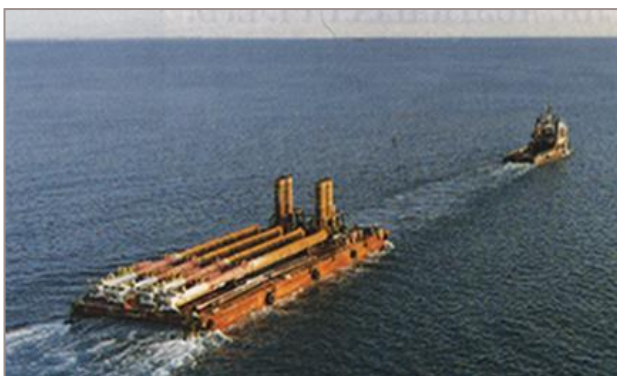
ICON directors Garrick Aberle and David Field were respectively the Project Manager and Designer / Senior Installation Engineer for this project.

Substructure Installation by Jackup Rig

The 4 x 135 tonne topsides and 4 x 140 tonne sub-structures were fabricated in the Perth metropolitan area. The substructures were transported from Perth to site together on a barge and installed using the jackup drilling rig "Hakuryu 9" in a single installation phase.



Substructure Road Transportation to Jervoise Bay Loadout Site



Substructures under tow to location

The substructure installation phase occurred well in advance of the topsides installation. This allowed development drilling to occur parallel with topsides fabrication, allowing a longer duration and reducing the impact of any unforeseen delays in topsides fabrication.



Substructure upending

Topsides tow

Topsides Installation

The four topsides were road transported from Perth to Onslow where they were temporarily stored. They were then loaded out onto a small barge and installed with a jackup rig in one day each to match the development drilling program and rig movements.

Detailed installation procedures aimed at reducing construction risk allowed each complete platform to be installed in an average of 6 days.



The completed Roller A platform

All platform transportation, installation and commissioning work was executed by an in-house WAPET team led by the ICON Directors.

Pipelines

The 508mm oil pipeline and the 168mm gas pipeline were constructed using the bottom tow method. An onshore stringing site, some 4.5 kms long, was set up at Tubridgi, approximately 10km from the Roller field.



View of the pipeline string site at Tubridgi where the pipeline strings were made up prior to towing to site



Pipeline bundle with flotation & pull head ready for tow

Gas Treatment Plant

A gas treatment and compression plant capable of handling up to 20mmscfd of gas was constructed adjacent to the existing oil treatment facilities on Thevenard Island.



The gas plant was modular and skid mounted to minimise the installation time and cost

Other Works

The project also included the installation of a new turbine generator, a slug catcher and separator vessel, island road works and a 100 personnel camp.