

## ENI AUSTRALIA LTD BLACKTIP FIELD DEVELOPMENT Platform Crane installation, Timor Sea

ENI Australia Limited (ENI) Blacktip development includes a fixed Well Head Platform (WHP) located in the Timor Sea approximately 245 kms from Darwin and 110 km off Northern Australia in the Bonaparte Basin, at a water depth of 50 metres.

The Blacktip field is fully owned and operated by ENI and has estimate recoverable reserves of 150 million BOE. The Field delivers gas to the Northern Territory. Gas production from the Blacktip field is processed through an onshore gas plant near Wadeye, one of the largest Aboriginal communities in Australia.

ICON Engineering was contracted by ENI to undertake the Project Management, Onshore trial assembly and Offshore Installation / Commissioning of the platform's new crane, manufactured by Italgru of Italy.

The Platform Crane installation was to be conducted using the Diamond Offshore "Ocean Shield" MODU. Due to the high loads of the new crane unit and the MODU's lifting capacity at radius, ICON had to develop a piece-small installation strategy. To ensure this ran without a hitch, a trial assembly of the crane was conducted onshore in Darwin.



Blacktip crane installed and tested

### Project Management

ICON developed a number of optional installation strategies. Each option was presented and screened by conducting Hazard reviews and workshopping scenarios with the client, a clear procedure was developed, with the risks already highlighted to be actioned.

Management included office based engineering, on shore site work, punch list remedial works prior to installation, offshore installation work, load testing and commissioning.

Throughout this project a moving schedule and dead line was ever present and was one of the main challenges to be managed.

ICON managed the various different skilled trade sub-contractors which were utilised, necessitating constant liaison and planning.

### Engineering

The main issues with sectional installation, [required due to the MODU crane load limits at large radii], was the proximity of the MODU to the WHP, the tight installation schedule window and limited deck space available on both facilities. Therefore a clear load out schedule and plan was essential.

In addition ICON conducted calculations to develop the required sea fastenings for the transport vessels to the MODU and crane positioning / logistics to enable the new crane units to be managed in a safe and controlled manner.

### Procurement

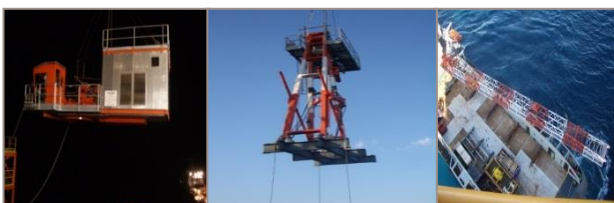
ICON sourced, procured and managed the logistics and fabrication of all permanent items for the project.

### Load Testing and Commissioning

ICON developed and performed the detailed load testing procedure and conducted integration testing to prove the system and make ready for handover for operation.



Trial assembly shore side / Sea fastening for voyage



Lifting the main crane units onto WHP

### Key features of the project included:

- Project Management
- Onshore trial assembly
- Punch listing activities and remedial works
- Detailed design and seafastening activities
- Significant in-house engineering including load calculations, concept design, procurement and fabrication of Steel structures and installation aids
- Sub-contractor liaison and coordination