

APACHE ENERGY Limited - DOUBLE ISLAND PROJECT

Monopod Platform Design & Installation

The Double Island oil field was discovered and developed in 2002. It lies between Varanus Island and Barrow Island off NW Australia. The water depth is approximately 6m LAT.

The Minnowpod concept

As part of its ongoing quest to develop previously uncommercial fields, Apache, in conjunction with ICON, developed the "Minnowpod" concept based around a strengthened 30" conductor with mechanical connectors. This monopod substructure is used as the surface conductor on shallow water exploration wells which have a high probability of success. If the well proves commercial, a completion is run prior to the rig departing. Appropriate topsides are then designed and installed on the monopod later to allow production to commence. If the well is unsuccessful, the monopod is cut off at the mudline and recovered for re-use. Only the section below the seabed is expended.

The Double Island field is one of a number of fields known as the "String of Pearls" located within 13km of Varanus Island. The Minnowpod concept has been employed successfully on a number of the platforms on these fields.

ICON was engaged to undertake the design, fabrication and installation due to our extensive experience with minimal facilities platforms as well as our ability to execute the offshore component of the work in a fast timeframe. The key requirements of the project were:

1. All work to be performed safely
2. Minimise capital costs
3. Minimise complexity of the structure
4. Undertake the work as quickly as possible

ICON worked closely with Apache to achieve these common goals.

Fast Track - completion in 3 months

Design, fabrication and offshore installation of the topsides, access ladders, risers and topsides piping were completed in 3 months due to constraints on availability of the construction jackup. This time scale also enforced the achievement of the other project objectives.

Use of construction jackup

Apache were able to capitalise on ICON's recent experience with the "Sirius" self elevating work jackup. This jackup was designed for drill and blast dredging operations. ICON had previously utilised it for conducting a coiled tubing workover on monopods in a

nearby field for another operator and had developed specific operating procedures for it to work under a Safety Case environment. It was a low cost solution which allowed the work to be undertaken with minimal downtime.



The "Sirius" self elevating platform located alongside the Double Island platform during installation

Key features of the project include:

- Structures designed with clamped connections so no field welding was required on site.
- Minimal load on the conductor.



Installation of the topsides structure on the caisson

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