

SEMI-SUBMERSIBLE MODU RIG

Completions and Gravel Pack Interfaces

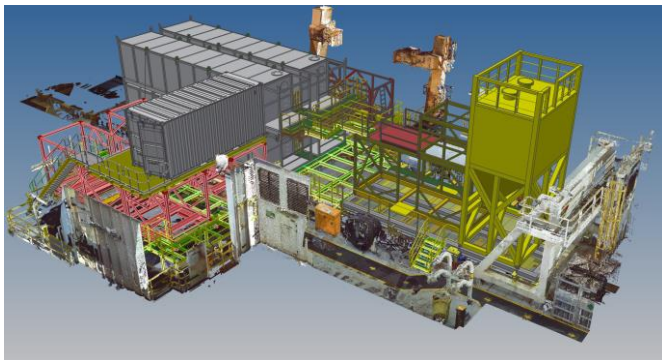
North West Shelf, Australia

An international LNG producer engaged ICON to engineer, design, fabricate and install modifications to a semi-submersible MODU in preparation for its drilling and completions operations on a North West Shelf drilling campaign.

ICON provided project management, engineering, fabrication, logistics, offshore installation and client liaison services. ICON was simultaneously delivering other work scopes on the rig for the Operator which allowed synergies for resourcing and scheduling while improving efficiency of the offshore installation scopes.

The rig interfacing was designed with an emphasis on “human factors” to allow for an ergonomic and safe workspace to carry out operations on the projects.

The Design phase also made extensive use of 3D laser scan together with 3D CAD models. This enabled ICON to prefabricate support grillages and walkways to ensure a seamless offshore installation, saving the client many days of offshore installation time.



**Gravel Pack Spread Support and Access Structure Model
Overlaid on 3D Laser Scan Information**

Lower Completions

ICON carried out the following work scopes:

- Design, drafting & fabrication procurement for seafastening, double stacking interfaces, access platforms, stairways and walkways
- Onshore SIT to confirm compatibility of ICON interfacing equipment to Halliburton’s completion & gravel pack equipment, and capture any lessons learnt for improved efficiency during offshore installation
- Offshore installation of seafastening, double stacking interfaces, access platforms, stairways and walkways

The design of the interfacing to the rig allowed efficient operation of equipment and ensured the safety of equipment operators.

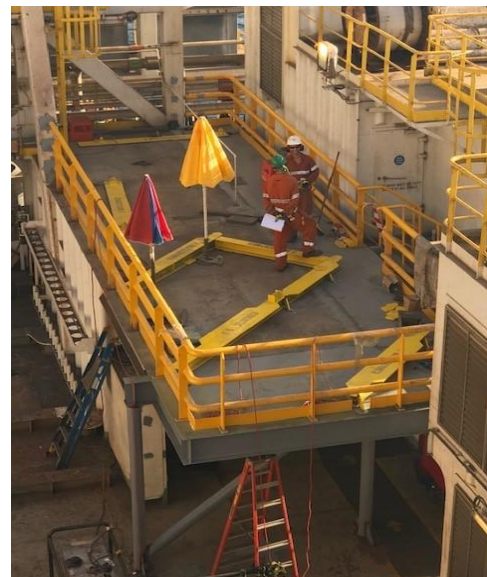


Gravel Pack Spread Support and Access Structure as installed

Upper Completions

ICON also carried out the following work scopes:

- Design, drafting & fabrication procurement for seafastening of upper completion equipment
- Onshore SIT to confirm compatibility of ICON interfacing equipment to Halliburton’s completion & gravel pack equipment, and capture any lessons learnt for improved efficiency during offshore installation
- Offshore installation of seafastening for upper completions equipment including the completions reeler, completions workshop and control cabin.



ICON Designed and Installed Reeler Grillage and Roof Extension

ICON has an extensive project portfolio and track record delivering rig modifications and rig interfacing for completions, well test and subsea equipment.