

WOODSIDE ENERGY LIMITED TIDEPole PROJECT ARTP E-Series Compensated Tension Lift Frame

ICON Engineering Pty Ltd (ICON) was contracted by Woodside to maintain and operate an ICON ARTP E-Series Compensated Tension Lift Frame (CTLF) on the Atwood Osprey semi-submersible drilling rig for the Tidepole Project. The ICON ARTP Tension Frames are a range of coiled tubing lift frames with integrated passive heave compensation systems specifically designed to mitigate risks associated with accidental lock of a rig's primary drill string compensator during subsea well completions, well testing, well interventions and other "locked-to-bottom" operations from floating rigs.

Purpose

This phase of the Tidepole Project required completing 3 gas production wells in 115 metres water depth. The wells, which had previously been drilled and suspended, had to be unplugged, underbalanced and then undergo flowback and cleanup operations.

Project risk assessments during the planning phase concluded that accidental failure / lock-up of the rig's primary drill string compensator (active heave drawworks) posed a serious hazard, particularly during flowbacks when hydrocarbons were brought to the surface. The potential consequence of a major accident event was unacceptable.

In order to mitigate this risk as low as reasonably practicable, ICON's ARTP E-series compensated tension lift frame was deployed and used during completions work on all three wells.



ARTP E-Series operational in the Atwood Osprey derrick

Scope

ICON's scope included onshore equipment preparation phase followed by an offshore operations phase.

The project preparation phase had a 10 week duration and required ICON to carry out:

- 24 month maintenance programme including equipment recertification
- Various equipment upgrades
- Fabrication of campaign specific interfaces

The project's offshore phase had a 4 week duration and included:

- Equipment rig-up, setup and testing
- Operating team for 24 hour operations
- Packup and demob



ARTP E-Series during rig-up

On time, on budget, no LTIs

Woodside congratulated ICON on a smoothly conducted operation which was completed within time, within budget and most importantly, without any Lost Time Incidents (LTIs).

Primary technical specifications:

In addition to providing back-up heave compensation to mitigate the risk of accidental rig compensator lock-up, the ICON ARTP also provided a structural link supporting the surface flow tree and workover riser beneath the rig's top drive, and a work for rigging up surface pressure control equipment (i.e. wireline). System capacity included:

- Load rating (mechanically locked) 1000kips
- Load rating (compensating) 500 kips
- Stroke 10m