

ENVIRONMENT

CASE STUDY | June 2009

Taking Care to Protect the Marine Environment

Woodside is a long-standing operator of oil and gas facilities in Australia, with a strong recognition of, and commitment to, the importance of high standards in environmental performance. So with the prospect of drilling a well from the lagoon of Scott Reef off Western Australia, the Woodside development team knew that a well-planned and executed environmental impact management program would be required.

The Challenge

Scott Reef is 425 km offshore from Broome, Western Australia and is recognised for its marine life and diverse habitats.

Woodside's gas discoveries, the Torosa, Brecknock and Calliance fields, are within the Browse Basin geological area. The majority of these fields are located in deep water (>500m), with the exception of Torosa which is partially below Scott Reef.

In 2008 Woodside needed to appraise the southern part of the Torosa field to gain information on the gas reservoir important to the future development of the field. The Torosa appraisal program was part of a broader exploration and appraisal program being undertaken by Woodside to support the Browse LNG Development.

Program success would hinge on timely acquisition of data, as well as Woodside's ability to drill the well with a minimal environmental footprint.

The Project

A comprehensive risk assessment was undertaken during the planning of the program, with four activities identified as being crucial to success. These activities were:

- Conducting an extensive stakeholder engagement program involving government regulators, conservation groups and research organisations to understand interests and concerns.



Wilcraft jack-up drilling rig

- Development of an effective management plan to prevent introduction of invasive marine species, including in-water inspections of the vessels and infrastructure by specialist marine divers.
- Collection of all drilling muds, drill cuttings and cementing fluids for transport and disposal at a dedicated deep-water location 12 km away from the reef, minimising potential local impacts.
- Pre and post-program monitoring of benthic habitats to assess drilling impacts.

A jack-up drilling rig – the Wilcraft – was chosen to undertake the drilling program. Jack-up rigs are typically used in shallow-water environments and do not require anchoring, minimising disturbance to the sea floor. The water depth at the Torosa drill location was about 44 metres. The rig was required to drill the well an additional 4700 metres below sea level.

Strong relationships were established with contractors and suppliers, including construction of the world's first "riserless mud recovery unit" on a jack-up rig.



The normal practice for drilling appraisal wells is to discharge cuttings and drilling mud to the sea. In the case of the Torosa well, this would have resulted in localised smothering of the seabed and increased sedimentation of nearby coral habitats. Instead, all cuttings and drilling fluids were recovered and were successfully contained and transferred to support vessels for disposal at an approved location away from Scott Reef.

Achievements

The Torosa-6 appraisal well campaign achieved successful acquisition of appraisal data, with no recordable safety or environmental incidents during the program.

Furthermore, pre and post program seabed monitoring showed no impacts outside the rig footprint area. Overall the environmental footprint was reduced to less than 500m².

This well represents a significant demonstration of the industry's responsible approach to operating in sensitive areas.

More Information

All stakeholders are invited to contact Woodside for additional information at:

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