

COFFEY CONQUERS REMOTE CHALLENGES

(6 March 2008) Coffey Geotechnics and Coffey Environments are providing specialist services to the \$US10 billion Ichthys Gas Field Development Project, located off the far north-west coast of Western Australia.

The proposed project includes the transport of gas from the Ichthys field – which holds estimated gas resources of 9.5 tcf – via about 200 km of subsea pipeline. Onshore processing facilities will be located on Maret Islands, which include gas receiving, a LNG process plant, product storage tanks and export facilities.

General manager technical operations Marc Woodward said Coffey Geotechnics was managing the geotechnical investigations for the nearshore and onshore facilities proposed at the Maret Islands.

“We are providing engineering advice on the foundation conditions for the construction of the harbour and offloading facilities, nearshore pipeline approaches and the associated gas processing and storage structures.

“For Coffey Geotechnics to provide the appropriate recommendations to our client, Inpex, we required accurate information about the ground conditions.

“To obtain this information, we drilled a number of nearshore investigation holes around the islands using a geotechnical drilling rig mounted on a jack-up barge.

“And to minimise disturbance of the local fauna and flora from our onshore investigations, we are moving a small drilling rig around the island by helicopter,” Marc said.

Because of the environmental and occupational health and safety (OHS) challenges, Coffey Geotechnics’ sister company, Coffey Environments, was brought into the project.

Marc said Coffey Environments’ knowledge of OHS management and systems implementation had been invaluable in developing a strong safety and environmental culture for the project.

Coffey Environments prepared the OHS documentation required for the project and are acting as site managers – overseeing job hazard analyses, helicopter lift co-ordination and general logistics management.

Coffey’s work on the project will conclude in December 2007. Inpex, which operates the Ichthys Joint Venture, is scheduled to make a final investment decision on the project in the fourth quarter of 2008.



Major challenges of the geotechnical investigations:

- its remote location – two-to-three hours flying time from Broome and some 18 hours by vessel
- local fauna cannot be disturbed, which includes nesting turtles and coral reef communities
- helicopters are required to lift the drill rig and all other equipment around the islands, a high-risk activity requiring strictly controlled OH&S procedures and training
- accessing shallow nearshore areas with high tidal range
- strong tidal currents around the islands restricting access
- co-ordinating vessels, planes and helicopters to achieve maximum efficiencies for the project and minimising standby time
- safely transporting core samples back to Coffey Geotechnics’ laboratories in Perth.