



**Title: Lambert-8 Drilling Campaign
Environment Plan Summary**

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Lambert-8 Drilling Campaign Environment Plan Summary

This summary of the Lambert-8 Drilling Campaign Environment Plan has been submitted to comply with Regulation 11(7)(8) of the *Petroleum (Submerged Lands) (Management of Environment) Regulations 1999*.

Introduction

Woodside Energy Ltd (Woodside) proposes to the Lambert-8 well for exploration and appraisal purposes on the North West Shelf using the Ocean Bounty semi-submersible drill rig, operated by Diamond Offshore. Spudding is planned for August 2008.

Project Description

The Lambert-8 well is located within the permit area WA-16-L, 150 km north north-west of Karratha, 145 km northeast of the Montebello Conservation Park and 187 km northeast of Barrow Island. Water depth at the location is approximately 130 m.

Vertical Seismic Profiling is planned for the well however no Well Testing is planned.

Coordinates of Activity

The surface location coordinates for the wells are: *UTM (GDA94 50S)*

Easting (Longitude)	Northing (Latitude)
446 151m E (116° 29' 13.41" E)	7 851 988 m N (019° 25' 32.54" S)

Description of the Existing Environment

The Lambert-8 well location is located on the North West Shelf (NWS). There are no known areas of environmental significance in the immediate vicinity of the well. No endangered or vulnerable species are known to reside permanently with the area, although some may pass through on migratory routes.

Physical Environment

The water depth on the continental shelf of the NWS area ranges between 50 and 1,500 m, although most of the area lies between 50 and 500 m water depth. Two significant banks are present on the gently inclined shelf, the Rankin Bank and the Glomar Shoal. The seabed is generally characterised by deep (>5 m) soft, silty sediments which become softer and finer with increasing depth.

General wind patterns in the region are monsoonal, with a marked seasonal pattern. Wind direction is predominantly from the SE and NE during April to September with an average wind of speed 5 – 6 knots. During October to March the prevailing wind direction is from the SW, W and NW and the average wind speeds are less than 10 knots. Tropical cyclones occur in the area, typically three to four times per year, most commonly between December and April. Swells of up to 2 m can be expected year round, with April being the calmest month, and January and June the roughest. Wave direction predominantly follows wind direction (ESE in winter, WSW in summer), except during cyclone or storm conditions.

Biological Environment

Sampling of the benthic zone has consistently shown that the soft sediments of NWS support a low abundance, high diversity invertebrate fauna population, largely comprising burrowing polychaete worms (Phylum *annelida*) and crustaceans (Phylum *crustacean*). Echinoderms, bivalves and molluscs also contribute significantly to the faunal composition of the area.

Five species of turtle listed under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) are known to occur in the region; Flatback, Leathery, Green, Hawksbill and Loggerhead Turtles. Individuals of all five species may be expected to pass through the region on their way to and from nesting beaches on the mainland and adjacent islands, however, while at sea the density (concentration) of animals is low. A number of whale species may be encountered in the region including Pygmy, Blue, Sperm and Humpback Whales. The Humpback Whale is listed as Vulnerable under the EPBC Act. The Group IV Humpback Whale (*Megaptera novaeangliae*) population migrates across the NWS during the annual migration. During June, July and early August the whales follow a northward route across the NWS, which appears to follow the edge of the continental shelf, to the calving grounds off the Kimberley Coast. Cow-calf pairings tend to occur in the area from September/October. Research undertaken by the Centre for Whale Research indicates that cow-calf pairings generally remain in the proximity of the close shore during the southern migration following a relatively narrow route that passes close to the Dampier Archipelago and Montebello Islands.

Surveys off the NWS indicate that seabird distribution is generally very patchy except near islands where shelter and anomalies in surface water concentrate food seasonally. Most of the birds encountered offshore forage in flocks of 20 to more than 200 individuals, often of different species and are commonly associated with schools of pelagic fish, such as tuna. Foraging groups typically comprise Sooty Terns (*Sterna fuscata*), Wedge-tailed Shearwaters (*Puffinus pacificus*) and the occasional Frigatebird (*Frigata* spp).

Socio-Economic Environment

The offshore NWS supports one open fishery and three offshore fisheries, extending northwards and eastwards from the North West Cape out to the limits of state jurisdiction at a depth of 200 m. The main fisheries in this area include the Pilbara Trawl Fishery, Pilbara Trap Fishery, Western Tuna and Billfish Fishery and the Northern Shark Fishery. There are no recreational fisheries in the vicinity of any permit areas on the NWS.

Major Environmental Hazards and Controls

A risk assessment for the drilling of the Lambert-8 well identified the major impacts from drilling activities to be discharge of drill cuttings and fluids, and potential for spillage of hydrocarbons.

A number of whale species may be encountered in the region, including Pygmy, Blue, Sperm and Humpback Whales. The Lambert-8 well is located within the known Humpback Migratory path. The drilling and well profiling activities are planned to occur within the known migration period. To ensure minimal impact on whales in the area, support vessels will maintain a 300 m separation distance, where safe to do so, from any whales sighted. Vertical Seismic Profiling survey procedures will be in place and adhered to for the short duration of profiling activities planned.

The risk of a major hydrocarbon spill during routine drilling activities is very low. The results of spill modelling for the Cossack Pioneer location in WA-11-L, approximately 18 km to the south southwest of the Lambert-8, were considered to be indicative of worst case spill scenarios for the drilling activities proposed. The results for the modelling undertaken during

the transition and summer months, September to February, predicted no potential for exposure to shorelines of the Montebello Islands, Barrow Island or the WA coastline.

A series of comprehensive environmental management controls will be maintained by Woodside and Diamond Offshore to ensure that no significant environmental effects are realised from the drilling operation. Potential spills will be managed according to the oil spill arrangements and procedures outlined in the approved Western Australia and Dampier Sub-Basin Oil Spill Contingency Plan (ERP-3210).

Summary of Management Approach

The following table identifies the key management objectives, standard and criteria to achieve these objectives.

Objectives	Standards	Criteria
No significant disturbance to seabed and benthic habitats	<ul style="list-style-type: none"> Woodside Environmental Standards Site specific anchoring plan Supply Vessel Marine Operations Procedures 	<ul style="list-style-type: none"> Anchoring, deployment and retrieval is carried out according to procedures to minimise anchor damage and chain drag. Recording and reporting of all items lost overboard.
No introduction of exotic marine species	<ul style="list-style-type: none"> AQIS Australian Ballast Water Management Requirements <i>Quarantine Act 1980</i> 	<ul style="list-style-type: none"> Rig and vessels adhere to AQIS Australian Ballast Water Management Requirements and quarantine requirements.
No significant impact to transient marine fauna	<ul style="list-style-type: none"> Woodside Environmental Standards EBPC Amendment Regulations 2006 DEWHA Guidelines for Minimising Disturbances to Whales 	<ul style="list-style-type: none"> Guidelines for minimising whale disturbance followed. Required safe distance of 300 m from cetaceans maintained by support vessels, where safe to do so. Vertical Seismic Profiling procedures to be followed.
No significant impact on marine environment from drill fluids and cuttings	<ul style="list-style-type: none"> Woodside Environmental Standards Rig Preventative Maintenance System (PMS) 	<ul style="list-style-type: none"> Use of approved water-based and non-water based drilling fluids. Fluid and cuttings control equipment inspected and operating correctly prior to commencement of operations. Oil on cuttings will be managed below 10%.
No significant impact on marine environment from routine discharge	<ul style="list-style-type: none"> Woodside Environmental Standards MARPOL 73/78 Annex IV P(SL)A Schedule 2003, Clause 222 	<ul style="list-style-type: none"> Sewage and putrescibles waste systems are fully operational prior to commencement of drilling operations and include maceration to less than 25 mm diameter. Deck drainage contaminated by hydrocarbons or chemicals is contained and disposed onshore unless monitored and oil in water content meets MARPOL requirement.
No significant environmental impact from solid and hazardous wastes	<ul style="list-style-type: none"> Woodside Environmental Standards Woodside Waste Management Plan - Dampier MARPOL 73/78 Annex IV 	<ul style="list-style-type: none"> Waste Management Plan in place and adhered to. Hazardous wastes documented and tracked according to requirements. MSDS sheets readily available. Waste log maintained and quantities of wastes transported ashore recorded.

Objectives	Standards	Criteria
No hydrocarbon or chemical spills to the marine environment	<ul style="list-style-type: none"> Woodside Environmental Standards Western Australia and Dampier Sub-Basin Oil Spill Contingency Plan (ERP-3210) Rig and vessel Shipboard Oil Pollution Emergency Plan Emergency Response Plan 	<ul style="list-style-type: none"> Blow Out Preventer in place. Approved Oil Spill Contingency Plan in place. Rig and crew induction covers spill response procedures and spill response exercise conducted. Refuelling procedures are in place and followed. Job Hazard Analysis for bulk transfer of diesel and drilling fluids reviewed before transfers. Dry break couplings used on transfer hoses. All valves, couplings and the transfer hose checked for integrity prior to use. Approval is sought and provided prior to all dispersant applications.
No significant impact on recreational vessels, commercial fishing, and shipping	<ul style="list-style-type: none"> Woodside Environmental Standards Rig Emergency Response Plan Australian Maritime Safety Authority (AMSA) requirements 	<ul style="list-style-type: none"> Functional vessel navigation lighting in place and in use. Consultation with identified stakeholders undertaken, as needed. Marine notices broadcast according to Standard Maritime Safety Procedures (AMSA), via the Rescue Co-ordination Centre (RCC).

Consultation

Consultation with parties who may be directly impacted will be undertaken on an ongoing basis. Vessels in the Western Tuna and Billfish Fishery may be operating in the permit area, hence the Commonwealth Fisheries Association, West Australian Fishing Industry Council, TunaWest and Southern and Western Tuna and Billfish Fisheries will be contacted prior to drilling commencing to inform them of the drill rig location. Consultation with broader stakeholders is not deemed necessary at this time due to the small area affected, short duration of drilling and lack of sensitive environments close to the well location. This will be reviewed on an ongoing basis.

Contact Details

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