

## Huntsman Exploration Well Environmental Plan Summary

Woodside plans to drill the Huntsman-1 exploration well, spudding in July 2006, using the semi-submersible rig Atwood Eagle, which is owned and operated by Atwood Oceanics. The Huntsman-1 well is located in approximately 1,468 m water depth, within Permit WA-297-P. It is 350 km north of Port Hedland, 510 km south of Scott Reef Marine Park, 70 km north-west of Imperieuse Reef, the southern atoll of the Rowley Shoals, and 125 km west of Mermaid Reef, the northern atoll of the Rowley Shoals.

Location coordinates are:

Easting: 650468 m  
Northing: 8105389 m

Latitude: 17°07'52.14" South  
Longitude: 118°24'52.08" East

Woodside has evaluated the environmental risks associated with the proposed drilling and identified no issues in relation to potential significant effects on matters of national environmental significance under the *Environment Protection and Biodiversity Conservation Act* (EPBC) 1999.

Few significant environmental resources are expected to be located in the immediate vicinity of the well site due to the water depth being greater than 1,400 m. The benthic biotic at the location is likely to be characterised by a low abundance, low diversity burrowing infauna dominated by polychaetes and crustaceans. Resources of ecological significance in the surrounding surface waters typically include mobile species mostly occurring in low numbers and widely dispersed.

The drilling location is removed from shallow water habitats and from mainland and island shorelines and beaches used by turtles. It is also removed from the near shore waters that are the main migratory pathways for marine mammals, such as whales, although this does not preclude whales from swimming through the area. Vessels operating in the vicinity of the rig will maintain a safe distance of 300 m from any whales sighted. In addition, the drilling window is of a relatively short duration of 35 days reducing the likelihood of significant disturbance to marine life in the area.

The Rowley Shoals Marine Park, an 'A' Class Reserve, is located approximately 70 km to the south-east of the well location and the Mermaid Reef Marine National Reserve is located approximately 120 km to the east. Tourism in the region generally focuses around recreational fishing and diving/snorkelling within the Rowley Shoals Marine Park between August and November.

There are no known sites of Aboriginal or European cultural significance within the permit area, however, the WA Maritime Museum database of historic shipwrecks in Western Australian waters has four listings for the Rowley Shoals area.

The permit area lies within the North West Slope Trawl Fishery, Western Skipjack Fishery, Western Tuna and Billfish Fishery and Southern Bluefin Tuna Fishery. These fisheries will be contacted regarding the proposed drilling as per Woodside's notifications process. The closest recreational fishery areas are located at the Clerke and Imperieuse Reefs.

Commercial shipping activity in the vicinity of the well location is particularly heavy. The well site is located approximately 20 km from a major shipping lane largely utilised by iron ore ships and gas and oil tankers travelling to and from Dampier and Karratha.

All hole sections of the well will be drilled with low-toxicity water based drilling mud. Study findings from single well drilling activities in similar environments both within Australia and overseas, show

that environmental effects attributable to the discharge of drill cuttings can be expected to be localised (< 250 m) and short lived. As such sufficient buffer from routine activities exists between the well sites and any sensitive habitats.

The risk of a major hydrocarbon spill during routine drilling activities is very low. Based on the low probability of encountering hydrocarbons, the high evaporation rates expected, the wind (SW-W) and current (average near surface currents of 0.24 ms<sup>-1</sup>, heading N-NE-N) conditions at the time of drilling it is unlikely that any spill would produce trajectories in the vicinity of environmentally sensitive areas in the region such as the Rowley Shoals.

A risk assessment has been undertaken to identify potential environmental impacts associated with the intervention works. A series of comprehensive environmental management prevention and mitigation controls will be implemented by Woodside and Atwood Oceanics to ensure that no significant environmental effects are realised from the proposed drilling (Table 1). With the environmental management measures committed to, low sensitivity of the local environment, distance from shallow-waters and very low probability of a significant spill and with a low probability of oil directly exposing offshore sub-surface shoals, Woodside regards the risk to the environment from the proposed intervention works as tolerable and manageable.

Further information can be obtained from Samantha Jarvis, Drilling and Completions Environmental Adviser, on 9348 3956 or [Samantha.jarvis@woodside.com.au](mailto:Samantha.jarvis@woodside.com.au).

**Table 1: Summary of Environmental Performance Objectives, Standards and Criteria**

Objectives	Standards	Criteria
Minimise disturbance to the seabed and benthic habitats.	<ul style="list-style-type: none"> <li>• Woodside Environmental Policy</li> <li>• Huntsman-1 Mooring Plan</li> <li>• Atwood Falcon Drilling Manual – Anchoring Procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Anchoring/deployment and retrieval is done according to procedures to minimise anchor damage and chain drag.</li> <li>• Recording and reporting of all items lost overboard.</li> <li>• Anchoring of standby vessels is minimised.</li> <li>• Briefing of all project personnel on environmental sensitivities, management procedures and commitments detailed in the EP.</li> </ul>
Minimise disruption to transient marine life.	<ul style="list-style-type: none"> <li>• Woodside Environmental Policy</li> <li>• Atwood Oceanics SH&amp;E Standards &amp; Procedures Manual</li> <li>• DEH Guidelines for Minimising Disturbances to Whales.</li> <li>• DEH Guidelines on the Application of the EPBC Act to Interactions Between Offshore Seismic Operations and Larger Cetaceans.</li> </ul>	<ul style="list-style-type: none"> <li>• Guidelines to minimise whale disturbance followed.</li> <li>• Required safe distance maintained by standby vessels.</li> <li>• VSP Survey Procedures followed.</li> <li>• Briefing of all project personnel on environmental sensitivities, management procedures and commitments detailed in the EP.</li> </ul>
Minimise impact of drilling fluids and cuttings on marine environment.	<ul style="list-style-type: none"> <li>• Woodside Environmental Policy</li> <li>• Atwood Eagle Preventative Maintenance System (PMS)</li> <li>• Woodside’s Well Engineering Drilling Fluid Selection Procedure (TP03).</li> </ul>	<ul style="list-style-type: none"> <li>• Use of approved, low toxicity Water Based Mud.</li> <li>• Shale shakers inspected and operating correctly prior to commencement of operations.</li> <li>• Briefing of all project personnel on environmental sensitivities, management procedures and commitments detailed in the EP.</li> </ul>
Minimise impact of routine waste discharge on marine environment.	<ul style="list-style-type: none"> <li>• Woodside Environmental Policy</li> <li>• Atwood Eagle Garbage Management Plan</li> <li>• MARPOL 73/78 Annex IV</li> </ul>	<ul style="list-style-type: none"> <li>• Sewage treatment system (comminuter and grinder) is fully operational and includes maceration and disinfection.</li> <li>• MARPOL waste management requirements followed.</li> <li>• Briefing of all project personnel on environmental sensitivities, management procedures and commitments detailed in the EP.</li> </ul>
Minimise potential impacts of solid and hazardous wastes on the environment.	<ul style="list-style-type: none"> <li>• Woodside Environmental Policy</li> <li>• Atwood Eagle Garbage Management Plan</li> <li>• Waste Management Plan for MODU Operations - Broome (WMP).</li> </ul>	<ul style="list-style-type: none"> <li>• Waste Management Plan for MODU Operations - Broome in place and adhered to.</li> <li>• Hazardous wastes documented and tracked according to requirements.</li> <li>• Waste log maintained and quantities of wastes transported ashore recorded.</li> <li>• Recording and reporting of all items lost overboard.</li> <li>• Briefing of all project personnel on environmental sensitivities, management procedures and commitments detailed in the EP.</li> </ul>
Minimise occurrence and effects of hydrocarbon and chemical spills.	<ul style="list-style-type: none"> <li>• Woodside Environmental Policy</li> <li>• Woodside Offshore Operations Procedures</li> <li>• Woodside OSCP - Western Australia and Dampier Sub-Basin Oil Spill Contingency Plan (ERP-3210)</li> <li>• Atwood Eagle SOPEP</li> </ul>	<ul style="list-style-type: none"> <li>• Procedures comply with MARPOL requirements.</li> <li>• BOP in place.</li> <li>• Approved OSCP in place.</li> <li>• Rig crew induction covers spill response procedures and spill response exercise conducted.</li> </ul>

Objectives	Standards	Criteria
	<ul style="list-style-type: none"> <li>• Atwood Eagle Emergency Response Plan</li> <li>• Atwood Oceanics SH&amp;E Standards &amp; Procedures Manual</li> <li>• Atwood Eagle Preventative Maintenance System</li> <li>• Atwood Eagle Refuelling Procedures</li> <li>• MARPOL 73/78 Annex I</li> </ul>	<ul style="list-style-type: none"> <li>• Re-fuelling procedures are in place and followed for rig and standby vessels.</li> <li>• JHA for bulk transfer of diesel and drilling fluids in place before first transfer.</li> <li>• At sea refuelling supervised by Vessel Master or nominated Officer.</li> <li>• Records kept of inspections and preventative maintenance.</li> <li>• All valves and the flexible transfer hose checked for integrity prior to use.</li> <li>• Approval is sought and provided prior to all dispersant applications.</li> <li>• Briefing of all project personnel on environmental sensitivities, management procedures and commitments detailed in the EP.</li> </ul>
<p>Minimise interference with recreational vessels, commercial fishing, and shipping.</p>	<ul style="list-style-type: none"> <li>• Woodside HSE Management System and External Affairs Issues Management Process</li> <li>• Control Strategy for Physical Presence of Vessels (Atwood Eagle Emergency Response Plan)</li> </ul>	<ul style="list-style-type: none"> <li>• Functional rig navigational lighting in place and in use.</li> <li>• Marine notices broadcast according to requirements. Rescue Co-ordination Centre (RCC) notified of rigs location. Radio monitoring undertaken.</li> <li>• Standby vessel with radar capabilities located within 2.5 to 5 nautical miles of the rig at all times.</li> <li>• Briefing of all project personnel on environmental sensitivities, management procedures and commitments detailed in the EP.</li> <li>• Consultation with identified stakeholders undertaken as needed.</li> </ul>