



**SUMMARY OF
ENVIRONMENT PLAN**

WA-286-P

EXPLORATION DRILLING PROGRAM 2008

Roc Oil (WA) Pty Limited

Jan 2008 (Rev 0)

1. DESCRIPTION OF THE ACTIVITY

1.1.Coordinates of proposed wells

Table 1 sets out the details of the wells included in the program.

Table 1: Location and Details of Proposed Wells

Well	Status	Permit	Latitude	Longitude	Water Depth
Lilac - 1	Exploration	WA-286-P	29°1'11"S	114°39'8"E	24 m
Frankland - 2	Exploration	WA-286-P	29 ° 14'49"S	114°44'36"E	41 m
Dunsborough -2 (contingent well)	Exploration	WA-286-P	29°1'00"S	114 ° 35'00"E	40-50 m

Figure 1 shows the locations of the proposed wells.

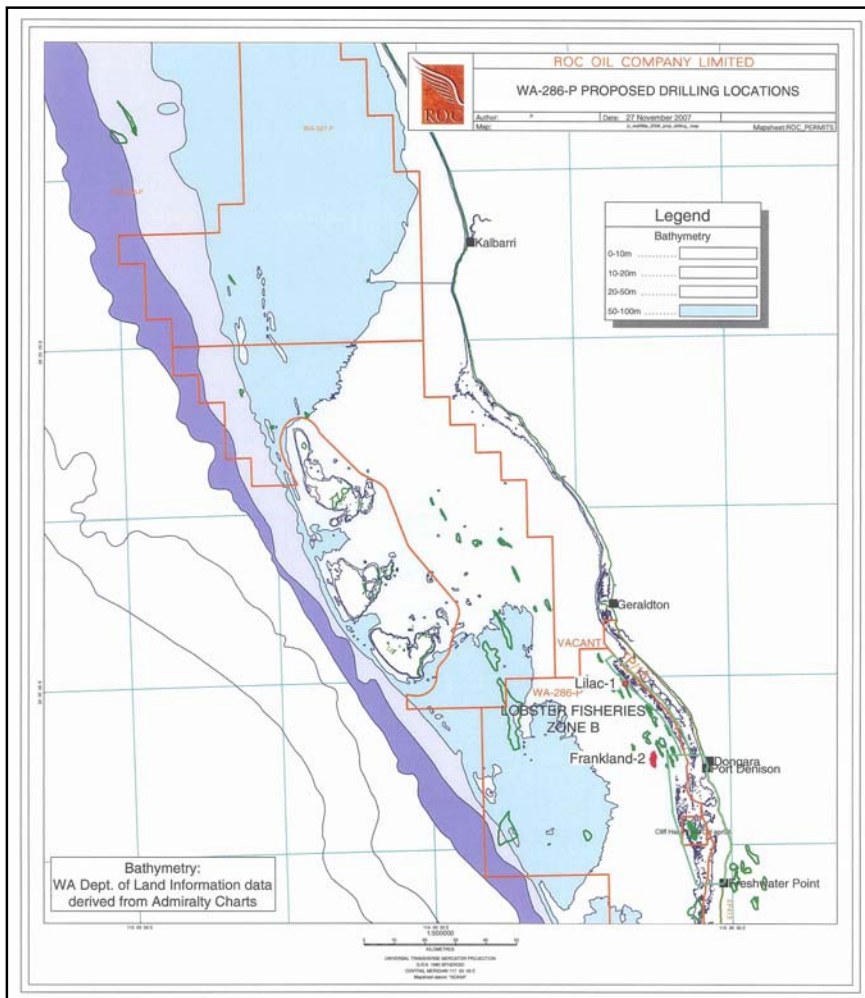


Figure 1 Well location map

*The contingent well of Dunsborough-2 lies adjacent to Lilac-1.

1.2. Description of Operation

The MODU Premium Wilcraft has been contracted for the program. It is a medium environment, cantilever jack-up similar to the rig used to drill the previous WA-286-P drilling program in Q2, 2007. A workforce of between 60 and 100 persons would be expected to be on board for various phases of the drilling program.

ROC expects to contract the MODU on 23rd January 2008. The tow to the first well is expected to take approximately 5 days. Each well is expected to take approximately 15 days to complete, including an allowance to move the rig onto the next location (approximately 12 hours from first location to second location). The schedule would then become that set out in the following table.

Table 2 Drilling Schedule

Well / Activity	Start Date	Finish Date
Lilac 1	28 th January 08	11 th February 08
Frankland 2	12 th February 08	26 th February 08
Dunsborough 2 (contingent well)	27 th February 08	13 th March 08

2. DESCRIPTION OF THE RECEIVING ENVIRONMENT

The project area lies within the 'Central West Coast' meso-scale region according to the IMCRA classification (IMCRA, 1997). The region is characterised by a relatively narrow continental shelf with diverse moderate energy coastal landforms (IMCRA, 1997). The wells are not located within the inshore platform. Sandy seafloor occurs in the majority of the project area, with some patches of seagrass cover. The area has a range of temperate species and is also at the southern limit of a suite of sub-tropical and tropical species. One of the dominant features of the region is the Houtman Abrolhos island group, located some 70 km north-west from the project area.

3. SUMMARY OF ENVIRONMENTAL COMMITMENTS

Table 3 Summary of Environmental Commitments (including major hazards, their controls, and the management approach to be carried out)

EP Commitments	Responsible Person	Required Evidence
Well Design and Timing		
This timing has been chosen to avoid interaction with the rock lobster "whites" run fishing season. Fishing activity is intense in the area when the "whites" fishing is underway. By January the fishing focus is both further offshore than the project area and dispersed.	ROC Drilling Manager	Verification of consultation with commercial fishing operations
Drilling will be completed before the annual northern migration of the humpback whales.	ROC Drilling Manager	Project completed on schedule
The well will incorporate a blow out prevention system capable of containing pressures in the well strings of up to 10,000 psi	ROC Drilling Manager	Internal audit of drilling procedures
Drilling fluids will be exclusively of water based KCl / PHPA formulation.	Offshore Drilling	Internal audit of drilling procedures

	Manager	
Pre-Mobilisation Surveys		
Prior to the mobilisation of the rig to the area a survey of each of the well locations has been carried out. The survey was conducted using a specialist vessel that measures the immediate bathymetry, the nature of the sea floor and searches for local features such as shipwrecks.	Project HSE Manager	Approved environmental plan (this document)
Drill cuttings and Fluids		
It is proposed that water based drill fluids with low inherent toxicity will be used for drilling	Drilling Contractor	Internal audit of drilling procedures
A closed drilling fluid system will be used when drilling in 8½" (216mm) hole	Drilling Contractor	Internal audit of drilling procedures
All drilling fluids will be discharged at completion of the wells, in line with standard industry practice.	Drilling Contractor	Internal audit of drilling procedures
Cuttings will be removed from the circulating drilling fluids with shakers and hydrocyclones and discharged to the sea continuously during drilling operations.	Drilling Contractor	Internal audit of drilling procedures
Well Testing		
No flow testing will be conducted.	Offshore Drilling Manager	Internal audit of drilling procedures
Support Logistics		
The rig will be attended and serviced by two offshore workboats operating out of the Port of Geraldton. One workboat will be standing by the rig at all times. Workboats are available for the deployment of oil spill response equipment if that circumstance should arise.	Offshore Drilling Manager	Internal audit of drilling procedures
Navigation		
MODU and workboats will be well lit and poses no navigational hazard	Drilling Contractor	Internal audit of drilling procedures
Lighting will be used for safe illumination of the facility and work and accommodation areas during all phases of the proposed drilling activities	Drilling Contractor	Internal audit of drilling procedures
A 300m radius exclusion zone will be established around the drilling rig and a notice to mariners warning of the presence of the rig will be broadcast. The rig will be well lit at night and during times of poor visibility	Drilling Contractor	Internal audit of drilling procedures
The standby vessel will only be anchoring during the operation at locations agreed with the local fishermen's Association.	Drilling Supervisor (offshore)	Internal audit of drilling procedures
Routine Liquid Wastes		
Sewage, grey water and putrescible wastes will be disposed of in accordance with Clause 222 (Housekeeping) of the Schedule to the <i>Western Australian Petroleum (Submerged Lands) Act 1982</i> (PSLA), which requires that food scraps and sanitary effluents be passed through a grinder or comminuter so that the final product will pass through a screen <25 mm diameter prior to disposal to the sea.	Drilling Contractor	Audit of vessels HSE Plan
No sewage or putrescible wastes (ground or unground) will be discharged within 12 nautical miles of any land.	Drilling Contractor	Audit of vessels HSE Plan
Deck run off is collected in a sump connected to an oily water separator.	Drilling Contractor	Verification of mitigation measures and internal audit of

		drilling procedures
The oil in water concentration of discharged deck drainage will not exceed 15 mg/L at any one time or an average of 15 mg/L over any 24-hour period.	Drilling Contractor	Verification of mitigation measures and internal audit of drilling procedures
Storage of Chemicals and Hydrocarbons		
Chemicals used or stored on board the drilling rig will be managed so as to prevent damage to the containers	Drilling Contractor	Internal audit of drilling procedures
Any spills or leaks of chemicals or hydrocarbons to deck will be cleaned up immediately using absorbent material	Drilling Contractor	Internal audit of drilling procedures
All chemical and hazardous wastes, such as cleaning products, acids, solvents, toxic waste and medical waste, will be segregated into clearly marked containers prior to onshore disposal.	Drilling Contractor	Internal audit of drilling procedures
All storage facilities and handling equipment will be segregated in good order and designed in such a way as to prevent and contain any spillages as far as practicable.	Drilling Contractor	Internal audit of drilling procedures
Storage and handling of chemicals and hydrocarbons will comply with strict procedures, including transfer procedures and restricting storage to appropriately banded areas with closed drain systems	Drilling Contractor	Internal audit of drilling procedures
Solid and hazardous Wastes		
All wastes, including hazardous wastes, will be managed in accordance with Roc Oil's HSE MS and appropriate State hazardous waste legislation and local shire disposal guidelines.	Drilling Contractor	Verification through audit of waste log and internal audit of drilling procedures
All solid wastes, such as packaging and domestic wastes, will be segregated into clearly marked skips prior to onshore disposal.	Drilling Contractor	Verification through audit of waste log and internal audit of drilling procedures
In accordance with MARPOL requirements no plastics or plastic products of any kind will be disposed of overboard.	Drilling Contractor	Internal audit of drilling procedures
All hazardous wastes will be documented and tracked and segregated from other streams of industrial waste.	Drilling Contractor	Verification through audit of waste log and internal audit of drilling procedures
Atmospheric Emissions		
Exhaust gas emissions from equipment used during well drilling and testing will be minimised through selection and use of high efficiency equipment.	General Manager of Operations	Verification through vessel equipment registry
Preventing Accidental Release of Hydrocarbons		
All machinery and engine oil spills and below-deck spills will be captured (catchment lips around potential spill areas), mopped up, containerised and sent to shore for recycling/disposal	Drilling Contractor	Verification of drilling procedures through internal audit
Vessel to rig transfers of drilling fluids and fuel will be conducted in accordance with defined marine drilling and supply vessel Contractor procedures which will be identified to all personnel concerned with transfer operations in the job safety analysis.	Drilling Contractor	Verification of drilling procedures through internal audit
During sea refuelling, there are a number of specific control and mitigation measures that will be implemented to eliminate or minimise the risk of spills and potential environmental impacts. These include: <ul style="list-style-type: none"> • Agreement to refuel between the Master of the 	Drilling Contractor / Master or First Officer (refuelling)	Verification of drilling procedures through internal audit

<p>Supply vessel and the drilling rig Master;</p> <ul style="list-style-type: none"> • Continuous visual monitoring of hoses, couplings and the sea surface during refuelling; • Continuous monitoring of fuel flow gauges on both rig and supply vessel; • Continuous contact between the supply vessel and the rig; • Drip trays under all coupling points; and • No night-time refueling unless sea and weather conditions preclude this. 		
Real-time oil spill modelling capability will be in place during the drilling program.	Drilling Supervisor (Offshore)	Verification of drilling procedures through internal audit
Stocks of absorbent materials on board the MODU and standby vessel(s) will be checked for their adequacy and replenished as necessary prior to the commencement of operational activities at the well.	Drilling Contractor	Verification of drilling procedures through internal audit
<p>Actions to prevent marine collisions will include:</p> <ul style="list-style-type: none"> • notification of AMSA via the Rescue Co-ordination Centre (RCC) in Canberra; • issuing of standard AusCoast radio warnings to shipping by the RCC; and <p>standard maritime safety procedures (AusCoast warnings via the Australian Maritime Safety Authority, radio contact, display of appropriate navigational beacons and lights).</p>	Drilling Contractor	Verification of drilling procedures through internal audit
Procedures and equipment for preventing loss of well control will be separately described within the MODU Safety Case.	Drilling Contractor	Verification of drilling procedures through internal audit
Environmental Awareness		
A project specific induction program will be developed for this drilling program. It will incorporate all of the practical environmental issues that could influence either the behaviour of individuals or the standards of environmental performance of the drilling operation.	Drilling Supervisor (Offshore)	Internal audit verification via training log
All persons arriving at the location will be required to complete the induction program and acknowledge that they will accept the environmental restrictions that apply at the location.	Drilling Supervisor (Offshore)	Internal audit verification via training log
Monitoring and Audit		
ROC will perform regular (monthly) inspections and audits of its drilling operations.	Corporate HSE Manager / Drilling Supervisor (Offshore)	Internal report to Sydney Office
The volume of cuttings will be calculated from the records of the drilling operation	Drilling Contractor	Internal audit of records
The oil spill contingency plan will detail how monitoring would be undertaken in the event of an oil spill.	HSE Manager	Internal review of oil spill contingency plan
An ROV survey will be conducted at each well surface location when the rig is preparing to leave to ensure that the sea floor is free of equipment or rubbish that may have emanated from the drilling program.	Drilling Supervisor (Offshore)	Internal audit of drilling procedures
Greenhouse gas releases associated with the program will be calculated using fuel consumption records and the APPEA endorsed methodology.	HSE Manager	Internal audit of greenhouse gas records and calculations
A record will be maintained of the volumes of solid waste	Drilling	Verification through

loads sent ashore.	Contractor	audit of waste log and internal audit of drilling procedures
ROC will conduct an operational environmental audit of the drilling program if warranted during its early stages.	HSE Manager	Audit results reported to DoIR
ROC will utilise its existing incident reporting and investigation procedures that exist within the ROC Safety and Environment Management System	HSE Manager	Internal audit of ROC Safety and Environment Management System
Environmental performance will be reported as an integral part of the well completion reports. Performance will be reported against the objectives set out in "Safety and Environmental Management System Requirements".	Drilling Superintendent	Review of Well Completion Report
With regard to at sea refuelling and fuel and oil spills, the following reporting requirements must be complied with: <ul style="list-style-type: none"> • Roc Oil (WA) Pty Ltd Well Site Manager and Drilling Manager must be notified in advance that refuelling at sea operations will be carried out. • AMSA must be notified in advance of all ship-to-ship transfer operations at sea (see Marine Notice 6/1995). • Roc Oil (WA) Pty Ltd is responsible for reporting all spills >80 litres to the Designated Authority (WA DOIR). • All oil pollution incidents in Commonwealth waters must be reported to AMSA, under Marine Notice 1/1996. • Any spills greater than 10 tonnes in Commonwealth waters must be reported to AMSA within one hour, via the national 24 hour emergency notification contacts. 	Drilling Contractor / Master or First Officer (refuelling)	Adherence to Oil Spill Contingency Plan Internal audit of drilling procedures
ROC intends to repeat the communication arrangements put in operation for previous drilling programs. These included; <ul style="list-style-type: none"> • The production and distribution of a community advice pamphlet (500 copies) • Publication of details of the drilling program in the Dongara newspaper "The Local Rag" • Contracting a local vessel to act as a scout boat and communication channel between the local fishing community and the operation. • The erection of signs advising the public about the drilling operation at boat ramps and in harbours near the operation. 	HSE Co-ordinator	Internal audit of communication arrangements
ROC will report on a monthly basis to DoIR	HSE Manager	Monthly reports received by DoIR
A watch will be kept on standby vessels during movements to ensure that appropriate minimum distance can be maintained between whales and standby vessels.	Support Vessel Master / Tug Master	Internal audit of Contractor operating guidelines
Any cetacean sightings during drilling activities will be recorded on Environment Australia <i>Whale and Dolphin Sighting Report</i> sheets. Rig, standby vessel and helicopter crews will be encouraged to record sightings. Copies of these sheets will be forwarded to Environment Australia at the end of the drilling activities.	ROC Drilling Manager	Internal audit of Contractor operating guidelines
Roc Oil (WA) Pty Ltd is responsible for reporting any collisions with large cetaceans to the Designated	ROC Drilling Manager	Internal audit of Contractor operating

Authority (WA DOIR) as soon as practicable and not later than 3 days after the occurrence.		guidelines
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4. STAKEHOLDER CONSULTATION

Bodies being consulted in this process were initially visited for discussions. Following this, communication has been through Email, fax and mail. Bodies include;

- Department of Environment and Water Resources
- WA Department of Industry and Resources
- Fisheries Western Australia
- WA Department of Environment & Conservation
- Western Rock Lobster Council
- Dongara Professional Fishermen's Association
- Geraldton Professional Fishermen's Association
- United Midwest Fishers Association
- Kalbarri Professional Fishermen's Association
- Irwin Shire Council
- Geraldton Port Authority

Stakeholder consultation records indicating who was consulted, when, what their issues were, and how these issues were resolved, are included in Appendix A of the Environmental Plan.

5. CONTACT DETAILS

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