

**AUSTRALIAN DRILLING  
ASSOCIATES**

Bass Basin West Triton  
Drilling Program

**ENVIRONMENT PLAN  
EXECUTIVE SUMMARY**

1	0	Bass Basin EP – Executive Summary	T Moussa	K Reeks	P Barrett	23-09-08
<b>Issue</b>	<b>Rev</b>	<b>Description</b>	<b>Prepared By:</b>	<b>Reviewed By:</b>	<b>Approved By:</b>	<b>Date</b>



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# 1 EXECUTIVE SUMMARY

## 1.1 The Proponent

Australian Drilling Associates Pty Ltd (ADA) is the proponent for the Bass Basin West Triton Drilling Program, conducting the drilling operations on behalf of the T/38P and T/39P joint ventures. Beach Petroleum Ltd is the Operator for the drilling of the PeeJay-1 well in T/39P (Permit Operator Benaris Petroleum NV) and for the drilling of the Spikey Beach-1 well in T/38P (Permit Operator Cue Energy Resources Ltd; Beach Petroleum the Operator for the 'Spikey Beach Block').

ADA is an international well engineering and project management company, with its head office in Melbourne.

## 1.2 The Proposal

ADA proposes to undertake a drilling program in the Bass Basin located north of Tasmania in Commonwealth waters at two sites within offshore permits T/38P and T/39P (See Figure ES1). Water depths in the project area range from approximately 70 m to 80 m.

The West Triton jack-up drilling rig will be used to drill each of the two wells in the Bass Basin. Drilling will occur 24 hours per day.

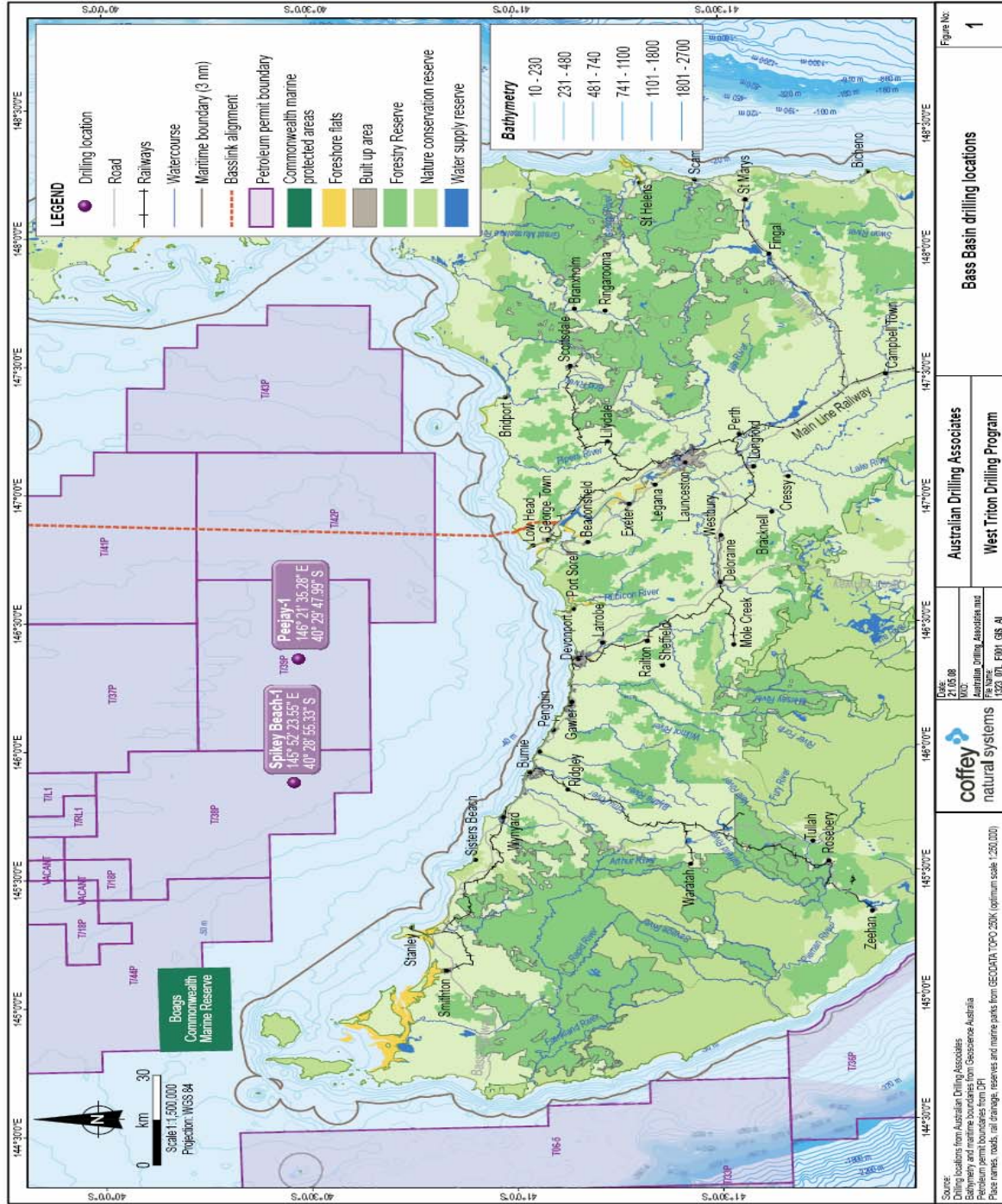
Two support vessels will service the rig and there will be approximately 15 support vessel trips per month during the drilling program. Both vessels will be returning to port for refuelling. There will be helicopter support to the drill rig.

The two wells in the drilling program will be drilled using low toxicity water-based drilling muds (WBM). Cuttings will be separated from the WBM using industry standard equipment. Whole WBM will be predominantly discharged overboard at the completion of the wells. The quantity of cuttings discharged will be approximately 273 m<sup>3</sup> for PeeJay-1 (well depth 2,138 m TVD) and 260 m<sup>3</sup> for Spikey Beach (well depth 2,078 m TVD).

The drilling program is scheduled to commence towards the end of the third quarter or early in the fourth quarter of 2008 and will continue for approximately two months.

This Environmental Plan was approved by the Department of Infrastructure, Energy and Resources (DIER) 17 September 2008. The Commonwealth Department of Environment, Water, Heritage and Arts (DEWHA) assessed a referral under the Environment Protection and Biodiversity Conservation Act as 'not a controlled action' on 16 January 2008.

Figure ES1 West Triton drilling program well locations – Bass Basin



### 1.3 Stakeholder Consultation

In the course of planning the proposed drilling program, ADA has to date, undertaken extensive consultation with relevant stakeholders in the region to identify regulatory processes, potential environmental issues and management requirements. Ongoing consultation by ADA, Beach and Benaris with these groups will continue up to and during the drilling program.

Stakeholders associated with the program and that have been consulted are listed in **Table ES1**.

**Table ES1 Stakeholder consultation**

Stakeholder	Contact	Date	Matters Discussed
DIER	Chris Boron	6/9/07 then ongoing	EP requirements.
Border Protection Command	bpliaison@customs.gov.au	To be advised 2 weeks prior.	Security advice.
AFMA	Bronwen Jones	31/8/07, 4/9/07	Advice on locations and fisher groups contact.
AMSA	–	To be advised 2 weeks prior.	Contact with Rescue Co-ordination Centre (RCC).
Commonwealth Fisheries Assn	Peter Franklin	17/8/07	Advice on locations.
	Chris Melham	28/5/08	Update advice on drilling locations and timing
Tasmanian Seafood Industry Council	Neil Stump	12/9/07	Advice on geotechnical program and locations of coring.
		28/5/08	Update advice on drilling locations and timing
Tasmanian Association of Recreational Fishing	Anne Purtill	12/09/07	Advice on geotechnical program and locations of coring.
		28/5/08	Update advice on drilling locations and timing

### 1.4 Environmental Impact Assessment, Management and Mitigation

The main environmental hazards associated with the drilling program include:

- Presence of drilling rig and support vessels.
- Well equipment remaining on seabed after drilling (rig to be removed from sites at end of drilling).
- Drilling operations (i.e., lost equipment).
- Discharge of sewage and putrescible wastes, deck drainage, oily wastes.
- Management of solid and hazardous materials and waste.
- Ballast water discharge and hull cleaning.
- Deck drainage discharge from drill rig and vessels.
- Exhaust and well testing emissions.
- Accidental spills.

The Environment Plan provides a detailed assessment of potential impacts. The key points of the assessment, and management and mitigation measures are summarised in Table ES2 below. The summary risk ranking is also shown in Table ES2; - there are a total of 15 potential environmental risks, all of which have been assessed as having low risk.

**Table ES2 Summary of environmental impact assessment results**

Impact Assessment	Management and Mitigation	Risk Ranking
<p><b>Presence of drilling rig and support vessels: rig positioning and anchoring.</b> Disturbance to seabed habitat</p>	<ul style="list-style-type: none"> <li>• Pre-mobilisation survey of drill locations</li> <li>• Adherence to anchoring procedures to minimise chain and anchor drag.</li> </ul>	Low
<p><b>Presence of drilling rig and support vessels: interference with other activities.</b> Interference with commercial fishing and shipping, cumulative affects of offshore oil and gas activities and risk of collision with other vessels leading to oil spills (including the Melbourne to Davenport Spirit of Tasmania ferry).</p>	<ul style="list-style-type: none"> <li>• Implementation of measures discussed in consultation with commercial fisheries, including avoidance of conflict procedures and management of complaints procedures.</li> <li>• Liaison and communication with commercial fishing operators regarding schedules and work plans during the drilling program.</li> <li>• Offshore distance, short duration will reduce the extent of inconvenience.</li> <li>• All support vessel operations will be conducted in compliance with the AMSA OSV Code (e.g., radar monitoring, vessel communications).</li> <li>• 500m safety zone to protect rig infrastructure.</li> <li>• Navigation light present on West Triton.</li> <li>• Continuous support vessel surveillance.</li> <li>• Commercial shipping lanes Davenport-Melbourne through the T/39P and T/39P permit area, managed by liaison with AMSA.</li> </ul>	Low
<p><b>Presence of drilling rig and support vessels: artificial lighting.</b> Attraction of seabirds and other marine life and the safety need to other vessels visibility at night.</p>	<ul style="list-style-type: none"> <li>• Standard maritime safety procedures will be adopted (AMSA). Lighting selected to meet safety requirements.</li> <li>• Minimise unnecessary lights directed downwards toward water.</li> <li>• Crew to record observations of whales and other megafauna. These will be provided to DEWHA.</li> </ul>	Low
<p><b>Presence of drilling infrastructure and support vessels: impact to visual amenity.</b> Visual impact in nearshore areas</p>	<ul style="list-style-type: none"> <li>• Program is of short duration.</li> <li>• Distance from shoreline 50 km to nearest drill site.</li> </ul>	Low
<p><b>Presence of drilling rig and support vessels: noise from drill rig, drilling vessels and support vessels, helicopters.</b> Behavioural changes to marine mammals.</p>	<ul style="list-style-type: none"> <li>• Application of DEWHA guidelines for cetacean observation and recording on rig and support vessels.</li> <li>• Program will be undertaken during migratory periods for whale species that are likely to occur in the area but not at locations where there is breeding, calving.</li> <li>• Program of short duration (approximately one month per well site).</li> <li>• Noise produced from the drilling rig (low-level, low-frequency tones), and accompanying support vessels in the order of magnitude of noise produced by commercial shipping.</li> <li>• Adoption of encroachment distances from whales by service</li> </ul>	Low

	<p>vessels (300 m) and helicopters (500 m) (Australian National Guidelines for Whale and Dolphin Watching 2005).</p> <ul style="list-style-type: none"> <li>• Crew to record observations of whales and other megafauna. These will be provided to DEWHA</li> </ul>	
<p><b>Drilling discharges: discharge of water based drilling cuttings and muds to sea.</b> Disturbance to water column and benthic communities in immediate area of discharge.</p>	<ul style="list-style-type: none"> <li>• Drill cuttings are treated on the shale shaker and by centrifuges prior to disposal to maximise recovery and reuse of drill muds.</li> <li>• WBM is low toxicity and rapidly disperses.</li> <li>• Drilling mud spills will be prevented by containment on the main deck and mud handling area.</li> </ul>	Low
<p><b>Drilling operations: lost equipment and well completion.</b> Disruption to commercial fishing operations and a higher perception of consequences.</p>	<ul style="list-style-type: none"> <li>• Drilling activity is short duration at each of the two sites (approximately 1 month each). Equipment retrieval at end of drilling program.</li> <li>• Record to be kept of any lost equipment overboard.</li> <li>• Consultation to explain drilling program to stakeholders and means to avoid/record/retrieve equipment.</li> <li>• Suspended wells identified on marine charts. If a discovery is made, a wellhead, no larger than 1 metre in diameter and 1.5 meters in height will reside on the seabed.</li> </ul>	Low
<p><b>Discharge of sewage and putrescible wastes, deck drainage, oily wastes: Waste discharge to sea.</b> Disturbance to marine environment.</p>	<ul style="list-style-type: none"> <li>• Solid waste discharges to sea will be limited to food scraps and sewage.</li> <li>• Sewage will be treated through an on-board effluent treatment plant prior to being discharged to sea in accordance with MARPOL regulations (Annex IV).</li> <li>• Macerated to less than 25 mm diameter prior to disposal.</li> </ul>	Low
<p><b>Discharge of solid and hazardous materials and waste: Waste discharge to sea.</b> Disturbance to marine environment.</p>	<ul style="list-style-type: none"> <li>• All vessels will comply with State and Commonwealth legislation for the control of pollution and dumping at sea.</li> <li>• Solids will be returned to shore for disposal.</li> <li>• All hazardous materials will be stored in appropriately bunded areas.</li> <li>• Wastes will be segregated as required and stored in storage areas and transferred to onshore licensed materials handlers for disposal to a licensed depot.</li> <li>• Waste register will be maintained to record waste management practices and audited to verify compliance.</li> <li>• Records kept of unplanned emissions and discharges.</li> <li>• Induction training will be provided for waste management.</li> <li>• A maintenance program shall be in place for waste management equipment.</li> </ul>	Low
<p><b>Ballast water discharge and hull cleaning: Introduction of marine pests.</b> Marine species will compete for food.</p>	<ul style="list-style-type: none"> <li>• Ballast water will be exchanged as per vessel procedures, if required.</li> <li>• Vessels to comply with the Australian Ballast Water Management Requirements (AQIS).</li> <li>• Vessel masters will be made aware of the AQIS' Maritime Awareness Kit'.</li> <li>• Support vessels and drill rig to avoid abalone virus areas.</li> </ul>	Low
<p><b>Deck drainage discharge from drill rig and vessels: waste discharge to sea.</b></p>	<ul style="list-style-type: none"> <li>• In the event of a chemical or oil spill, absorbent materials will be used to remove spill material prior to any washing activities.</li> <li>• The absorbent material will be containerised and sent to shore as</li> </ul>	Low



<p>Disturbance to marine environment.</p>	<p>hazardous waste to ensure that no contaminated waste streams are routinely discharged from the deck drainage system.</p> <ul style="list-style-type: none"> <li>• MSDS forms available for all hazardous chemicals</li> <li>• Use of oil detection monitoring equipment (OMD-2005 scattered light sensor) for treated oily water, which is maintained under the routine maintenance system</li> <li>• Deck treatment systems (separators) for oily wastes and discharge of separated water.</li> </ul>	
<p><b>Exhaust and well testing emissions: Emission to atmosphere.</b> Pollution of atmosphere.</p>	<ul style="list-style-type: none"> <li>• Emissions will be minimised by ensuring that all engines and generators are serviced to manufacturer's specifications.</li> <li>• Fuel consumption routinely monitored.</li> <li>• Well cleanup and testing in accordance with approval conditions. Modern burner header, spare air compressor for smoke prevention, flare gas volume recorded from off-gas meter on test separator.</li> </ul>	<p>Low</p>
<p><b>Accidental spill: fuel spill, condensate spill.</b> Disturbance to marine environment.</p>	<ul style="list-style-type: none"> <li>• Ensure that the vessel has an approved Oil Spill Contingency Plan (OSCP) in place and staff (including subcontractors, service vessels, etc.) appropriately trained in its execution.</li> <li>• Ensure that all necessary fuel spill equipment is functional and accessible on the vessel. A maintenance program will be in place for oil spill equipment.</li> <li>• The West Triton spill kits (located on the drill floor, port main deck, starboard main deck, sack room, pump room, engine room) include boom socks, soak pads, gloves, goggles. Each of the service vessels has spill kits at up to 4 locations (focsle store, SOPEP bin lower focsle deck, portable bin main deck, deck store main deck) which include scupper plugs, bags of absorbent granules, absorbent socks, booms and fittings, absorbent pads, bags of rags, bags of sawdust, drip buckets, brooms/mops/shovels, large wheelie bins, plastic disposable bags, pump, portable radios, PPE, gloves, no-smoking signs, portable fire extinguishers, hoses for ship fire main.</li> <li>• Ensure that fuel will not be transferred during inappropriate weather conditions.</li> <li>• Ensure that equipment and procedures used for transferring fuel from vessel to rig (e.g., 'Dry-Break' hose couplings), conform to the AMSA Code for the safe working of support vessels.</li> <li>• Supply vessels will cease operating and seek safe harbour (or deep water) where conditions make it unsafe, in the view of the Vessel Master, to continue drilling operations.</li> <li>• In the unlikely event of a spill during fuel transfer, ensure that the volume spilled is minimised by the automatic operation of shutdown pumps or safety valves and apply vessel Emergency Response and OSCPs.</li> <li>• Ensure that all vessel operations are conducted in compliance with the AMSA OSV Code (e.g., radar monitoring, vessel communications). Communications shall be maintained with other vessels operating in the area to advise of the project area and avoid collision.</li> <li>• Spill modelling undertaken to enable oil spill contingency planning.</li> <li>• Ensure that all personnel are aware of the existence and location of the above-listed documents.</li> </ul>	<p>Low</p>





<p><b>Accidental spill: Chemical spill.</b>  <b>Impacts to water quality and marine life.</b>                  Impacts to water quality and marine life.</p>	<ul style="list-style-type: none"> <li>• Minimisation of chemical usage and generation of waste.</li> <li>• Education in waste handling procedures during transfer and operational usage for relevant personnel.</li> </ul>	<p>Low</p>
<p><b>Accidental spills: Blow out, uncontrolled release of reservoir fluids.</b>                  Impacts to marine fauna.</p>	<ul style="list-style-type: none"> <li>• Prior site survey analysis and understanding of likelihood of intersecting over-pressured strata.</li> <li>• Maintenance of all well control equipment including routine maintenance of flowline, hose and other fittings to the BOP and other equipment.</li> <li>• Installation of blow-out preventers.</li> <li>• Routine monitoring of pressure of drilling fluid system.</li> <li>• Oils spill and emergency response plan.</li> </ul>	<p>Low</p>

In summary, the drilling is located in Tasmanian (Bass Basin) Commonwealth waters. The duration of the program is two months (one month per well), is distant from marine protected areas and has low impact to the marine environment.

Stakeholders have been consulted especially fishing groups, and mitigation measures have been put in place to manage whale interaction.

Management and mitigation measures that will be followed during the project are provided in the Environment Plan. The implementation strategy for the Environment Plan specifically details the measures needed to ensure that the environmental performance objectives and standards are met, and identifies:

- Systems, practices and procedures.
- Specific roles and responsibilities.
- Employee training.
- Monitoring, auditing and recording requirements.
- Emergency response planning.
- Consultation with government and stakeholders.

## 1.5 Contact Details

Please direct all queries, comments or requests for a copy of the approved West Triton Bass Basin Drilling Program Environment Plan to:

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