Coniston-Novara Development, Phase I Drilling Environment Plan Summary

APACHE ENERGY LTD (ABN 39 009 301 964) 100 ST GEORGES TERRACE / PERTH / WA / 6000 TEL (08) 6218 7100 / FAX (08) 6218 7200

CONTENTS

1. INTRODUCTION

Apache Energy Ltd (Apache) proposes to develop the offshore Coniston and Novara oil fields within the Exmouth Basin of the North West Shelf (NWS) in Production Licence WA-35-L (Commonwealth waters) in order to carry out its obligations under the permit.

The purpose of the Coniston Novara Development is to produce oil from the Coniston and Novara fields. The hydrocarbon accumulations in the Coniston and Novara fields are reservoired within Berriasian-aged shallow marine sandstones of the Upper Barrow Group and are top and fault-sealed by massive marine claystones of the Lower Cretaceous Muderong Formation and Windalia Radiolarite, and Upper Cretaceous Lower Gearle Siltstone. Located approximately 2.3 km southeast of the Coniston-1 well, the Novara structure is a smaller, northeast–southwest oriented footwall closure against the northeast–southwest trending and northwest dipping Novara normal fault.

The wells which are the subject of this activity will be drilled using a semi-submersible drill rig, and involve drilling the tophole sections of the seven production wells and installation of the casing and Christmas trees.

Apache is the operator of the WA-35-L permit and will be conducting the installation work on behalf of joint venture partner Inpex.

1.1 Schedule

The Phase I drilling activity is scheduled to commence in January 2013, and will take approximately 85 days. Therefore, completion of these wells is expected by April 2013. The schedule may vary however depending on weather delays. The EP remains in effect until drilling recommences (Phase II) on the suspended production wells scheduled to commence August 2013.

1.2 Compliance

The Coniston-Novara Development EP has been prepared to comply with the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 (OPGGS (E)) under the Offshore Petroleum and Greenhouse Gas Storage Act 2006 (OPGGS Act) (Cmlth). The EP has been reviewed and accepted by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

This EP summary has been prepared as per the requirements of Regulation 11 (7) and (8) of the referenced OPGGS(E) Regulations.

The Coniston Novara Field Development was referred under the Environmental Protection and Biodiversity Conservation (EPBC) Act to the Commonwealth Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) on the 16th of June 2011 (Ref. EPBC 2011/5995). A decision on this action was subsequently provided on the 15th of July 2011, approving the development on the basis that it is a 'Controlled Action' and the project requires assessment and approval under the EPBC Act before it can proceed. Assessment of the project was undertaken through preparation of Preliminary Documentation and a Supplement, with conditional approval under the EPBC Act granted on the 15th of October 2012.

2. LOCATION OF THIS ACTIVITY

The Coniston Novara Development is located approximately 65 km north of Exmouth and 35 km north from the Ningaloo Marine Park boundary in approximately 380 m of water. The geographic coordinates for the FPSO mooring and subsea infrastructure are provided in **Table 2-1** and surface location in relation to regional features is shown in **Figure 2-1**.

Table 2-1: Seabed Surface location for Coniston and Novara wells

Parameter	Coordinates (Datum/Projection: GDA 94 Zone 50)			
	Latitude	Longitude	Easting	Northing
FPSO mooring position	21° 24' 12.39"S	114° 05' 17.22"E	198096	7630400
Drill centre 3 (DC3)	21˚ 20’ 57.290”S	114˚ 04’ 23.613”E	196439	7636375
Drill Centre 4 (DC 4)	21˚ 20’ 12.47”S	114˚ 04’ 56.12”E	197350	7637772

For the purposes of defining operational boundaries, all project vessels and the drilling rig are considered to be undertaking the activity when they are located within the defined area. The defined area is illustrated in **Figure 2-1** and geographic coordinates are provided.

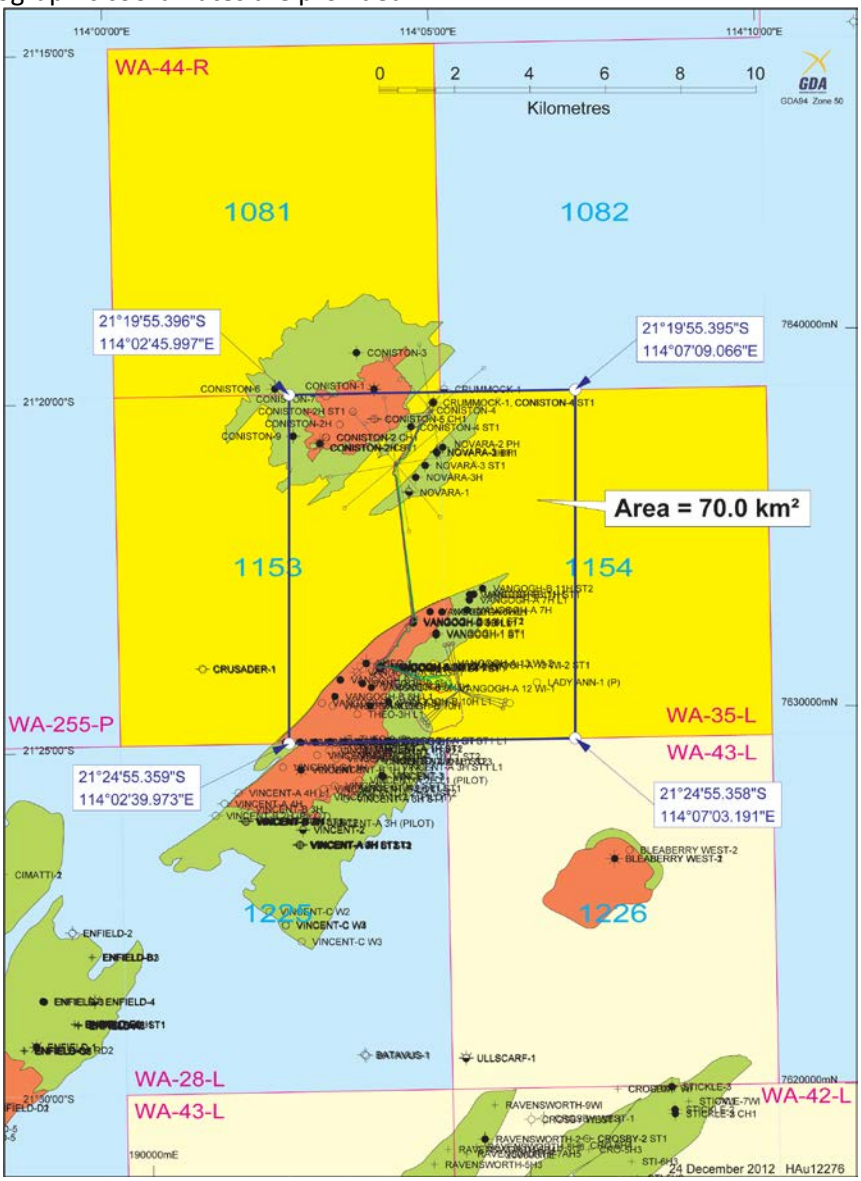

Figure 2-1: Coniston-Novara Development ‘defined area’

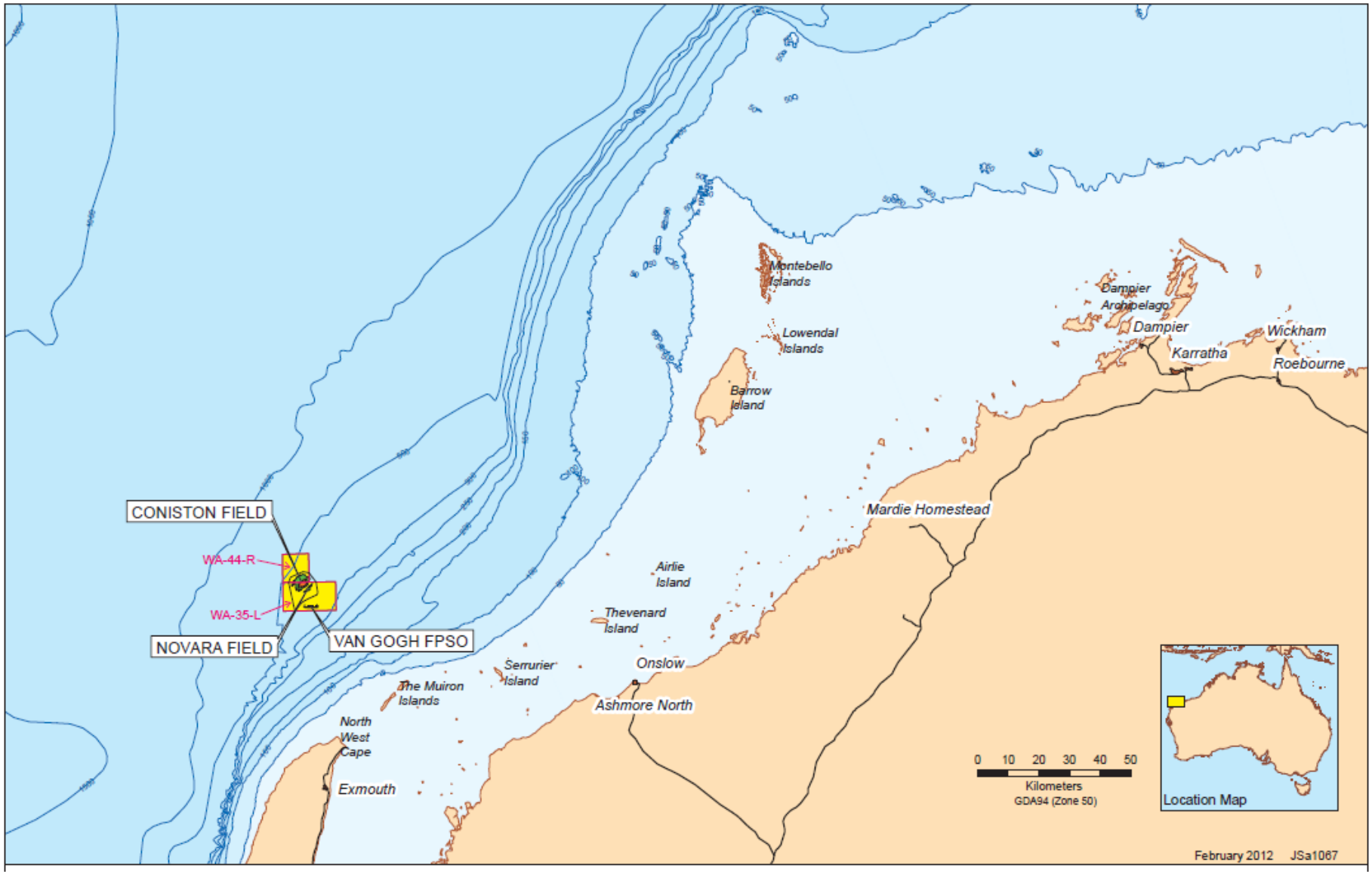

Figure 2-2: Location of the Coniston-Novara Fields – Regional Perspective

3. DESCRIPTION OF THE RECEIVING ENVIRONMENT

3.1 Physical Environment

The proposed Coniston-Novara wells are located in the North West Shelf (NWS). NWS waters are usually thermally stratified with a marked change in water density at approximately 20 m (SSE, 1993). Surface temperatures vary annually, being warmest in March (32^{o}C) and coolest in August (19^{o}C). Vertical gradients are correlated to sea surface temperatures, and are greatest during the warm-water season (SSE, 1991). Near bottom water temperature is approximately 23^{o}C, with no discernible seasonal variation.

Wind shear on surface waters generates local-scale drift currents that can persist for extended periods (hours to days). During summer (October–March) and the proposed drilling period, the prevailing non-storm winds are from the southwest, west and northwest at an average speed of less than 10 knots, peak average speeds of 15–25 knots, and maximum speeds of 30 knots. Winds from the south-east to north-east quadrant are experienced at a frequency of less than 10% over summer.

The wave climate is generally composed of locally generated wind waves (seas) and swells that are propagated from distant areas (WNI, 1995; 1996). In summer, seas typically approach from the west and southwest. Mean sea wave heights of less than 1 m with peak heights of less than 2 m are experienced in all months of the year (WNI, 1995). Tropical cyclones have generated significant swell heights of up to 5 m in this area, although the predicted frequency of swells exceeding 2 m is less than 5% (WNI, 1995). In the open ocean, sustained winds result in wind-forced currents of approximately 3% of the wind speed (Holloway and Nye, 1985).

The dominant sea surface offshore current (typically seaward of the 200 m isobath) is the Leeuwin Current, which carries warm tropical water south along the edge of WA's continental shelf, reaching its peak strength in winter and becoming weaker and more variable in summer. Closer to the coast, the Ningaloo Current flows in a northerly direction, in the opposite direction to the Leeuwin Current, from September to mid-April (BHPB, 2005; Woodside, 2005). The Indonesian Throughflow is the other important current influencing the upper 200 m of the outer NWS (Woodside, 2005).

Offshore drift currents are represented as a series of interconnected eddies and connecting flows that can generate relatively fast (1–2 knots) and complex water movement. These offshore drift currents also tend to persist longer (days to weeks) than tidal current flows (hours between reversals) and thus will have greater influence upon the trajectory of slicks over time scales exceeding a few hours (APASA, 2012).

3.2 Biological environment

Benthic habitats within the Zone of Potential Impact (ZPI) are composed of soft sediments and associated benthic fauna. The Coniston and Novara wells are located on the continental slope, with water depths ranging across the Continental Slope from 350–900 m where the seabed slope increases more distinctly over short distances. The continental slope supports a sparse seabed community, with species diversity and abundance decreasing with increasing depth (AEL, 2008). Soft sediments can support a diverse benthic infauna consisting predominantly of mobile burrowing species which can include molluscs, crustaceans (crabs, shrimps and smaller related species), polychaetes, sipunculid and platyhelminth worms, asteroids (sea stars), echinoids (sea urchins) and other small animals.

The spatial and temporal distribution and density of these organisms depends on factors such as substrate composition, season, depth and water temperature (Ward and Rainer, 1988; Rainer, 1991; Kinhill, 1997). Ward and Rainer (1988) reported a seasonal pattern in the abundance of small species of decapod crustaceans in this region. It was not clear if this pattern was related to season or to other factors, such as storm events, which operate on much shorter time scales. By comparison, the diversity and abundance of large encrusting animal species in this region is relatively low (Ward and Rainer, 1988; LeProvost Environmental Consultants (LEC), 1990). This is probably due to instability of the sediment and the lack of exposed and colonisable reef.

The proposed drilling activity is located in Commonwealth waters, offshore from the WA mainland. Significant features in the region include Ningaloo Marine Park (35 km SW), Muiron Islands (45 km SE), NWC Peninsular (50 km S), Barrow Island (130 km NE) and Montebello and Lowendal Islands (170 km NE). The ZPI does not overlie any of these identified features. Key ecological features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area. From the EPBC Act Protected Matters search two features were identified: Continental Slope Demersal Fish Communities and Canyons linking the Cuvier Abyssal Plain and the Cape Range Peninsula. Whilst the canyons do not occur within the ZPI, demersal fish communities are distributed throughout the area.

The EPBC Act Protected Matters Database (DSEWPaC, 2012a) identified 10 species of marine fauna found in the ZPI area listed as threatened species (endangered or vulnerable) under the EPBC Act, all of which are migratory, a further 6 migratory species were also identified. The species listed included 2 Fish, 7 Cetaceans, 5 turtles and 2 seabirds. The timing of the activity overlaps with the southern migration of blue whales (November-December) and peak turtle nesting season (November to January). The southern migration of blue whales has been recorded between the 750 m and 850 m isobaths and the 300 m and 350 m. Although the drilling activity ZPI does not include any recognised blue whale migratory routes or known feeding, breeding or resting areas, individuals may transit through the area (DSEWPaC, 2012b). The nearest turtle nesting sites to the drilling activity are located on the North-West Cape and the Muiron Islands, approximately 40 km south of the proposed drilling location.

3.3 Socio-economic environment

Both the offshore and coastal waters in the NWC Region support a valuable and diverse commercial fishing industry, several of which operate out of Exmouth and Onslow. There are four Commonwealth fisheries overlapping or close to the area of the drilling activity: Western Skipjack, North West Slope Trawl, Southern Bluefin Tuna and Western Deepwater Trawl. In addition, six State managed fisheries have boundaries that overlie or are in close proximity to part or all of the drilling location (AEL, 2011; DoF, 2011): Beche-de-mer, Marine Aquarium, Specimen Shell, Mackerel, Pilbara Trap/Line and the Pearl Oyster Managed Fishery (Zone 1).

Offshore angling by recreational fishers takes place from large boats (including charter vessels) during the winter tourist season, past the reef edge and around the islands of the Exmouth Gulf (AEL, 2008). Recreational fishing could occur within the ZPI although the drilling activity timing only overlaps a short period of the peak recreational fishing season which extends over March – October.

The drilling location and surrounding waters are also used for petroleum exploration and development. The nearest Floating Production Storage and Offloading Facility (FPSO) is the Van Gogh FPSO (in production licence WA-35-L) and the Woodside Vincent FPSO (in production licence WA-28-L) 5 km and 8 km south respectively, of the drilling location. A further 3 FPSO developments are currently operating in the region within 35 km of the drilling location.

There are no recognised shipping routes through the drilling location. There is a shipping route heading northeast approximately 40 km to the west of the proposed drilling location, however, a relatively low number of vessels use this (AEL, 2010; Woodside 2006).

A search of the Australian Heritage Database (AHD) on the 28th of August 2012 found 23 heritage listings for the Exmouth area, however none of these are within the exclusion zone or the ZPI. The National Shipwrecks Database lists seven shipwrecks near/around the NWC area, and 31 shipwrecks in the Exmouth Gulf area. There are no known listed historic shipwrecks within, or in the immediate vicinity of, the proposed Coniston-Novara drilling activity. The airspace above the proposed drilling area lies within a designated military exercise area. When activated by a Notice to Airmen (NOTAM), the restricted airspace can operate down to sea level.

4. DESCRIPTION OF THE ACTION

The objective of this activity is to develop the offshore Coniston and Novara oil fields in Commonwealth waters. Phase I drilling will involve drilling of the surface-hole sections of six Coniston wells (Con-10H, Con-11H, Con-12H, Con-13H, Con-14H and Con-15H) and the Novara well (Nov-4H). Following this casing will be run and cemented and subsea Christmas trees will be installed.

Commencement of drilling for Coniston and Novara wells is scheduled for January 2013, and is expected to take approximately 85 days. The *Atwood Falcon* semi-submersible drilling rig, operated by Atwood Oceanics will be used to undertake the Coniston and Novara wells.

Two main support vessels (sourced from Apache's current Australian vessel fleet): the DOF Subsea *Skandi Atlantic* and UOS *Endeavour,* will be used to supply fresh water, food, bulk drilling fluid materials and transportation of the equipment used during the drilling activity. Helicopter transfers, operated by Bristow Australia, will transfer personnel between the rig and Dampier airport.

Once the drill rig has arrived at well location and anchored, drilling activities will commence. Drilling operations are conducted 24 hours a day, seven days a week.

4.1 Drilling activities

The *Atwood Falcon* rig will anchor at one drill centre, DC4 to complete Novara 4H, then demobilise and re-anchor at drill centre, DC3 to complete the Coniston wells. However, the rig will not change anchor positioning once on location for Coniston. The rig is "kedged" between well locations. The 660 mm x 914 mm (26" x 36") conductor hole section will be drilled with seawater and gel sweeps. The 445 mm (17.5") riserless tophole sections of the seven production wells will be drilled with seawater, gel sweeps and unweighted gel PAD fluid.

Seven wellheads, six at Coniston and one at Novara drill locations, will be installed and will sit approximately 2.5 to 3 m above the seabed; and subsea Xmas trees will be placed on top of each wellhead.

5. MAJOR ENVIRONMENTAL HAZARDS AND CONTROLS

The environmental risk assessment for routine and accidental events for the Coniston-Novara drilling activities centred around a hazard identification workshop attended by a subset of Apache's environmental scientists and drilling personnel, held on 11 July 2012. The outcomes of a broader scale hazard identification workshop on Apache's drilling activities across the NWS (Oracle, 2011), independently facilitated by risk consultants using the combined experience of Apache's Drilling, Environment and Logistics Departments, was used to inform the Coniston-Novara drilling workshop.

The purpose of the risk assessment was to understand and identify the potential environmental hazards, their causes and the potential impacts associated with Phase I and II drilling activities to ensure they are reduced to As Low As Reasonably Practicable (ALARP). Apache's management and mitigation actions aim to reduce the environmental risks arising from the drilling activities associated with the proposed Coniston-Novara Phase I drilling activity to ALARP. These have been developed from experience in the environmental management of offshore exploration in Australia, and are based on Australian petroleum industry best practice environmental management guidelines, as defined by the APPEA Code of Environmental Practice (2008).

The key environmental hazards and control measures to be applied to the Coniston-Novara Phase I drilling activity are shown in **Section 9**. These are consistent with Apache corporate and project specific performance objectives, standards and criteria. All commitments associated with these will be used to reduce environmental risk to ALARP and will be of an acceptable level.

6. MANAGEMENT APPROACH

The Coniston-Novara Phase I drilling activity will be managed in compliance with the *Coniston-Novara Development Environment Plan (EA-00-RI-208/1)* accepted by NOPSEMA under the OPGGS(E) Regulations, other environmental legislation and Apache's Management System (e.g. Apache Environmental Management Policy).

The objective of the EP is to ensure that potential adverse environmental impacts associated with the Coniston-Novara Phase I drilling activity during both routine operational activities and unplanned events, are identified and assessed and to stipulate mitigation measures to avoid and/or reduce any adverse impacts to the marine environment to ALARP.

The EP details for each environmental impact identified (and assessed in the Environmental Risk Assessment) specific performance objectives, standards and procedures and identifies the range of controls to be implemented (consistent with the standards) (**Section 9**) to achieve the performance objectives and also identifies the specific measurement criteria and records to be kept to demonstrate the achievement of each performance objective.

The goals of the environmental implementation strategy, detailed in the EP, are to direct, review and manage activities so that environmental impacts and risks are continually being reduced to ALARP, and performance objectives and standards are met over the duration of the drilling activity. It includes the following:

1. Details on the systems, practices and procedures to be implemented
2. Key roles and responsibilities
3. Training and competencies for all personnel (Apache and contractors)
4. Monitoring, auditing, management of non-conformance and review
5. Incident Response including an Oil Spill Contingency Plan
6. Record Keeping
7. Consultation

The reporting requirements for routine activities and environmental incidents (recordable and reportable) and reporting on overall compliance of the activity with the EP (e.g. close out reports submitted to NOPSEMA within 3 months of drilling activity completion) are also detailed.

7. CONSULTATION

Apache maintains an updated stakeholder database containing fishing interest groups, government and non-government authorities and other stakeholder parties, including the community of Exmouth and adheres to its Stakeholder Consultation Strategy. This database was used to identify stakeholders located, or operating, in the proximity of the Coniston Novara Phase I drilling activity. Due to the high frequency of activities being undertaken by Apache and other operators in the Exmouth region, Apache considers the community to be aware and informed of matters pertaining to drilling programs, including potential impacts from hydrocarbon spill. Apache has maintained relationships to assist information sharing with key stakeholders from many years and regularly communicates with stakeholders on a variety of activities, always seeking comment and fielding enquiries.

Relevant interested parties for consultation directly relating to the EP were identified on two bases: those potentially or likely to be impacted by the Coniston Novara project (including the Phase I drilling) geographically and commercially (offshore activities) and those potentially or likely to be impacted in the event of an oil spill incident (**Table 7-1**). In addition, a public comment campaign was completed under the EPBC Act for the Coniston Novara Development Project in July 2012 during the EPBC referral process. This campaign included public advertising, which enhanced consultation processes and raised awareness of the project.

Table 7-1: Summary of the environmental resources and representative organisations notified for Coniston-Novara drilling activity

Resource category	Commonwealth	State
Habitats & cultural	SEWPaC (shipwrecks, WHE) NWC Exmouth Aboriginal Corporation (interest only)	DEC (National and Marine Parks) NWC Exmouth Aboriginal Corporation (interest only)
Endangered flora & fauna	SEWPaC (NMES)	DEC
Commercial	AFMA Chamber of Commerce O&G operators (WEL, BHP) Shipping (AMSA) Commonwealth Fisheries Association (CFA) A Raptis and Sons WestMore Seafoods Shark Bay Seafoods Austral Fisheries	DoF Visitors Centre Shipping (DoT) WAFIC
Amenities	Recfishwest Exmouth Game Fishing Club (EGFC)	Recfishwest EGFC Shire of Exmouth Department of Defence (Murat Pier) Ningaloo Station DEC (National Park) DoT (Tantabiddi boat ramp)
Incident Response (logistics and support)	AMOSC Dept of Defence AMSA	FESA (communications) Ningaloo Station Exmouth Game Fishing Club DEC; DOT Shire of Exmouth

Detailed consultation has been undertaken with AMSA and the Department of Transport (WA) specifically relating to the Coniston Novara Phase I Drilling Activity OSCP. A copy of the draft OSCP document has also been provided to the Department of Environment and Conservation and the Department of Transport for review, as per guidelines.

The *Coniston Novara Phase I Drilling Activity EP* (EA-00-RI-208/1) pertains to the initial drilling phase of the Coniston Novara Development Project, which will then progress through construction, drilling, commissioning and operation. The Project has a production life of approximately 20 years and will tie-in to Apache Energy's existing Van Gogh facility. The consultation methods planned for the life of Project include: consultation in accordance with regulatory guidelines (NOPSEMA) regarding Environment Plans for phases of the Project, regular briefings and meetings as requested or required with stakeholders and two-way communication with Apache's Exmouth Stakeholder Reference Group (SRG), including biannual project briefings regarding Coniston Novara and other Apache projects and including regular progress reports included in *Apache Energy's Quarterly Project Update* document, supplied to all stakeholders.

Apache has and will continue to maintain a presence in the Exmouth community including attending community events (annual Exmouth Whale Shark Festival), conducting meetings between key Apache personnel and local stakeholders and has an appointed Stakeholder Coordinator to oversee information sharing with all stakeholders and the wider community. Apache's consultation strategy is regularly reviewed in line with feedback and requirements from stakeholders.

8. CONTACT DETAILS

Further information about the Coniston-Novara Phase I drilling activity can be obtained from:

Libby Howitt

Environment Manager

Apache Energy Limited

100 St Georges Terrace, Perth, Western Australia, 6000

Phone: 08 6218 7181

Email: libby.howitt@apachecorp.com

9. ENVIRONMENTAL ASPECTS, IMPACTS AND CONTROLS

The following tables (**Table 9-1** and **Table 9-2**) provide a summary of potential environmental impacts that could be expected from the drilling of Coniston-Novara Phase I. It lists the activities which might give rise to the environmental impact and controls and measures which eliminate or ensure the residual risk is reduced to ALARP.

Table 9-1: Environmental risk summary for operational activities for Coniston and Novara 4H wells

Hazard	Cause	Potential Impacts	Risk Treatment Avoidance, Mitigation & Management Measures
Seabed disturbance	Rig positioning, anchor/chain drag or retrieval Installation of wellhead and Xmas trees	Localised disturbance to seabed, resulting in loss of or change in benthic habitat.	Anchoring • Loss of position while cross-tensioned anchors are in place is constantly monitored using the onboard seabed acoustic monitoring system; • The rig monitors and records anchor tensions every three hours in the Deck Log. • Support vessels do not anchor within exclusion zone • The rig is "kedged" between well locations. Dropped Objects • The Atwood Falcon HSE Case 2011 (FAL-HSE-SC-1002, Rev 2) includes Lifting Equipment Management System (LEMS). • Site surveys indicated that there are no raised seabed features or geological formations of concern for the safe movement of the rig. • An ROV survey of the seabed will be completed at the end of the drilling activity to check for and retrieve dropped objects. • Crew members involved with lifting and offloading equipment from the rig will be trained in the DROPS (Dropped Object Prevention Scheme) and Atwood Lifting Tackle Procedures and be aware of lifting and offloading requirements. • Apache Drilling and Completions Standards Manual (AE-91-ID-004) defines a number of measures that must be in place to ensure no dropped objects enter the marine environment. • Detailed records of equipment lost overboard will be recorded • Planned maintenance undertaken on material handling and lifting equipment undertaken in accordance with the Atwood Falcon Planned Maintenance System. • During mobilisation/demobilisation and kedging all equipment and gear on rigs and support vessels are securely sea fastened. • Transfer of chemicals and hydrocarbons will only be carried out under suitable conditions at the discretion of both the rig's OIM and the vessel master and will be monitored at all times by competent rig and vessel crew.
Artificial light	Lighting required for safety purposes on the rig and vessels.	Attraction of fauna such as fish, turtles and migratory birds, leading to possible increased predation.	• Lighting is required for safety during the 24 hour operations of the drilling activities and cannot be eliminated. Reduction in the lighting levels would result in non-compliance with vessel and occupational safety regulations. • Lighting is kept to a minimum safe operational level in line with the Atwood Falcon Safety Case (FAL-HSE-SC-1002 Revision 2) for the Atwood Falcon. • Deck lighting on support vessels of sufficient power and intensity which is required for workplace

Hazard	Cause	Potential Impacts	Risk Treatment Avoidance, Mitigation & Management Measures
			safety, as per Australian Offshore Support Vessel Code of Safe Working Practice (Section 9.1.4. Deck lighting) (AMSA, Version 3), will be directed in-board to minimise the amount of direct light spill onto marine waters • Non-essential lighting will be switched off when possible without compromising safety.
Noise	Standard drilling operations – drill bit motion and vessel propellers and helicopter rotors;	Potential negative physiological or behavioural effects to some threatened marine fauna.	• Proximity distances will be adopted by helicopters in accordance with the Australian National Guideline for Whale and Dolphin Watching (2005) to avoid behavioural impacts to marine fauna. In particular helicopters will not fly lower than 500m within a 500m radius of a cetacean or whale shark. • The interaction of support vessels with cetaceans and whale sharks will be consistent with Part 8 of the EPBC Regulations 2000 requirements which requires that: • A vessel will not travel at greater than 6 knots within 300m (caution zone) of a cetacean (or whale shark) known to be in the area • A vessel will not approach closer than 100 m of a cetacean (or whale shark) known to be in the area. • If a dolphin approaches the vessel or comes within 100 m the vessel master must not change the course or speed of the vessel suddenly. • Sightings of marine mammals are to be reported and then recorded in Apache's Marine Fauna Sighting Database with data submitted to DSEWPaC. Marine Fauna observation kits are available on support vessels to assist with marine fauna identification. • All personnel will receive an induction that includes information on marine mammal species identification and requests personnel to record sightings. • Optimisation of the number of helicopter flights in accordance with safety requirements and project planning. • The maintenance of noise generating engines and equipment is scheduled on the planned maintenance system and is maintained, as a minimum, in accordance with manufacturer's maintenance specifications.
Vessel Movement	The physical presence of support vessel and helicopters within the 500 m exclusion zone during routine operations.	Death or injury to marine fauna from vessel strike and behavioural disturbance.	• Drilling location is devoid of key sensitive habitats, e.g. no major seabird roosting/nesting area within 500 m exclusion zone. • Drilling activity timing does not overlap with peak humpback whale or whale shark migration activities; low numbers may occur during drilling period and may transit through the drilling location. • The interaction of all vessels with cetaceans and whale sharks in the defined area will be consistent with Part 8 of the EPBC Regulations 2000 requirements including: • A vessel will not travel at greater than 6 knots within 300m (caution zone) of a cetacean (or whale shark) known to be in the area;

Hazard	Cause	Potential Impacts	Risk Treatment Avoidance, Mitigation & Management Measures
			• A vessel will not approach closer than 100 m of a cetacean (or whale shark) known to be in the area; and • If a dolphin approaches the vessel or comes within 100 m the vessel master must not change the course or speed of the vessel suddenly. • Atwood Falcon crew and support vessel masters will complete the Atwood Falcon environmental induction that details marine fauna interaction mitigation measures. • Atwood Falcon and support vessel cetacean observations recorded on the Apache's marine fauna sighting datasheet and logged in Apache's Marine Fauna database with records sent to DSEWPaC. • Fauna observation kits (including as a minimum binoculars, cetacean identification posters and fauna observation recording sheets) will be available on all vessels to ensure crew have the necessary equipment available to record observations.
Discharge of SBM drill cuttings, base oil and SBM drilling fluids	Routine drilling activity from rotation of drill bit through formations.	Temporary and localised water column turbidity and seabed deposition causing benthic fauna smothering Toxic effects on marine fauna	Well design: • Optimisation of the well design uses the minimum volume of drilling fluids and generates the minimum volumes of drill cuttings; in addition it also optimises the length of time taken to drill the well. If the well is drilled at too small a diameter then the risk of not reaching the target depth, and therefore the chance of mechanical sidetracking, is increased. This results in increased drilling time, producing more drill cuttings and using more fluids. Chemical selection • Biodegradable drilling fluids are used wherever practicable and are considered to have the least environmental impact. • Apache uses a risk based approach to select drilling chemical products ranked under the OCNS. All of the drilling fluids that are proposed for this drilling activity are CHARM rated Gold/Silver, or non-CHARM rated E. To achieve these rankings, the chemicals have the least environmental impact in terms of ecotoxicity, biodegradation and bioaccumulation. In the event that other drilling fluids are used that are not CHARM rated Gold and Silver, or non-CHARM rated E and D these drilling fluids will be risk assessed as per the Apache chemical risk assessment process, and determined to be environmentally acceptable (Drilling Fluids and Chemical risk Assessment procedure (EA-91-II-008). • Drill cuttings will be discharged to sea following treatment onboard the rig through the shale shakers and centrifuges (as required) to reduce volume of material discharged overboard. • Reconditioning and reuse of residual drilling fluid, where practicable, for use on subsequent wells • Approved contractors will control the storage and handling of drilling fluid chemicals in conjunction with National Code for the control of Workplace Hazardous Substances. Maintenance

Hazard	Cause	Potential Impacts	Risk Treatment Avoidance, Mitigation & Management Measures
			• Drill cuttings shaker and centrifuge systems maintenance included in the relevant Planned Maintenance System. • Regular inspections of onboard cuttings management equipment. • Shaker screen selection is made by the Mud Engineer on location and reviewed by the Apache Fluid Coordinator daily. • Screens are inspected a minimum of once a day during drilling operations once BOP and riser are in place to check for wear and tear.
Discharge of cement	Drilling of cement downhole, or liquid or semi liquid cement returned to surface Disposal of bulk cement during or at the end of a well. Cementing surface pipe when riserless, returns to the sea-bed. During tank or pipework cleaning	Temporary and localised water column turbidity and seabed deposition causing benthic fauna smothering. Toxic effects to marine fauna	Bulk Cement Disposal • Bulk cement will not be discharged overboard except in an emergency; it will either be left onboard for the next drilling campaign, returned to a supply vessel for re-use or will be sent back to shore for storage or appropriate onshore disposal. Through inventory control and well planning, left over product will be minimised. Chemical Selection • Apache uses a risk based approach to select drilling chemical products ranked under the OCNS. All of the drilling fluids that are proposed for this drilling activity are CHARM rated Gold/Silver, or non-CHARM rated E. To achieve these rankings, the chemicals have the least environmental impact in terms of ecotoxicity, biodegradation and bioaccumulation. In the event that other drilling fluids are used that are not CHARM rated Gold and Silver, or non-CHARM rated E and D these drilling fluids will be risk assessed as per the Apache chemical risk assessment process, and determined to be environmentally acceptable (Drilling Fluids and Chemical risk Assessment procedure (EA-91-II-008). Maintenance • Drill cuttings shaker and centrifuge systems maintenance included in the relevant Planned Maintenance System. • Regular inspections of onboard cuttings management equipment. • Shaker screen selection is made by the Mud Engineer on location and reviewed by the Apache Fluid Coordinator daily. • Screens are inspected a minimum of once a day during drilling operations once BOP and riser are in place to check for wear and tear. Storage/ Handling • Bulk transfer procedure, storage and handling facilities on the rig, • Vessel liquid, bulk and sack product handling procedures. • Only the required volume of cement will be brought on board the rig (plus allowable contingency) in

Hazard	Cause	Potential Impacts	Risk Treatment Avoidance, Mitigation & Management Measures
			accordance with the cement program. • Liquid or semi liquid cement that returns to surface or is flushed during tank/pipe cleaning will be diverted and appropriately disposed. • Left-over bulk dry cement materials will not be disposed overboard unless in an emergency, they will be returned to a supply vessel for re-use or will be sent back to shore for storage or appropriate onshore disposal • Hard cement which returns to surface and is removed at the shale shakers will be diverted overboard • Cement additives are stored in bunded areas where collected liquids will be vacuumed and primarily re-used within the muds system, or directed for treatment and appropriate disposal. • Approved contractors will control the storage and handling of chemicals in conjunction with National Code for the control of Workplace Hazardous Substances.
Planned discharges	Planned non-hazardous discharges that will enter the marine environment during the drilling activity include cooling water, brine, anti-scalant, sewage, putrescible food waste, oily water discharges from support vessels and deck drainage. Discharges will be intermittent and dependent on rainfall, persons on board and machinery activity.	Non-hazardous discharges will reduce the quality of receiving marine waters by nutrient enrichment, organic and particulate loading, thermal loading and increased salinity primarily in surface (<5 m) waters. Altered water quality conditions are predicted up to 100 m from the drilling location and the duration of reduced water quality will be short-term (hours).	• The cooling water and potable water systems on vessels have maintenance scheduled on their respective planned maintenance system and are maintained in accordance with manufacturer's maintenance specifications. • Sewage discharges will be compliant to MARPOL 73/78/97 Annex IV requirements in accordance with Protection of the Sea (Prevention of Pollution from Ships) Act 1983. • The Atwood Falcon and support vessels will have a valid International Sewage Pollution Prevention Certificate. • A MARPOL-compliant macerator and sewage treatment plant are installed on the rig and support vessels. Bacteria in the sewage waste stream will be killed in the treatment process, reducing the risks of discharge. • All food waste will be macerated prior to discharge. The macerator will be maintained in accordance with the Planned Maintenance System. In the event of macerator failure, all food waste will be bagged and shipped to shore for disposal until remediation of the macerator. • All non-food galley wastes will be bagged and shipped to shore for recycling or disposal in accordance with Environmental Protection (Controlled Waste) Regulations 2004. • The Atwood Falcon and support vessels will have a Garbage Management Plan. • The Atwood Falcon and support vessels will have a Garbage Record Book that is maintained to record volume and location of macerated/unmacerated food scrap discharges. • The use of an open-loop cooling system segregated from hydrocarbons ensures no hydrocarbons are discharged with the cooling water. • With respect to the Atwood Falcon In compliance with *MARPOL 73/78/97 Annex 1 Appendix 5 Special*

Hazard	Cause	Potential Impacts	Risk Treatment Avoidance, Mitigation & Management Measures
			requirements for fixed or floating platforms o Main deck drainage from the Atwood Falcon will be directly overboard, unless closed as an oil spill pollution prevention action. o As a part of a daily start of work practice Atwood Falcon personnel will ensure that main deck areas are clean of spillages and accumulations of oil/grease and chemicals, and that all spills and leaks are reported. o Chemicals and hydrocarbons on the main deck will be stored within continuously bunded areas. o All hydrocarbon containing machinery and equipment on the main deck will be in bunded areas. • With respect to support vessels In compliance with *MARPOL 73/78/97 Annex I Chapter 3, - Requirements for machinery spaces of all ships* o Drainage from machinery space or bunded areas will be collected through a closed drain system and processed through Oil Detection Monitoring Equipment (ODME) prior to discharge to ensure discharge are less than 15 ppm oil-in-water (OIW). o Over-spec (>15ppm) discharge fluids will be re-directed through the ODME again or held for future offloading and onshore disposal. o An alarm system sounds if 15 ppm limit is exceeded. o The Oil Detection Monitoring Equipment (ODME) on the discharge stream will be certified and routinely calibrated to ensure the validity of OIW discharge concentrations overboard. o The oily water treatment system will be maintained in accordance with Manufacturer's specifications via the Vessels Planned Maintenance System • In line with MARPOL 73/78/97 Annex 1 the Atwood Falcon and Support vessels will have an: o Oil Record Book with all oil transfer/movement recorded (this includes bunkering of fuel, collection and disposal of oil residues and discharge overboard or disposal otherwise of bilge water which has accumulated in machinery spaces). o A current SOPEP o A valid International Oil Pollution prevention Certificate • The drill floor/rotary table is fitted with a drip tray/pan to collect mud spillages during drilling activities • Drilling fluids will be stored in bunded areas where collected liquids will be vacuumed and primarily re-used within the muds system, or directed for treatment and appropriate disposal • All Atwood Falcon personnel to complete the Atwood Falcon environmental induction that includes

Hazard	Cause	Potential Impacts	Risk Treatment Avoidance, Mitigation & Management Measures
			information on waste management practices and spill response.
Air emissions	Operation of machinery and engines	Temporary and localised decrease in air quality. Global contribution to greenhouse effect.	• Incineration of waste on board the rig or support vessels will not be permitted during the drilling activity. • All combustion equipment and combustion, is maintained in accordance with Manufacturer's instructions via the vessel's Planned Maintenance System (PMS) and regularly and will comply with MARPOL 73/78/97. • The rig Barge Engineer (or similar) will monitor equipment fuel consumption to ensure equipment efficiency is maintained. • The Atwood Falcon and all support vessels will carry a current International Air Pollution Prevention Certificate (IAPP), compliant to MARPOL 73/78/97 Annex VI as required by the Protection of the Sea (Prevention of Pollution from Ships) Act 1983 Part IIID. This prescribes the sulphur content of fuel used on-board; operational exhaust treatment systems to prevent excessive NOx and SOx emissions; and the allowable feed-streams to, and operational parameters of, any on-board IMO-approved incineration equipment (waste disposal). • Marine Diesel Oil compliant with the MARPOL Annex VI Regulation 14.2 (i.e. sulphur content of less than 3.50%m/m) is the only engine fuel recorded on the fuel bunkering register for rig and support vessels. Controls to be adopted to avoid impacts from ODS emissions include: • Maintenance of closed system rechargeable refrigeration systems on-board vessels is undertaken by qualified personnel in accordance with approved procedures which reduce the leakage potential from the system. • Any repair or maintenance of equipment containing ODS substances or incidents which involve the discharge of ODSs to the atmosphere is recorded in the vessel's Marpol (Annex VI Prevention of Air Pollution from Ships) ODS Record Book.
Interference with other users of the sea	500m exclusion zone.	Temporary loss of fishing area or inconvenience to fishing practices. Fishing gear snags or equipment damage. Navigational hazard and vessel collision.	• The rigs and vessels will be well lit at all times. • The exclusion zone will be patrolled by support vessels to ensure commercial fishers do not enter the exclusion zone. • A 'Notice to Mariners' advising of the presence of the drilling rigs will be issued through Australian Hydrographic Office prior to moving to drilling location. • An AusCoast warning will be issued by the AMSA RCC providing the location of the construction vessels prior to moving to drilling location. • AMSA marine order part 30 – prevention of collisions navigational lighting requirements will be

Hazard	Cause	Potential Impacts	Risk Treatment Avoidance, Mitigation & Management Measures
			adhered to during the duration of the drilling activity on both the Atwood Falcon and support vessels. • Stakeholder consultation with commercial fishing industry representatives has been undertaken; consultation has confirmed that it is unlikely commercial fishing operators will be in this area during the drilling activity.

Table 9-2: Environmental risk assessment summary for unplanned events for Coniston-Novara Development

Hazard	Cause	Potential Impacts	Risk Treatment Avoidance, Mitigation & Management Measures
Solid waste discharges	Waste not properly contained.	Marine pollution. Injury or death of marine fauna through ingestion (e.g. flatback turtles) or entanglement	**Non-Hazardous Solid Wastes** • Apache's Waste Management Guidelines for Drilling Activities (EA-91-II-006) and Atwood Falcon Waste Plan (FAL-HSE-PN-4001) implemented. • MARPOL 73/78 Annex V requires Garbage Management Plan and Garbage Record Book. Atwood Falcon and support vessel Garbage Management Plan (FAL-HSE-PN-4001), Section 6 and Garbage Record Book implemented. • Atwood Falcon and support vessels to have a Garbage Management Plan that is implemented with the following waste management strategies in place : o All recyclable and general wastes to be collected in clearly labelled, covered bins (and compacted where possible) for appropriate onshore disposal. o All scrap metal to be collected in bins for appropriate onshore disposal. • Procurement and contract process will ensure only essential items brought on board the rig in line with well design requirements. • Left-over bulk drilling solids (e.g., barite, bentonite, cement) will not be disposed overboard unless in an emergency situation (e.g. cyclone avoidance) whereby they may have to be vented overboard to enable the rig to move off location. • All Atwood Falcon personnel to complete the Atwood Falcon environmental induction that includes information on waste management practices. • The volume of concrete mixed will be calculated to ensure only that which is necessary for drilling requirements is mixed **Hazardous Solid Wastes** • Segregation of hazardous solid wastes from non-hazardous solid wastes. • Bunding around hazardous waste storage areas are continuous around the entire area. • Disposal onshore using a licenced contractor and waste disposal facility. • All solid hazardous wastes are documented and tracked via waste tracking records. • Apache's Waste Management Guidelines for Drilling Activities (EA-91-II-006) and Atwood Falcon Waste Plan (FAL-HSE-PN-4001) implemented. • Procurement and contract process will ensure only essential items brought on board the rig in line with well design requirements • Atwood Falcon and support vessel Garbage Record Book is maintained. • Atwood Falcon and support vessels to have a Garbage Management Plan that is implemented with the following waste management strategies in place :

Hazard	Cause	Potential Impacts	Risk Treatment Avoidance, Mitigation & Management Measures
			○ All recyclable and general wastes to be collected in clearly labelled, covered bins (and compacted where possible) for appropriate onshore disposal. ○ All scrap metal to be collected in bins for appropriate onshore disposal. • Support Vessels and Atwood Falcon will hold current and valid MSDS available for all chemicals. • All chemicals on support vessels and all chemicals brought onto the Atwood Falcon will have MSDS that are in accordance with the Code of Practice on Preparation of Safety Data Sheets for Hazardous Chemicals (2011). That is: ○ MSDS must be reviewed at least once every 5 years and amend whenever necessary to ensure it contains correct current information; ○ MSDS state the name, Australian address and business telephone number of the manufacturer or importer; and ○ MSDS state an Australian business telephone number from which information about the chemical can be obtained in an emergency. • MSDS and handling procedures for hazardous goods will be available in locations near where wastes are stored. • All Atwood Falcon personnel to complete the Atwood Falcon environmental induction that includes information on waste management practices. • Silos to be filled with bulk dry chemicals to a maximum of 75% capacity to prevent overfilling. • Silo air vents directed down to sea are also closed during bunkering after the air pressure in the silos has equalised to prevent unwanted discharge of bulk chemicals to the marine environment
Hazardous liquid (including wastes) discharges	Burst hose during bunkering Tank or pipework failure Human error Hazardous chemicals and waste not properly contained (spills and	Marine Pollution Short-term reduction in water quality Toxic effects on marine fauna	• The Atwood Falcon personnel must be trained in the DROPS (Dropped Object Prevention Scheme) and Atwood Lifting Tackle Procedures prior to involvement in lifting and offloading of equipment from the rig. • Disposal of controlled waste will follow local government requirements for transportation and disposal: adherence to Environment Protection (Controlled Waste) Regulations 2004. • Adherence to Atwood Falcon waste management procedure. • All hazardous wastes are documented, tracked and segregated from non-hazardous wastes (via waste tracking records). • In line with MARPOL 73/78/97 Annex 1, all shipboard operations on the Atwood Falcon and support vessels associated with oil transfer/movement are recorded in the Oil Record Book (this includes bunkering of fuel, collection and disposal of oil residues and discharge overboard or disposal otherwise of bilge water which has accumulated in machinery spaces). • All hazardous wastes are stored on board the rig in closed and secure storage facilities prior to transport back to shore for disposal/recycling/treatment in accordance with local regulations. • All chemical, hydrocarbon and waste containers will be adequately labelled.

Hazard	Cause	Potential Impacts	Risk Treatment Avoidance, Mitigation & Management Measures
	storage) Dropped Objects		• Drainage of Machinery Space Areas on the Atwood Falcon (as defined in MARPOL 73/78 Annex I Appendix 5 - Discharges from fixed or floating platforms) is closed to the sea and drains to a waste oil storage tank for onshore disposal. The closed drainage system is regulated by a permit-to-work system. • Drainage from bunded machinery space areas on the rigs main deck (eg anchor winches) is collected by a vacuum pump and drained into waste oil storage tanks for onshore disposal. • Wastes will be stored in bunded areas that drain through a closed drain system, and thus reduce the likelihood of any leaks or spills either onto the deck or into the ocean. • If spillage occurs in a bunded area it will be removed and treated as a hazardous or oil waste. • Any spills or leaks will be cleaned up immediately using absorbent material. • Small volume spills from machinery, engines and tanks will be cleaned up on deck and the absorbent materials will be disposed of onshore as a hazardous or oil waste. • In line with MARPOL 73/78 Annex 1, vessels over 400 gross tonnage will have a current SOPEP with the following related mitigation measures in place: o Spill exercises conducted a minimum of every three months and recorded in rig or vessel log. o Spill kit located near high risk spill areas. o Weekly inspection of spill kits is undertaken on support vessels and recorded to ensure they are intact, clearly labelled and contain adequate quantities of absorbent materials. o Spills cleaned up immediately, spill kits re-stocked and clean up material contained, and not washed overboard. o Chemicals and hydrocarbons stored within continuously bunded areas. o Rig decks bunded. Scupper plugs available to prevent liquid discharges from decks. o Drip trays used under portable equipment. o A valid International Oil Pollution prevention Certificate. • Support Vessels and Atwood Falcon will hold current and valid MSDS available for all chemicals. • All chemicals on support vessels and all chemicals brought onto the Atwood Falcon will have MSDS that are in accordance with the Code of Practice on Preparation of Safety Data Sheets for Hazardous Chemicals (2011). That is: o MSDS must be reviewed at least once every 5 years and amend whenever necessary to ensure it contains correct current information; o MSDS state the name, Australian address and business telephone number of the manufacturer or importer; and o MSDS state an Australian business telephone number from which information about the chemical can be obtained in an emergency.

Hazard	Cause	Potential Impacts	Risk Treatment Avoidance, Mitigation & Management Measures
			• MSDS will be located at designated chemical storage areas. • A Hazardous chemical register will be maintained on both the Atwood Falcon and Support Vessels. • Maintenance records on the Atwood Falcon and support vessels indicate that all machinery and equipment containing hydrocarbons have maintenance scheduled on their respective planned maintenance system and are maintained in accordance with manufacturer's maintenance • All personnel to complete the Atwood Falcon environmental induction that includes information on waste management practices.
Spillage of hydrocarbons from machinery, engines and tanks to the sea	Equipment malfunction, corrosion, inadequate bunding	Short-term impact to water quality Impact on pelagic fauna	• Use of marine-grade diesel rather than heavy fuel oil. • Equipment maintained in accordance with Planned Maintenance System. • Adherence with Atwood Falcon and Supply Vessel SOPEPs including: o Spills cleaned up immediately and clean up material contained, and not washed overboard; and o Weekly inspection of spill kits is undertaken and recorded to ensure they are intact, clearly labelled and contain adequate quantities of absorbent materials. • In line with MARPOL 73/78 Annex 1, vessels over 400 gross tonnage will have a current SOPEP with the following related mitigation measures in place: o Spill exercises conducted a minimum of every three months and recorded in rig or vessel log. o Spill kit located near high risk spill areas. o Weekly inspection of spill kits is undertaken on support vessels and recorded to ensure they are intact, clearly labelled and contain adequate quantities of absorbent materials. o Spills cleaned up immediately, spill kits re-stocked and clean up material contained, and not washed overboard. o Chemicals and hydrocarbons stored within continuously bunded areas. o Rig decks bunded. Scupper plugs available to prevent liquid discharges from decks. o Drip trays used under portable equipment. o A valid International Oil Pollution prevention Certificate. • Support Vessels and Atwood Falcon will hold current and valid MSDS available for all chemicals. • All chemicals on support vessels and all chemicals brought onto the Atwood Falcon will have MSDS that are in accordance with the Code of Practice on Preparation of Safety Data Sheets for Hazardous Chemicals (2011). That is: o MSDS must be reviewed at least once every 5 years and amend whenever necessary to ensure it contains correct current information; o MSDS state the name, Australian address and business telephone number of the manufacturer or importer; and o MSDS state an Australian business telephone number from which information about the chemical can be obtained in an emergency. • MSDS will be located at designated chemical storage areas. • A Hazardous chemical register will be maintained on both the Atwood Falcon and Support Vessels.

Hazard	Cause	Potential Impacts	Risk Treatment Avoidance, Mitigation & Management Measures
			• Drip trays used under portable equipment and when refuelling portable equipment. • Rig decks bunded. Scupper plugs available to prevent liquid discharges from decks. • Chemicals and hydrocarbons stored within continuously bunded areas. • All personnel to complete the Atwood Falcon environmental induction that includes information on spill response. • The proposed oil response strategies that may be used in the event of a hydrocarbon spill during drilling activities are provided in Coniston Novara Drilling OSCP (EA-00-RI-208/2).
Spill from ruptured fuel tank	Vessel collision	Surface water diesel slick, with death, physiological or behavioural impacts to marine fauna Decrease in surface water quality	• Surveillance of the 500 m exclusion zone and greater area by support vessel radar watch. • Radio communication between rig, support vessels and other users of the sea. • Consultation with other users, e.g. fishing industry. • Marine Diesel Oil compliant with the MARPOL Annex VI Regulation 14.2 (i.e. sulphur content of less than 3.50%m/m) is the only engine fuel recorded on the fuel bunkering register for rig and support vessels. • In the event diesel is released from a support vessel due to a ruptured fuel tank, the following tier 2 spill response source control activities would be immediately implemented: o Reduce the head of cargo by dropping or pumping the tank contents into an empty or slack tank; o Consider the possibility of pumping water into the leaking tank to create a water cushion to prevent further cargo loss (only if density lower than water); o If the affected tank is not easily identified, reduce the level of the cargo in the tanks in the vicinity of the suspected area if stability of the vessel will not be compromised; o Evaluate the transfer of cargo to other vessels; and/or o Trimming or lightening the vessel to avoid further damage to intact tanks. • Support vessel crew will be experienced and competent to standards required by the International Convention of Standards of Training, Certification and Watch-keeping for Seafarers (STCW95) and/ or AMSA marine orders, seagoing qualifications. • Notification to the following Australian Government agencies will be made prior to moving to the drilling location: o the Australian Hydrographic Office of proposed activity, location (i.e. drill rig location) and commencement date to enable a Notice to Mariners to be issued; and o the AMSA RCC of proposed activity, location (i.e. drill rig location) and commencement date to enable a AusCoast warning to be issued.

Hazard	Cause	Potential Impacts	Risk Treatment Avoidance, Mitigation & Management Measures
Spill during refuelling	Equipment failure. Loss of hose control during at-sea refuelling. Support vessel runs over refuelling hose.	surface water diesel slick, with death or physiological impacts on sensitive species such as planktonic crustaceans. Decrease in surface water quality.	• Fully manned operation. • Refuelling to occur under suitable weather conditions and subject to Barge Engineer and Supply Vessel Captain's agreement transfer shall be conducted only during daylight hours. • Marine diesel will be the only fuel type used by the support vessels. • Dry-break refuelling hose couplings and hose floats will be installed on the refuelling hose assembly. • In the event the refuelling pipe is ruptured the fuel bunkering activity will cease by turning off the pump. • Drains closed in fuel transfer areas to contain spills. • Adequate bunding beneath the refuelling hose connections on the supply vessel and the rig. • Diesel storage tanks and fuel transfer hoses will be maintained on the rig and vessels in line with the planned maintenance systems (RigMax). • Rig personnel involved with refuelling will follow Atwood Falcon Safe Work Procedure – Transfer of fuel oil and other hydrocarbons from vessels to rig, from rig to vessels (DR-91-ID-001) with adherence to the procedure reflected in a Permit to Work for the refuelling activity. • Refuelling hoses on the Atwood Falcon will be replaced every six months. • Atwood Falcon and support vessel SOPEP • Atwood Falcon Safety Case (FAL-HSE-SC-10002) and Safety Case Revision (DR-00-RF-039) in place. • MARPOL 73/78/97 Annex I (Regulations for the prevention of pollution by oil) • Atwood Falcon and support vessels have valid and current International Oil Pollution Prevention Certificates • In line with MARPOL 73/78 Annex 1, vessels over 400 gross tonnage will have a current SOPEP with the following related mitigation measures in place: o Spill exercises conducted a minimum of every three months and recorded in rig or vessel log. o Spill kit located near high risk spill areas. o Weekly inspection of spill kits is undertaken on support vessels and recorded to ensure they are intact, clearly labelled and contain adequate quantities of absorbent materials. o Spills cleaned up immediately, spill kits re-stocked and clean up material contained, and not washed overboard. o Chemicals and hydrocarbons stored within continuously bunded areas. o Rig decks bunded. Scupper plugs available to prevent liquid discharges from decks. o Drip trays used under portable equipment and when refuelling portable equipment. • A valid International Oil Pollution Prevention certificate (IOPP). • Coniston Novara Phase I Drilling OSCP (EA-00-RI-208/2) • Atwood Falcon and vessel SOPEPs
Hydrocarbon Spill Response	Spill to marine environment	Increased emissions, light, noise; Reduction in water quality Continued release of	Management controls for activities and associated hazards have been previously described above relating to: • Artificial lights and noise associated with response vessels and aircraft • Movement of response vessels to minimise disturbance to marine fauna • Planned discharges from response vessels • Release of air emissions from response vessels and aircraft

Hazard	Cause	Potential Impacts	Risk Treatment Avoidance, Mitigation & Management Measures
		hydrocarbon into the pelagic environment, with death or physiological impacts to sensitive species.	• Interference with other users of the sea during operation of response vessels • Unplanned liquid waste discharges that may occur from response vessels • Unplanned hydrocarbon spills that may arise from response vessels

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