WOOLLYBUTT FIELD ENVIRONMENT PLAN SUMMARY – DECOMMISSIONING PHASES I & II

	00	05/12/13	Issued for information	TLU	SGAJ	MMCC		
Validity Status / Revision index	Rev. Number	Date	Description	Prepared by	Checked by	Approved by	Contractor Approval	Company Approval

eni australia	Project name	Company identification **000105_DV_PR.HSE.1060.000** Job N. ___
		Contractor identification Contract ___
(Vendor logo and business name)		Vendor identification ..... Order N.....

Facility Name	Location	Scale	Sheet of Sheets
WOOLLYBUTT	Australia WA-25-L	1:1	1 / 22

Document Title		
WOOLLYBUTT FIELD ENVIRONMENT PLAN SUMMARY – DECOMMISSIONING PHASES I & II	Supersedes N..... Superseded by N.....	
	Plant Area	Plant Unit

REVISION HISTORY

Rev.	Date	Nr. of sheets	Description
00	05/12/13	22	Issued for Information

TABLE OF CONTENTS

TABLES

FIGURES

1. INTRODUCTION

The Woollybutt Field is located off the northwest coast of Western Australia in Permit Area WA-25-L (Figure 2.1). During production, the field development consisted of four subsea wells (WB1, WB2A, SB1 and WB4) that produced through subsea wellheads and flexible flowlines to a Floating Production, Storage and Offloading (FPSO) facility. Production at the field ceased in May 2012 with the FPSO departing from the field in June 2012. The field is now being prepared for decommissioning.

Asset ownership in the field is divided between:

- The Woollybutt Joint Venture; and
- Four Vanguard Services E Navegacao (FVSN) (formerly known as Australian FPSO Management (AFM).

The Woollybutt Joint Venture comprises of:

- Eni (65%);
- Mobil Oil Australia Pty Ltd (ExxonMobil) (20%); and
- Tap Oil Limited (15%).

Eni Australia Limited (Eni) proposes to undertake Phase I and II of the decommissioning programme, which includes decommissioning of FPSO ancillary equipment (not including wellheads) and in-field surveys. Wellhead and remaining Eni subsea equipment will be decommissioned during Phase III of the decommissioning programme, which will be addressed separately in a future Environment Plan (EP) and summary document.

An EP for Phase I and II decommissioning activities was prepared in accordance with the requirements of the Offshore Petroleum & Greenhouse Gas (Environment) Regulations 2009 (OPGGS(E) Regulations). The EP was reviewed and accepted by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) in November 2013. This EP summary document has been prepared and submitted to NOPSEMA in accordance with Regulation 11(7) of the OPGGS(E) Regulations.

2. LOCATION OF ACTIVITY

The Woollybutt Field is located in Permit Area WA-25-L (Carnarvon Basin), approximately 65 km north of Onslow and 35 km west of Barrow Island, as shown in Figure 2.1. It lies on a continental shelf in 100 m water depth.

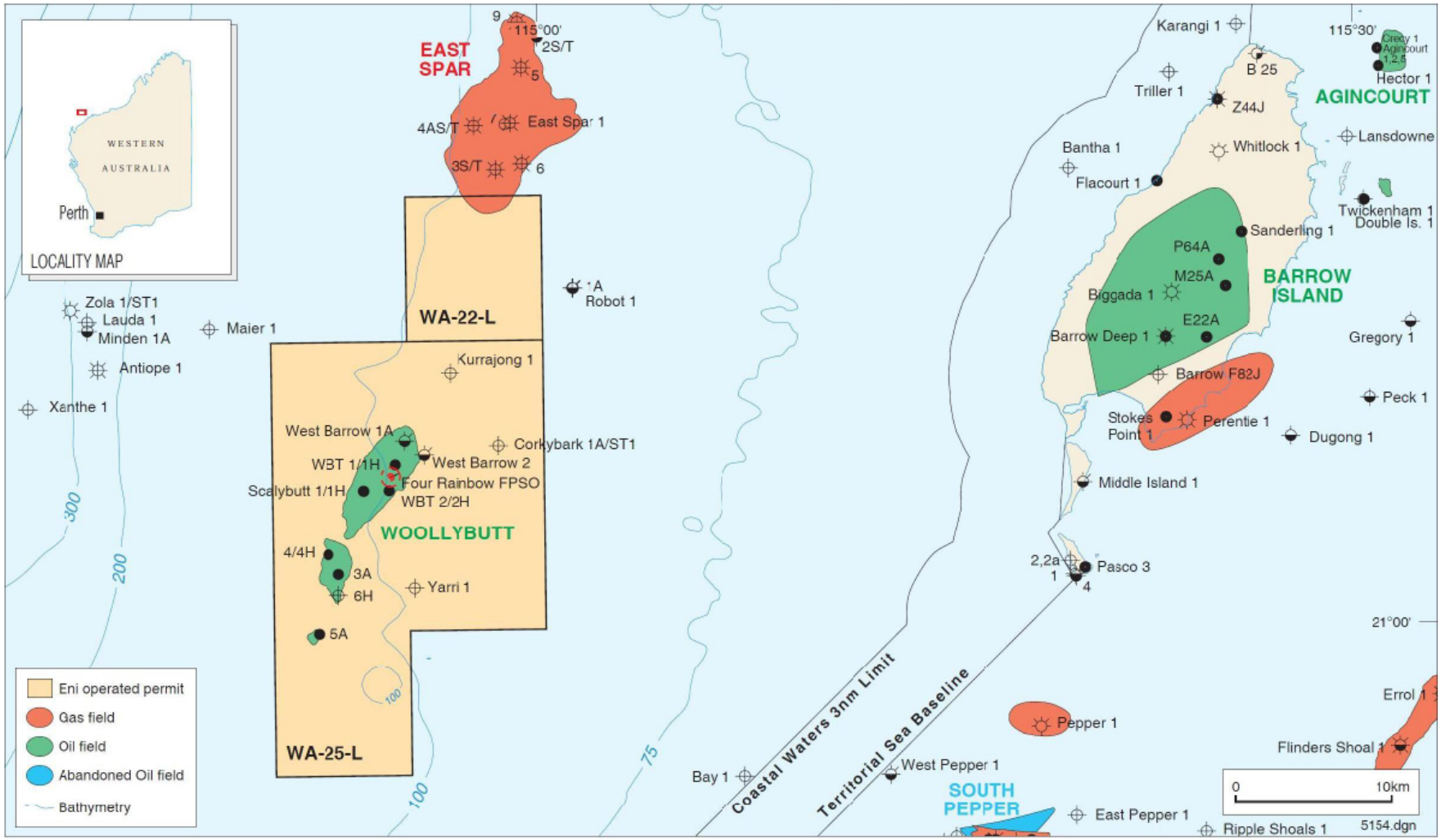

Figure 2.1: Location of the Woollybutt Field in WA-25-L

3. DESCRIPTION OF ACTIVITY

The Phase I and Phase II decommissioning activities are anticipated to occur in the second half of 2014, subject to availability of a suitable vessel and support equipment.

Phase I decommissioning activities will comprise the following:

- Pre-decommissioning survey;
- Retrieval of FPSO ancillary equipment; and
- Post-decommissioning surveys.

Phase I activities will use one of the following vessel options:

- A single dynamically positioned Multifunction Support Vessel (MSV) (decommissioning facility), with one supply vessel ; or
- A mooring spread consisting of:
  - A construction barge;
  - Two Anchor Handling Tugs (AHT); and
  - One supply vessel.

Phase II decommissioning activities comprise investigative studies including in-field survey(s) to assess the condition of remaining wellheads and determine the requirements for Phase III decommissioning of wellhead and subsea equipment.

4. DESCRIPTION OF RECEIVING ENVIRONMENT

4.1 Physical Environment

The Woollybutt Field is located within the Commonwealth waters of the North West Shelf Province (NWSP) bioregion, on a continental shelf in water depths of approximately 100 m. The NWSP bioregion extends primarily from the shelf between North West Cape and Cape Bougainville, and occupies an area of 238,759 km2 (DEWHA, 2008).

The outer continental shelf of the NWSP bioregion, where the Field is located, is predominantly flat and featureless and comprised of carbonate sands (Baker et al., 2008). To the north-west, the water deepens gradually across the outer continental shelf before falling more steeply to form the continental slope. To the east, the seafloor shallows slowly before rising to form the shoals and islands that include Barrow Island and the Montebello Islands, located to the north-east (Figure 2.1).

Tides are semi-diurnal with ranges of about 1 m on neap tides, increasing to 2.5 m on spring tides (AEL, 2010). Tidal movement is generally east-west at 0.1 m/s (AEL, 2010). In contrast to tidal currents, surface wind-driven currents range up to 0.8 m/s.

4.2 Biological Environment

Macroalgae is the most dominant and extensive benthic primary producer habitat in the Montebello/Barrow islands region. Macroalgae assemblages mainly comprise species of brown algae, particularly of the genera Sargassum, Turbinaria and Padina, while green algae from the genera Caulerpa and Cladophora are also abundant (DEC, 2006). Coral reefs are an important component of the marine environment in the Lowendal–Montebello Islands areas but non-existent in the locality of the Woollybutt Field, with depths and lack of light penetration precluding growth of coral species.

A survey of the seafloor observed sponges, gorgonians (sea whips and sea fans), soft corals, crinoids (feather stars), ophiuroids (brittle stars), crustaceans (e.g. hermit crabs) and bryozoans (lace corals). The predominant infauna recovered from sediment samples were burrowing and tube-dwelling polychaete worms, brittle stars, gastropods and bivalves (molluscs) and amphipods (crustaceans) (URS, 2001).

A review of the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) database (Protected Matters Search Tool) identified a number of listed threatened and migratory species could occur in the offshore waters surrounding the Field, including:

- Two birds, with one listed as Endangered (Southern giant-petrel);
- Eight marine mammals, including seven whale and one dolphin species, with two listed as Endangered (Blue whale, Southern right whale) and one Vulnerable (Humpback Whale);

- One seasnake, the Short-nosed seasnake, which is listed as Critically Endangered
- Five turtles, with two listed as Endangered (Loggerhead, Leatherback) and three listed as Vulnerable (Hawksbill, Flatback, Green Turtle); and
- Three sharks, with one listed as vulnerable (Whale Shark).

4.3 Socio-economic environment

The level of human activity in the vicinity of the field is low. Onslow, located 65 km to the south of the Field, is the nearest mainland town with a population of approximately 800 (Shire of Ashburton, 2012). Most shipping that occurs in the vicinity of the Field is associated with the oil and gas industry. The nearest major ports are the Dampier and Port Hedland ports and vessel point density analysis conducted by Australian Maritime Safety Authority (AMSA) for 2011 indicates the field is located outside of local shipping lanes of the North West Shelf, and vessel density in the vicinity of the field is low (i.e. ≤5 vessel reports per km2) (AMSA, 2012).

Commercial fisheries that operate in the waters of the NWSP are centred in Onslow, Exmouth and Dampier. The focus of commercial fishing activity is mainly the inner continental shelf and waters surrounding the offshore islands to depths of about 30 m.

A small tourism industry is important in the area, but is mainly oriented towards fishing in the waters near coastal islands. No recreational fishing is known to occur in the deep waters around the Field. However, occasional tourist and fishing charter vessels may pass through the area in transit between Exmouth and the Montebello Islands.

The North West Shelf is a well developed petroleum region, supporting a large number of operating oil and gas fields, along with a number of proposed developments under construction and exploration and appraisal of prospective areas.

4.4 Conservation Interests

The Field is not located within any Commonwealth marine reserves or conservation zones. Existing State Marine Protected Areas in the region include the Ningaloo Marine Park (State), the Barrow Island Marine Management Area and the Rowley Shoals Marine Park. Of these, the closest to the field is the Barrow Island Marine Management Area, the boundary of which is approximately 25 km east of the permit area.

The closest Commonwealth marine reserves to the Field are the Ningaloo Marine Park and the proposed Montebello Commonwealth Marine Reserve. The proposed Montebello Commonwealth Island Marine reserve is located more than 50 km to the north east.

There are no National Heritage Places in the vicinity of the Woollybutt Field.

5. ENVIRONMENTAL RISK ASSESSMENT

All risks were assessed using Eni's Risk Management and Hazard Identification procedure (ENI-HSE-PR-001) and associated environmental risk matrix. With controls in place, all risks were ranked as Low and therefore deemed acceptable. The following table summarises key aspects associated with the proposed decommissioning programme and the control measures that will be implemented to prevent or reduce impacts to as low as reasonably practicable (ALARP).

The environmental hazards and control measures to be applied are summarised in Table 5.1.

Table 5.1: Summary of environmental hazards and control measures to be applied

Source of risk	Potential impact	Control measure
Disturbance to marine fauna		
Underwater noise / vibration	• Behavioural change in marine fauna (localised avoidance/attraction). • Hearing impartment and pathological damage to marine fauna.	• Vessels will not approach within 300 m of a cetacean, in accordance with the EPBC Regulations 2000 and the Australian National Guidelines for Whale and Dolphin Watching (DEH, 2005). • Vessel engines maintained as per Vessel Maintenance System. • Compliance with Eni Environmental Standards (ENI-HSE-ST-035) relating to protected species. • Induction of all personnel to include the requirement to report cetacean sightings. • Support vessel operations pre-planned in detailed Decommissioning Operations Plan to optimise support operations and reduce vessel transits.
Light	Localised attraction / deterrence of marine biota, particularly marine turtles and seabirds.	• Minimum lighting in accordance with the Navigation Act 2012 (Marine Orders Part 30 [Prevention of Collisions]) and Vessel Safety Case. • Induction training will be provided to all crew and visitors stating not to disturb wildlife, to reduce non-essential lighting, and report any sightings to the HSE advisor.
Vessel collision with a cetacean or turtle.	Death or injury to a cetacean or turtle.	• Support vessel requirements will be pre-planned in a detailed Decommissioning Operations Plan to minimise required vessel transits to and from the field. • Short duration of surveys, low speed operation and limited vessel movements. • Vessels will not approach within 300 m of a cetacean, in accordance with the EPBC Regulations 2000 and the Interaction with Marine Fauna Guidelines (DEH, 2005).
Introduction of marine pests via hull fouling of decommissioning facility and support vessel(s) or ballast water discharge.	Introduction and establishment of invasive marine pests resulting in changes to benthic communities.	• All vessels will comply with National Biofouling Management Guidance for the Petroleum and Exploration Industry, and Australian Ballast Water Requirements (DAFF, 2011). • Australian Quarantine and Inspection Service (AQIS) inspection prior to entering Australian waters, and records of QPAR submitted to AQIS prior to entry into Australian waters onboard vessel. • All vessels to have AQIS certification and an anti-fouling coating in compliance with Annex I of the International Convention on the Control of Harmful Anti-Fouling Systems on Ships. • Ballast water from a foreign port will not be discharged into Australian waters less than 200 m deep or within 12 nm from land. • Ballast water and biofouling records will be maintained onboard all vessels.

Source of risk	Potential impact	Control measure
Seabed disturbance		
Seabed disturbance during anchoring (if required).	Loss of benthic communities due to localised smothering.	• In-field survey conducted during Phase I will identify any areas of significant marine growth or significant seabed features to avoid. • Vessel Anchoring Procedures and Mooring Analysis to reduce anchor drag.
Seabed disturbance during equipment retrieval.	Loss of benthic communities due to excavation/gouging.	• In-field survey conducted during Phase I will identify any areas of significant marine growth or significant seabed features to avoid. • Detailed Decommissioning Operations Plan/Lifting Procedures in place to optimise operations and minimise seabed disturbance.
Discharges		
Overboard discharge of potentially contaminated deck drainage.	• Toxicity effects on marine biota. • Adverse effects on water quality.	• Any spill onboard vessel will be managed in accordance with the SOPEP. • Crew trained in housekeeping and spill response requirements and responsibilities. • Spill response kits are available onboard all vessels and are kept fully stocked. • Use of low toxicity, biodegradable detergents. • All vessels hold a current International Oil Pollution Prevention (IOPP) Certificate. • Deck drains on all vessels routed to a holding tank for onshore disposal or an oily water separator and monitored for Oil in Water (OIW) content prior to discharge. • Discharge OIW content of <15mg/l or less in accordance with MARPOL 73/78 Annex I and vessel Waste Management Procedures, oily water separator alarmed and discharge ceases if this limit is breached. • Vessel Chemical Handling Procedures and Safety Data Sheet (SDS) adhered to and chemicals stored in bunded areas.
Discharge of cooling water and reject (brine) water.	• Temporary and localised increases in sea water temperature and salinity • Temporary and localised reduction in water quality (e.g., dissolved oxygen content) and toxicity to marine biota from biocides.	• The cooling water system is a segregated system, with no hydrocarbons or chemical content. • Use of low impact biocides (predominantly chlorine) and optimised concentrations in the cooling system. • Regular monitoring of the coolant system to ensure that waste water discharge temperatures remain within operational limits.

Source of risk	Potential impact	Control measure
Discharge of sewage, grey water and putrescible wastes.	Adverse effects on water quality and nutrient enrichment. Resulting in toxicity to marine biota and biostimulation of the water column.	• Vessels will have an International Sewage Pollution Prevention Certificate (ISPP) and certified sewage treatment plant or facilities onboard. • All sewage will be macerated to <25 mm, treated and discharged in accordance with MARPOL Annex IV (Regulation 11). • All food scraps and putrescible wastes to be macerated to <25 mm and discharged in accordance with MARPOL Annex V (Regulation 3). • Sewage and putrescibles wastes will be discharged >12 nm from land.
Solid and hazardous waste		
Generation and disposal of non-hazardous waste.	• Toxicity or physical effects on marine biota. • Adverse effects on water quality.	• All wastes managed in accordance with the Waste Management Plan and recorded in the Vessel Waste Manifest. • All wastes collected and segregated in clearly marked containers stored in bunded area. • All bins on deck will be covered to prevent rubbish blowing overboard. • All solid wastes will be returned to shore for appropriate disposal and a licensed onshore facility. • Records maintained of waste volumes generated and transferred for onshore recycling and disposal. • Any release of waste to the marine environment recorded as an environmental incident and reported accordingly. • Induction of all personnel to include waste management procedures.

Source of risk	Potential impact	Control measure
Waste oil and chemical (hazardous) waste disposal.	Adverse effects on water quality resulting in toxicity to marine biota.	• All hazardous wastes managed in accordance with the Waste Management Plan and MARPOL 73/78 Annex V – Prevention of pollution by garbage from ships. • All hazardous wastes collected and segregated in clearly marked containers stored in bunded area. • All bins on deck will be covered to prevent rubbish blowing overboard. • All hazardous wastes will be returned to shore for appropriate disposal and a licensed onshore facility. • Records maintained of hazardous waste volumes generated and transferred for onshore recycling and disposal. • Any release of hazardous waste to the marine environment recorded as an environmental incident and reported accordingly. • All chemical and waste oil hazardous wastes will be treated according to SDS and Chemical Handling Procedures. • Induction of all personnel to include waste management procedures.
Atmospheric emissions		
Atmospheric emissions from combustion engines.	Localised reduction in air quality resulting in adverse impacts to wildlife.	• All equipment and machinery will undergo regular planned maintenance to manufacturer's specifications to ensure operating at optimal efficiency. • All vessels will hold a current International Air Pollution Prevention (IAPP) Certificate, in accordance with MARPOL 73/78 Annex VI. • Selection of low sulphur diesel (where appropriate) in line with MARPOL 73/78 Annex VI requirements to minimise SOx emissions.
Release of ozone depleting substances (ODS) to atmosphere.	Global contribution to greenhouse gases.	• All equipment and machinery containing ODS will undergo regular planned maintenance to manufacturer's specifications to ensure operating at optimal efficiency. • An ODS inventory shall be maintained and reviewed to ensure compliance with MARPOL Annex VI (Regulation 12). • All vessels to have a licence for handling ODS. • There will be no discharge of ODS except in the case of an emergency. • Any release of ODS will be recorded as an environmental incident and treated accordingly.

Source of risk	Potential impact	Control measure
Socio-economics		
Interference with commercial fishing operations through physical presence (i.e. decommissioning facility and remaining wellhead equipment).	Disruption to commercial fishing vessels.	• Low numbers of vessels operating in the area, fishing effort concentrated landward of the field location. • Ongoing consultation with commercial fishing organisations. • Marine safety notices, Notice to Mariners, issued through AMSA • Communication maintained with any vessels in the area. • The designation of a 500 m exclusion zone around the DSPM and well heads. • Vessel cautionary zone during Phase I and II activities, when the decommissioning facility is on site at the field location. • Appropriate navigation lights and markers will be displayed. • Ongoing consultation with relevant fisheries and fishing organisations throughout the Phase I and II decommissioning programme.
Interference with recreational vessels or tourism operations through physical presence (i.e. decommissioning facility and remaining wellhead equipment).	Demonstrable disruption to recreational users.	• No known recreational vessels utilise the permit area on a frequent basis.
Interference with commercial shipping through physical presence (i.e. decommissioning facility and remaining wellhead equipment).	Disruption to shipping routes.	• Marine safety notices, Notice to Mariners, issued through AMSA • Communication maintained with any vessels in the area. • The designation of a 500 m exclusion zone around the DSPM and well heads. • Vessel cautionary zone during Phase I and II activities, when the decommissioning facility is on site at the field location. • Appropriate navigation lights and markers will be displayed.
Interference with Defence Activities.	Disruption to defence training and operational activities.	• No defence activities occur within or near the field area.

Source of risk	Potential impact	Control measure
Interference with marine protected areas (MPA).	Disruption to conservation values of marine parks or protected areas.	• No marine parks or reserves occur within or near the field area. The nearest MPA is located approximately 25 km east of the field. No impacts are expected to occur within the MPA. • Routine discharges are expected to disperse to below toxicity levels rapidly and not reach any MPA.
Uncontrolled events		
Disconnection of umbilicals resulting in release of hydraulic fluids and scale inhibitor.	Adverse effects on water quality resulting in toxicity to marine biota.	• The hydraulic fluid used is low toxicity, water-based and in low volumes. • The scale inhibitor used is low toxicity and in low volumes. • Preferential disconnection at self-sealing connections.
Disconnection of risers / flowlines resulting in release of multi-function inhibitor and remnant hydrocarbons.	Adverse effects on water quality resulting in toxicity to marine biota.	• Low volume and concentration of multi-function inhibitor used. • Flowlines flushed to residual hydrocarbon concentrations below toxicity levels to marine biota (<30 ppm).
Release of Naturally Occurring Radioactive Material (NORM) from disconnected production flowlines.	Adverse effects on water quality resulting in toxicity to marine biota.	• Scale inhibitors used during operations have limited scale build up (NORM kept in suspension and processed through Produced Formation Water (PFW) management). • NORM investigation conducted in 2008 showed little scale build up in flowlines. • Optimal scale inhibitor dosage has been shown to prevent scale build up. • ROV assessment of presence of scale build up upon disconnection of production flowlines. • Plugging/capping of flowlines to be undertaken if ROV confirms presence of scale.

Source of risk	Potential impact	Control measure
Release of hydrocarbons due to impact on remaining well heads from dropped objects.	Negligible impacts determined from oil spill modelling.	• Dropped object analysis for work in the vicinity of wells utilised to define the appropriate lifting methodology. • Closed Surface Controlled Sub Surface Safety Valves. • Two independent tested barriers in the Xmas Tree. • Known well fluid characteristics. • Known well behaviour utilised to model the well inventory. • Ongoing satellite monitoring to detect oil spills in the area • Model the scenario and confirm negligible impact risk.
Release of Woollybutt well fluids from corrosion of subsea equipment	Negligible impacts determined from oil spill modelling.	• Maintain Xmas tree certification • Cathodic protection survey during Phase II in-field survey • Anodes are maintained and replaced (if required) in accordance with certification requirements
Vessel collision resulting in fuel tank rupture and release of diesel.	Acute and chronic toxic effects to sensitive marine biota.	• Risk of vessel collision managed via the Vessel Safety Case to ALARP. • Radar for approaching vessel detection. • 24 hour manned bridge. • Vessel cautionary zone in place, as per Vessel Safety Case. • Radio contact maintained with nearby vessels. • 500 m zone Notification to NOPSEMA and AMSA and mariners. • 500 m exclusion zone around the subsea equipment.
Outboard leaks of hydraulic fluids (e.g., control lines, ROVs).	Acute and chronic toxic effects to sensitive marine biota.	• Low toxicity hydraulic fluids used. • Pre-dive checks. • Preventative maintenance in line with the Vessel Safety Case.

6. OVERALL MANAGEMENT APPROACH

Eni is committed to achieving the highest practicable standard of environmental protection and this commitment is documented in the Eni Health, Safety and Environment (HSE) Policy. This policy is supported by Eni's ISO14001:2004 certified HSE Integrated Management System (IMS) which provides audited assurance of a best practice environmental management system based on continual improvement. The following plans have been developed to manage the risks described in this summary:

- Woollybutt Field Environment Plan – Decommissioning Phases I and II (000105_DV_PR.HSE.1011.000); and
- Woollybutt Decommissioning Oil Spill Contingency Plan (000105_DV_PR.HSE.1012.000).

Eni conducts operations in accordance with the above plans and its internal policies and management systems. In addition to implementing risk controls, the operation will comply with key requirements and legislation, including (but not limited to):

- Offshore Petroleum and Greenhouse Gas Storage Act 2006 and the associated OPGGS(E) Regulations;
- IMO 'Guidelines for the Control and Management of Ships' Biofouling' 2012
- MARPOL 73/78, as enacted under Protection of the Sea (Prevention of Pollution from Ships) Act 1983; and
- APPEA Code of Environmental Practice.

Specific responsibilities identified with respect to environmental management arrangements (i.e. control implementation) are assigned in the accepted EP's implementation strategy. This will help ensure that the environmental risks associated with the decommissioning programme are maintained at a level which is ALARP.

Environmental performance objectives are defined for each environmental aspect. These objectives are monitored and reviewed against key performance standards to ensure environmental outcomes are achieved during the decommissioning programme.

Monitoring of environment performance will be undertaken in a number of ways, including the use of the following tools and systems:

- Internal reporting, including daily (e.g. fuel inspection logs) and as required (e.g. waste manifest, incident reports etc.);
- External reporting, such as regulatory reporting (e.g. Environmental Compliance Report);
- Scheduled inspections; and

- Auditing and assurance of operating facilities.

Environment incidents will be investigated to identify prevention measures. Incidents will be reviewed to promote on-going environmental awareness. The relevant Regulator (i.e. NOPSEMA or AMSA) will be notified of all reportable incidents.

All Eni and contractor personnel will receive training on their environmental responsibilities in connection with the decommissioning campaign. The environmental induction will instruct personnel on the issues and management actions identified in the EP.

7. CONSULTATION

Stakeholder assessment was undertaken to identify potentially affected and interested stakeholders based on the field location, proposed activities and timing.

A consultation fact sheet was sent electronically to all identified stakeholders prior to lodgement of the EP to NOPSEMA for assessment and approval. This was supported by engagement with potentially affected stakeholders, relevant regulators and industry associations.

The primary issue arising from consultations with all of the stakeholders was the removal or otherwise of part or all of the equipment from the seafloor.

Eni will continue to accept feedback from stakeholders during the decommissioning programme. During decommissioning, regular Communications Bulletin will be issued to AMSA, defence and fisheries.

8. CONTACT DETAILS

The nominated contact person for this proposal is:

Rob Phillips
Senior Environmental Advisor
Eni Australia Ltd
Tel: (08) 9320 1541
Email: rob.phillips@eniaustralia.com.au

9. REFERENCES

[1] APACHE ENERGY LIMITED (AEL) (2010). HALYARD DEVELOPMENT EPBC REFERRAL. VIEWED ONLINE JULY 2012: <HTTP://WWW.ENVIRONMENT.GOV.AU/CGIBIN/EPBC/EPBC_AP.PL?NAME=CURRENT_REFERRAL_DETAIL&PROPOSAL_ID=5611>.

[2] AUSTRALIAN MARITIME SAFETY AUTHORITY (AMSA) (2012). AIS POINT DENSITY ANALYSIS. NORTH WEST CAPE TO DAMPIER, WESTERN AUSTRALIA. PREPARED MARCH 2012.

[3] BAKER, C., POTTER, A., TRAN, M. AND HEAP, A. (2008). SEDIMENTOLOGY AND GEOMORPHOLOGY OF THE NORTHWEST MARINE REGION. A SPATIAL ANALYSIS. GEOSCIENCE AUSTRALIA RECORD 008/07.

[4] BUREAU OF METEOROLOGY (2012). CLIMATE STATISTICS FOR AUSTRALIAN LOCATIONS (PIRLANGIMPI). AUSTRALIAN GOVERNMENT, CANBERRA. VIEWED JUNE 2012 AT: <HTTP://WWW.BOM.GOV.AU/CLIMATE/AVERAGES/TABLES/CW_014142.SHTML>.

[5] DEPARTMENT OF ENVIRONMENT AND CONSERVATION (DEC). (2006). MANAGEMENT PLAN FOR THE MONTEBELLO/BARROW ISLANDS MARINE CONSERVATION RESERVES 2007-2017. GOVERNMENT OF WESTERN AUSTRALIA, PERTH, WESTERN AUSTRALIA.

[6] DEPARTMENT OF ENVIRONMENT AND HERITAGE (2005). AUSTRALIAN NATIONAL GUIDELINES FOR WHALE AND DOLPHIN WATCHING 2005. AUSTRALIAN GOVERNMENT, CANBERRADEWHA, 2008.

[7] URS (2001). WOOLLYBUTT FIELD DEVELOPMENT ENVIRONMENTAL FIELD INVESTIGATION (DRAFT). REPORT PREPARED FOR ENI AUSTRALIA LIMITED BY URS, PERTH, WESTERN AUSTRALIA. DOCUMENT NUMBER WIN-0000-RN-0001.