

29 November 2022

Ministry of Environment, Forestry and Tourism
Department of Environmental Affairs
Private Bag 13346
Windhoek
Namibia

ATTENTION: Mr Timo Mufeti (Environmental Commissioner)
Mr. D Nchindo

Dear Mr Mufeti and Mr Nchindo

ECC RENEWAL APPLICATION: WINDHOEK PEL28 B.V.'S PROPOSED OFFSHORE EXPLORATION WELL DRILLING IN PETROLEUM EXPLORATION LICENCE (PEL) 83, ORANGE BASIN, NAMIBIA

1. Introduction

Windhoek PEL28 B.V. is a Joint Venture between the block partners, namely GALP Energia S.A. ("GALP"), the National Petroleum Corporation of Namibia (NAMCOR) and Custos. GALP holds an 80% controlling interest in PEL 83, while NAMCOR and Custos each hold 10%. GALP is currently the operator of PEL 83.

Windhoek PEL28 B.V. is proposing to drill one or possibly two exploration wells in PEL83. The proposed exploration wells would be drilled in PEL 83, which is located in the Orange Basin off the coast of Namibia (see Figure 1). PEL 83 covers an area of approximately 9 954 m² and is located between 130 km and 250 km from the coastline in water depths ranging from approximately 500 m to 2 500 m.

In 2019, Windhoek PEL28 B.V. applied for an Environmental Clearance Certificate (ECC) for the above mentioned activity, with the successful completion of an EIA process and the submission of an EIA Report and Environmental and Social Management Plan (ESMP). The Application and associated reports (including the ESMP) was approved by your Good Office and an ECC issued on the 27th of April 2020.

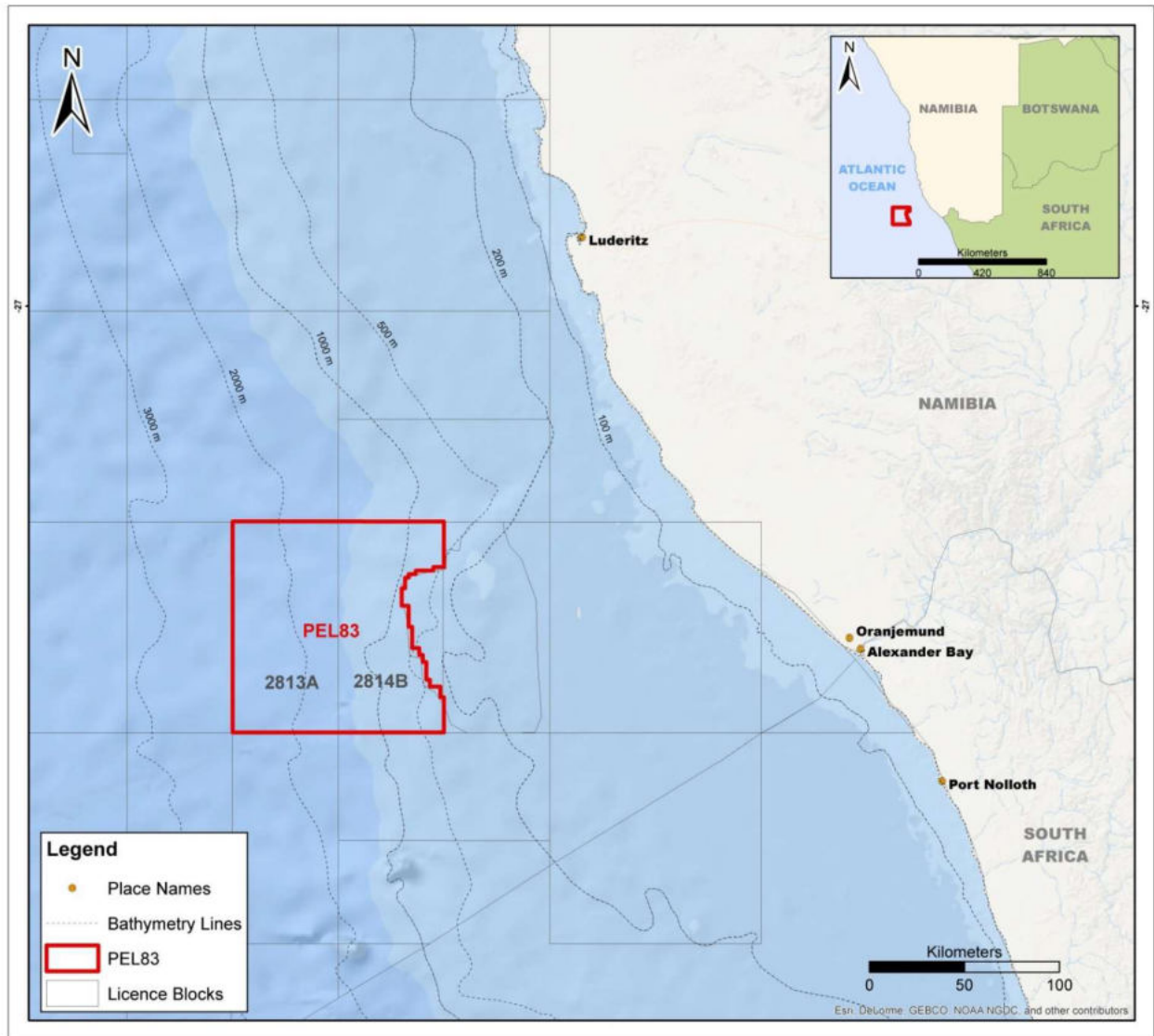


FIGURE 1: LOCATION OF PEL83 OFF THE COAST OF NAMIBIA (SLR, 2019)

To date, Galp has not carried out the proposed offshore exploration well drilling, and associated activities, in PEL 83. Galp has, however, followed up the latest activity in Namibia with a complete review of the potential in the acreage. This led to the identification of new drilling targets, already presented to the JV partners and the Ministry of Mines and Energy but which are still being matured to maximize the probability of success. The decision on the final well location has been made based on a number of factors, including further detailed analysis of the seismic data, the geological target, etc. Galp is therefore currently preparing the necessary pre-well activities to minimize any potential risks, including a Shallow Hazard study over the area and an Environmental Baseline Survey over the location.

Drilling is proposed to start Q4 2023 / Q1 2024. The uncertainty is due to rig availability as Galp is on the market looking for alternatives.

The (above mentioned) ECC for the proposed offshore exploration well drilling in PEL 83 has a three year validity period, which expires on the 27th of April 2023, hence this ECC renewal Application.

2. ECC Renewal Application

Windhoek PEL28 B.V. appointed Namisun Environmental Projects and Development (Namisun) to assist with the ECC renewal application. The request for a renewal of the existing ECC is to meet the conditions of Section 57 of the Environmental Management Act of 2007 and its Regulations. Namisun assumes as part of this this letter and renewal application that the proposed exploration activities remain similar (as previously assessed and approved) and that the ESMP commitments remain applicable (see Appendix C).

Attached to this letter are the following supporting documents:

- **Appendix A** – Application Form (Renewal application for the ECC).
- **Appendix B** – Current ECC for the (Windhoek PEL28 B.V.) offshore exploration well drilling in PEL 83 (17 October 2019).
- **Appendix C** – Approved ESMP (2019).

The ESMP was previously included as chapter 10 of the final EIA Report. The ESMP was recently converted to a 'stand-alone' document. All the original commitments (previously developed as an outcome of the EIA process and approved) remain relevant.

3. Environmental Performance Reports

Windhoek PEL28 B.V. has not yet prepared any Environmental Performance Reports (i.e. to provide feedback to the relevant Ministries on their performance against the commitments in the ESMP). This is due to the fact that the proposed offshore exploration well drilling, and associated activities, in PEL 83 still need to commence.

Please let us know if there is any further information that your Department might require to enable you to renew the ECC for Windhoek PEL28 B.V.

Yours sincerely,



Werner Petrick

APPENDIX A:
APPLICATION FORM (RENEWAL APPLICATION FOR THE ECC)

APPENDIX B:
ENVIRONNEMENTAL CLEARANCE CERTIFICATE

APPENDIX C:

2022 EMP

REPUBLIC OF NAMIBIA ENVIRONMENTAL

MANAGEMENT ACT, 2007 (Section 32)

APPLICATION FOR ENVIRONMENTAL CLEARANCE CERTIFICATE

Revenue
stamp or
revenue
franking
machine
impression

RENEWAL APPLICATION:

WINDHOEK PEL28 B.V.

ENVIRONMENTAL CLEARANCE CERTIFICATE FOR THE
PROPOSED OFFSHORE EXPLORATION WELL DRILLING IN
PETROLEUM EXPLORATION LICENCE 83, ORANGE BASIN, NAMIBIA

PART A: DETAILS OF APPLICANT

APPLICATION INFORMATION:	CONSULTANT INFORMATION:
1. <u>Name: (person or business)</u> Windhoek PEL28 B.V.	1. <u>Name: (person or business):</u> Namisun Environmental Projects and Development
2. <u>Business Registration / Identity No.</u> F/56528698	2. <u>Business Registration / Identity No.</u> CC/2022/02742
3. <u>Correspondence Address:</u> Physical: Dr. Frans Indongo St. (15th Floor), Erf 1657, Windhoek Postal: Rua Tomás da Fonseca – Torre A, 1600-209, Lisboa, Portugal	3. <u>Correspondence Address:</u> PO Box 8127 Swakopmund
4. <u>Name of Contact Person:</u> Daniel Rodrigues	4. <u>Name of Contact Person:</u> Werner Petrick
5. <u>Position of Contact Person:</u> Namibia Technical Lead	5. <u>Position of Contact Person:</u> Environmental Assessment Practitioner
6. <u>Telephone Number:</u> Tel: +351 963 858 838	6. <u>Telephone No.:</u> +264 (0) 81 1405968
7. <u>Fax Number:</u> NA	7. <u>Fax:</u> NA
8. <u>E-mail Address:</u> daniel.rodrigues@galp.com	8. <u>E-mail Address:</u> wpetrick@namisun.com

PART B: SCOPE OF THE ENVIRONMENTAL CLEARANCE CERTIFICATE

1. THE ENVIRONMENTAL CLEARANCE CERTIFICATE IS FOR:

Continuation of:

2. WASTE MANAGEMENT, TREATMENT, HANDLING AND DISPOSAL ACTIVITIES	
2.2	Any activity entailing a scheduled process referred to in the Atmospheric Pollution Prevention Ordinance, 1976.
2.3	The import, processing, use and recycling, temporary storage, transit or export of waste.
3. MINING AND QUARRYING ACTIVITIES	
3.2	Other forms of mining or extraction of any natural resources whether regulated by law or not.
3.3	Resource extraction, manipulation, conservation and related activities.
3.4	The extraction or processing of gas from natural and non-natural resources.
9. HAZARDOUS SUBSTANCE TREATMENT, HANDLING AND STORAGE	
9.1	The manufacturing, storage, handling or processing of a hazardous substance defined in the Hazardous Substances Ordinance, 1974.
9.3	The bulk transportation of dangerous goods using pipeline, funiculars or conveyors with a throughout capacity of 50 tons or 50 m ³ or more per day.
9.4	The storage and handling of a dangerous good, including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of more than 30 cubic meters at any one location.
10. INFRASTRUCTURE	
10.1	The construction of- (e) any structure below the high water mark of the sea.

2. DETAILS OF THE ACTIVITY(S) COVERED BY THE ENVIRONMENTAL CLEARANCE CERTIFICATE:

TITLE OF ACTIVITY:
<u>The renewal</u> of the Environmental Clearance Certificate (ECC) for proposed offshore exploration well drilling in Petroleum Exploration Licence (PEL) 83, Orange Basin, Namibia.
NATURE OF ACTIVITY:
<u>Renewal application for:</u> Windhoek PEL28 B.V. is proposing to drill one or possibly two exploration wells in PEL83. Windhoek PEL28 is a Joint Venture between the block partners, namely GALP Energia S.A. ("GALP"), the National Petroleum Corporation of Namibia (NAMCOR) and Custos. GALP holds an 80% controlling interest in PEL 83, while NAMCOR and Custos each hold 10%. GALP is currently the operator of PEL 83.
LOCATION OF ACTIVITY:
The proposed exploration wells would be drilled in PEL 83, which is located in the Orange Basin off the coast of Namibia (see Figure 1). PEL 83 covers an area of approximately 9 954 m ² and is located between 130 km and 250 km from the coastline in water depths ranging from approximately 500 m to 2 500 m.
SCALE AND SCOPE OF ACTIVITY:
The operator is proposing to drill one or possibly two exploration wells in PEL 83. The second well would ultimately be based on the success of the first well. The expected final depth of the well(s) would be approximately 3 000 m below the seafloor (approximately 5 000 m Total Depth).

The final well location(s) will be based on a number of factors, including detailed analysis of existing seismic data, the geological target and the presence of any seafloor obstacles, which will be determined by a pre-drilling site survey(s). Various types of drilling technology can be used depending on, inter alia, the water depth and marine operating conditions experienced at the well site.

The operator is currently considering two alternative drilling units, either a semi-submersible drilling vessel (rig) or a drill ship. A drilling date has been proposed to Q4 2023/ Q1 2024. Drilling activities are expected to take up to approximately two to three months per well to complete.

PART C: DECLARATION BY APPLICANT

I hereby certify that the particulars given above are correct and true to the best of my knowledge and belief. I understand the environmental clearance certificate may be suspended, amended or cancelled if any information given above is false, misleading, wrong or incomplete.


Signature of Applicant

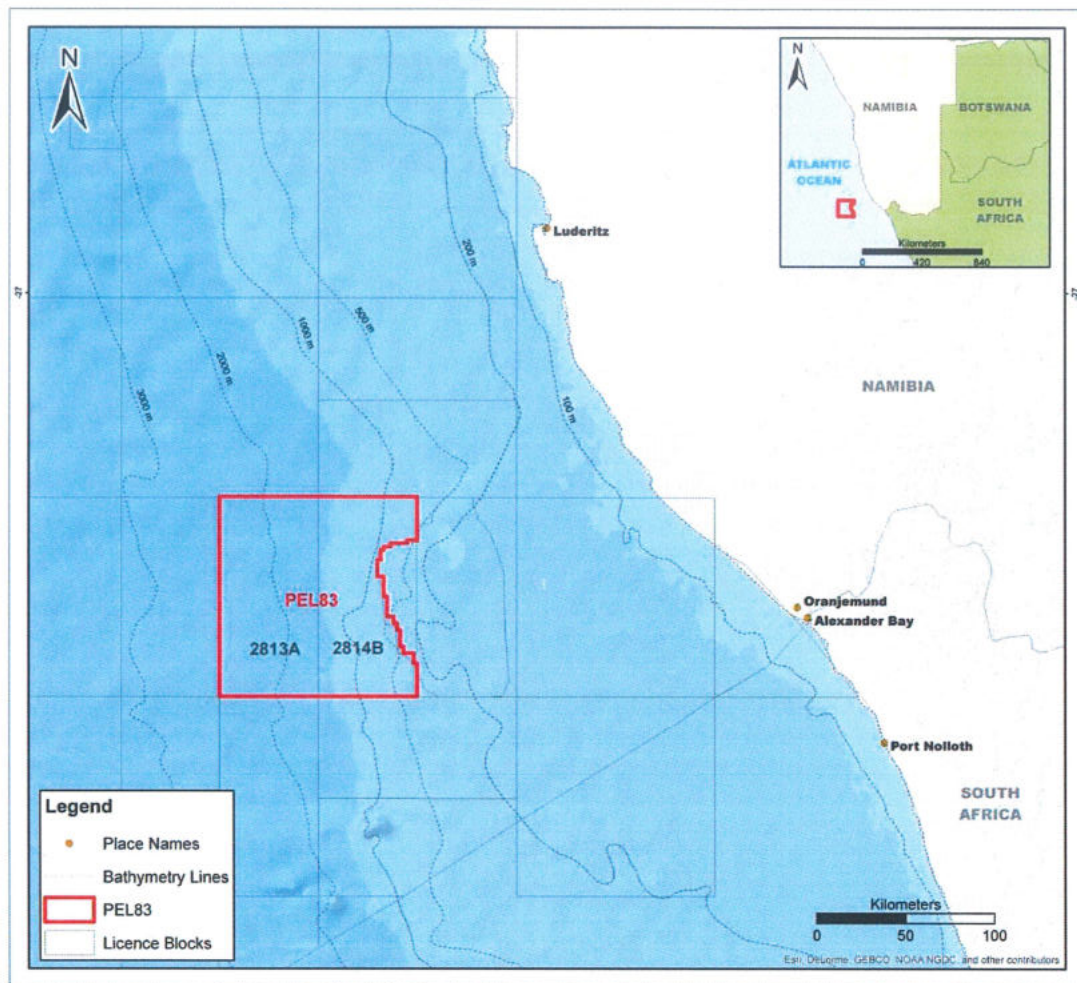
DANIEL RODRIGUES
Full name in Block Letters

TECHNICAL LEAD
Position

On behalf of GALP ENERGIA

Date: 28/11/2022

FIGURE 1: LOCALITY OF PEL83 OFF THE COAST OF NAMIBIA (SLR, 2019)





REPUBLIC OF NAMIBIA

MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM

OFFICE OF THE ENVIRONMENTAL COMMISSIONER

ENVIRONMENTAL CLEARANCE CERTIFICATE

ISSUED

In accordance with Section 37(2) of the Environmental
Management Act (Act No. 7 of 2007)

TO
Windhoek PEL28 B.V.

Dr. Frans Indongo St. (15th Floor) Erf 1657, Windhoek
.....

TO UNDERTAKE THE FOLLOWING LISTED ACTIVITY

The proposed offshore exploration well drilling in Petroleum Exploration Licence
(PEL) 83, Orange Basin, Namibia

Issued on the date: 2020-04-27
Expires on this date: 2023-04-27

(See conditions printed over leaf)

ENVIRONMENTAL COMMISSIONER



CONDITIONS OF APPROVAL

1. This environmental clearance is valid for a period of 3 (three) years, from the date of issue unless withdrawn by this office
2. This certificate does not in any way hold the Ministry of Environment and Tourism accountable for misleading information, nor any adverse effects that may arise from these activities. Instead, full accountability rests with the proponent and its consultants
3. This Ministry reserves the right to attach further legislative and regulatory conditions during the operational phase of the project

Offshore exploration well drilling in PEL 83

Environmental & Social Managementt Plan

November 2022
PEL83, Namibia

galp.com



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1. Introduction

1.1 Background

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Windhoek PEL28 B.V. is proposing to drill one or possibly two exploration wells in PEL83. The proposed exploration wells would be drilled in PEL 83, which is located in the Orange Basin off the coast of Namibia (see Figure 1). PEL 83 covers an area of approximately 9 954 m² and is located between 130 km and 250 km from the coastline in water depths ranging from approximately 500 m to 2 500 m.

In 2019, Windhoek PEL28 B.V. applied for an Environmental Clearance Certificate (ECC) for the above mentioned activity, with the successful completion of an EIA process and the submission of an EIA Report and Environmental and Social Management Plan (ESMP). The EIA process was conducted by SLR Environmental Consulting (Namibia) (Pty) Ltd (SLR), who also prepared the reports (SLR, 2019).

The Application and associated reports (including the ESMP) was approved by the Ministry of Environmental, Forestry and Tourism (MEFT) and an ECC issued on the 27th of April 2020.

The ESMP was previously included as chapter 10 of the final EIA Report. The ESMP was recently converted to a 'stand-alone' document (i.e. this document), as part of the ECC Renewal Application process. Windhoek PEL28 B.V. appointed Namisun Environmental Projects and Development (Namisun) to assist with the ECC renewal application, as well as the development of this 'stand-alone' ESMP. The original (previously approved) commitments and related information, as developed by SLR, remain relevant, as presented in the sections below.

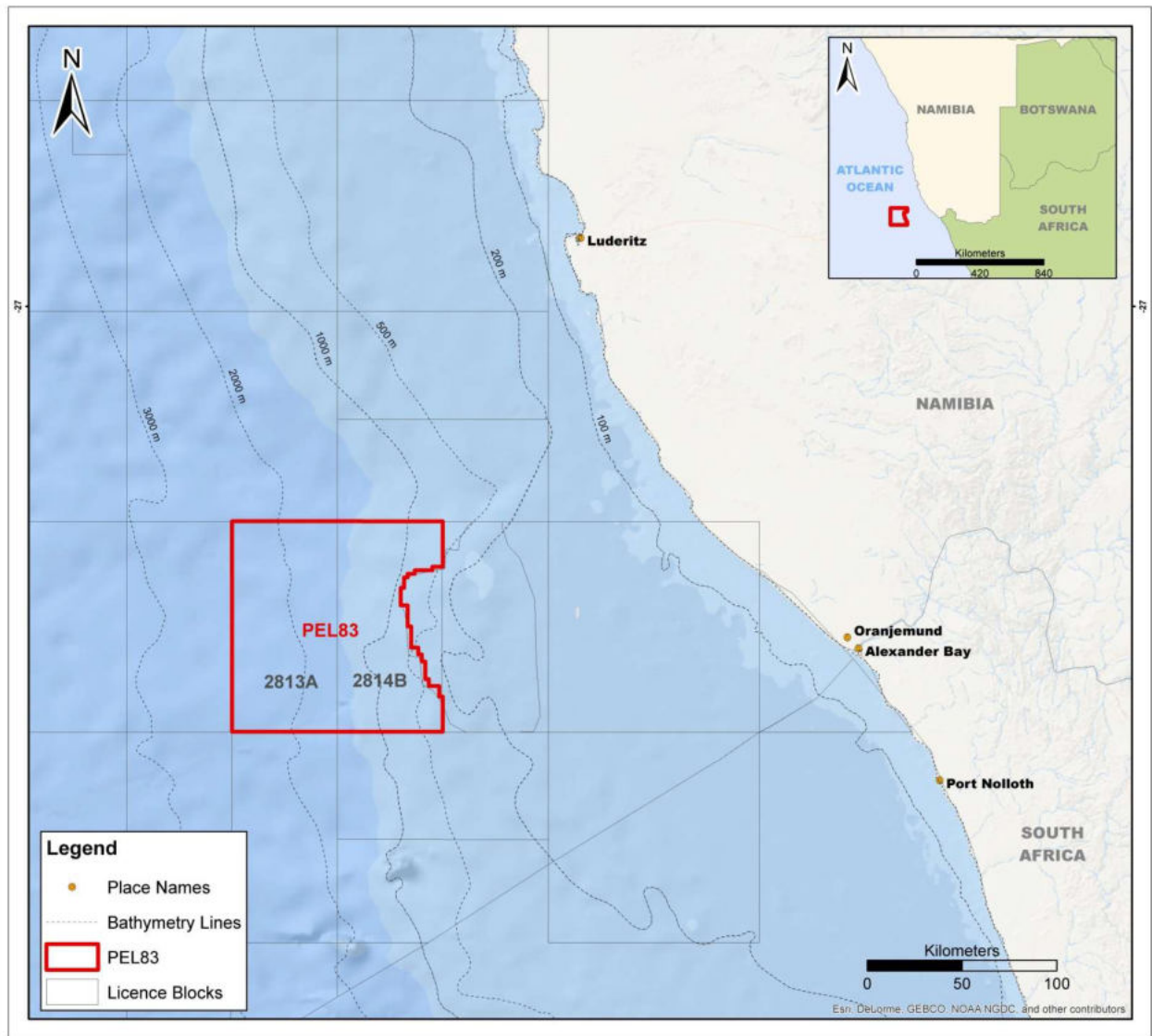


FIGURE 1: LOCATION OF PEL83 OFF THE COAST OF NAMIBIA (SLR, 2019)

1.2 Scope and Objectives

The objectives of this ESMP include the following:

- Fulfil the requirements of Namibian EIA legislation and international Conventions.
- Be consistent with oil and gas industry good practices and the operator's own project standards.

- Identify potential environmental and social impacts and outline the appropriate mitigation options to ensure that impacts are minimised, after first establishing whether impacts cannot be avoided.
- Provide an implementation mechanism for mitigation measures and commitments identified in the EIA Report.
- Establish a monitoring programme and record-keeping protocol against which the operator and its contractor's/sub-contractor's performance can be measured and to allow for corrective actions or improvements to be implemented when needed.
- Provide protocols for dealing with unforeseen circumstances such as unplanned events or ineffective mitigation measures.

1.3 Supporting Documentation

The additional management plans, which will be prepared by the operator and the appointed contractor(s), include:

- Oil Spill Contingency Plan (OSCP) and Emergency Response Plan: These plans will include all resources and action required to manage Tier 1, 2 and 3 spills and any impact on the environment, including the Namibian and any neighbouring coastlines. This plan will be aligned with the national Namibian Marine Pollution Contingency Plan which sets out national policies, principles and arrangements for the management of maritime environmental emergencies including oil spills.
- Shipboard Oil Pollution Emergency Plan (SOPEP): Regulation 37 of MARPOL Annex I requires that all ships of 400 gross tonnage and above carry an approved SOPEP. The purpose of a SOPEP is to assist personnel in dealing with unexpected discharge of oil, to set in motion the necessary actions to stop or minimise the discharge, and to mitigate its effects on the marine environment.
- Ballast Water Management Plan: All ships engaged in international traffic are required to manage their ballast water and sediments to a certain standard, according to a ship-specific ballast water management plan. This plan deals with the ballast water management system on each of the project vessels, including how it operates and procedures for monitoring and reporting.
- Waste Management Plan: This plan establishes procedures for the storage, collection and disposal of waste, including liquid and solid waste and hazardous and non-hazardous wastes.

- Well Control Contingency Plan: This plan is a specific response guide used in the case of well control emergency.

The requirement for each of these plans is referred to in the relevant sections of the ESMP tables (see Section 8.1 and 8.2).

1.4 ESMP Structure

Description of the structure and content of the ESMP is given in Table 1 below.

TABLE 1: DESCRIPTION OF THE STRUCTURE AND CONTENT OF THE ESMP

Section	Contents
Section 1	Introduction Background, objectives of the ESMP and lists the supporting documents.
Section 2	Roles and Responsibilities Key environmental management roles and responsibilities with respect to implementation and management of the ESMP.
Section 3	Training, Awareness and Competency Training and awareness provisions for the operator's staff and Contractors involved in the project.
Section 4	Compliance Verification and Corrective Actions Measures to ensure compliance with the EMP and implementation of corrective actions.
Section 5	Management of Change Procedure to be followed to respond to changes to the ESMP and/or drilling design.
Section 6	Communication Communication channels between the operator, the contractor(s) and external stakeholders.
Section 7	Document Control and Reporting Document control and reporting requirements (internal and external).
Section 8	Environmental and Social Mitigation Measures Management commitments that will be implemented to prevent, minimise or manage significant negative impacts and optimise and maximise any potential benefits of the project.
Section 9	References

2. Roles and Responsibilities

The project will have dedicated competent personnel that will manage and oversee the HSSE aspects over the project lifecycle. The operator will retain the primary responsibility for meeting environmental and social commitments throughout the project life span.

The key HSSE management roles and responsibilities will be defined by the operator prior to the commencement of any exploration activities. An indicative organogram of key staff involved in the implementation of the ESMP is presented in Figure 2.

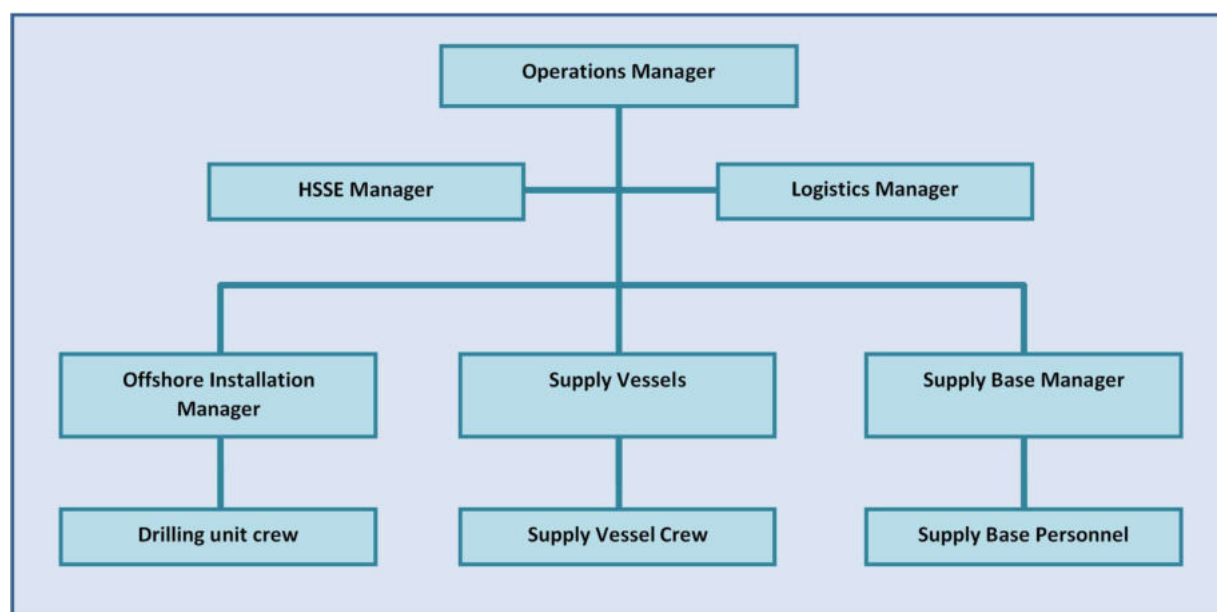


FIGURE 2: ORGANOGRAM OF KEY STAFF INVOLVED IN THE IMPLEMENTATION OF THE ESMP

3. Training, Awareness and Competency

The operator will identify, plan, monitor and record training needs for personnel whose work may have a significant adverse impact upon safety, the environment and in the community. Employees at all levels will be made aware of the potential impacts of their activities, and the roles and responsibilities in achieving conformance with the internal policy and procedures.

The personnel with responsibilities in specific HSSE practices will be adequately trained to ensure effective implementation of the works instructions and procedures for which they have responsibilities.

This training will include awareness and competency with respect to the following:

- General awareness relating to deep water exploration well drilling activities, including environmental and social impacts that could potentially arise from project activities.
- Legal requirements in relation to safety and environmental performance.
- Necessity of conforming to the requirements of the Environmental Clearance Certificate and ESMP, including reporting requirements (i.e. such as incident reporting).
- Activity-specific training (i.e. waste management practices).
- Roles and responsibilities to achieve compliance, including change management and emergency response.

Training will take cognisance of the level of education, designation and language preferences of the personnel.

Each of the appointed contractors will also be required to institute training programmes for its personnel. Each contractor will be responsible for site HSSE awareness training for personnel working on the project and for identification of any additional training requirements to maintain required competency levels. The contractor training programme will be subject to approval by the operator and it will be audited to ensure that:

- Training programmes are adequate;
- All personnel requiring training have been trained; and
- Competency is being verified.

4. Compliance Verification and Corrective Actions

Inspections, monitoring and auditing will be undertaken to confirm appropriate implementation of the ESMP, as well as the effectiveness of mitigation measures. Corrective actions include those intended to improve performance, non-compliances and non-conformances.

4.2 Inspection

Contractors will be required to conduct daily and weekly HSSE inspections in an effort to monitor compliance and implement conditions stipulated in this ESMP. The results of the inspection and monitoring activities will be reported to the operator.

4.3 Monitoring

Monitoring will be conducted to ensure compliance with regulatory requirements and the performance objectives specified in the ESMP, as well as to evaluate the effectiveness of operational controls and mitigation measures. The main objectives of the monitoring programme include:

- Gathering, recording and analysing data required for regulatory and ESMP purposes.
- Verifying the predictions and conclusions made in the EIA Report.
- Identifying changes in the physical, biological and social environment.
- Producing information to evaluate environmental performance specified in the ESMP.
- Producing information about emergencies that require an immediate response.
- Obtaining information on the actual and potential environmental and social impacts of exploration activities.
- Using monitoring results as a source of information and as grounds for decision making regarding the design of new mitigation measures.
- Describing whether and to what extent discharges from exploration activities have had impacts on the marine environment.

Monitoring will include, but not limited to, those criteria listed in TABLE 2.

TABLE 2: MONITORING DURING PRE-DRILLING AND DRILLING

No.	Risk	Criteria to be monitored	Inspections	Accountability (indicative)
1. Pre-drilling surveys and sampling				
1.1	Deck drainage/machinery space/bilge water	<ul style="list-style-type: none"> Correct operation of oil separating/filtering equipment and oil content meter (compliance with MARPOL 73/78 standards) 	Prior to surveying / sampling and once during campaign	Contractor (Vessel Captain)
1.2	Sewage discharge	<ul style="list-style-type: none"> Correct operation of sewage treatment system (compliance with MARPOL 73/78 standards) 	At start and once during campaign	Contractor (Vessel Captain)
1.3	Galley waste and air emissions	<ul style="list-style-type: none"> Type and volume discharged/incinerated Greenhouse gas (GHG) emissions from incineration 	Recorded daily in the operational log inspection	Contractor (Vessel Captain)
		<ul style="list-style-type: none"> Correct operation of macerator 	At start and once during campaign	
1.4	General waste	<ul style="list-style-type: none"> Type and volume of waste generated Type and volume transferred for onshore disposal/incinerated Compliance with Waste Management Plan 	Prior to waste transfers to supply vessel / port	Contractor (Vessel Captain)
1.5	Hazardous waste	<ul style="list-style-type: none"> Volume of waste generated Volume transferred for onshore disposal Compliance with Waste Management Plan 	Prior to waste transfers to supply vessel / port	Contractor (Vessel Captain)
1.6	Fuel usage and air emissions	<ul style="list-style-type: none"> Type and volume on board Volume consumed GHG emissions from fuel combustion 	Daily operational log inspection Fuel transfer log sheet	Contractor (Vessel Captain)

No.	Risk	Criteria to be monitored	Inspections	Accountability (indicative)
1.7	Accidental oil and chemical spills	<ul style="list-style-type: none"> Type Volume Compliance with Ship-board Oil Pollution Emergency Plan (SOPEP) 	Ongoing through daily operational log and incident reporting system	Contractor (Vessel Captain)
1.8	Lost equipment	<ul style="list-style-type: none"> Establish a hazards data-base listing: <ul style="list-style-type: none"> > the type of gear left on the seabed > date of abandonment/loss > location; and > where applicable, the dates of retrieval 	Ongoing through daily operational log and incident reporting system	Contractor (Vessel Captain)
1.9	Disruption/interference to fishing/shipping	<ul style="list-style-type: none"> Interactions with other vessels (via radio) Number of grievances/incidents logged 	Continuous	Contractor (Vessel Captain)
2. Drilling				
2.1	Sensitive seabed structures	<ul style="list-style-type: none"> Hard substrate and rocky outcrops Type and quantity of benthic fauna 	ROV inspection prior to drilling	Offshore Installation Manager
2.2	Ballast water	<ul style="list-style-type: none"> Volume discharged and location Compliance with Ballast Water Management Plan 	After de-ballasting	Drilling Unit Vessel Captain
2.3	Drilling fluids (WBM and SOBM)	<ul style="list-style-type: none"> Volume on board Volume used Volume discharged Toxicity, barite contamination and oil content Residual SOBM sent to shore (at end of drilling) 	Recorded daily in the operational log inspection	Offshore Installation Manager

No.	Risk	Criteria to be monitored	Inspections	Accountability (indicative)
2.4	Cement	<ul style="list-style-type: none"> Volume used Pressure testing on abandonment cement plugs 	During cementing operations	Offshore Installation Manager
2.5	Chemicals and hazardous materials	<ul style="list-style-type: none"> Volume stored Volume consumed 	Routine operational inspection of the: <ul style="list-style-type: none"> Storage area Management and transfer procedures Log sheet update 	Offshore Installation Manager
2.6	Drill cuttings	<ul style="list-style-type: none"> Volume discharged Oil content in drill cuttings 	Recorded daily in the operational log inspection	Offshore Installation Manager
2.7	Deck drainage/machinery space/bilge water	<ul style="list-style-type: none"> Correct operation of oil separating/filtering equipment and oil content meter (compliance with MARPOL 73/78 standards) 	Prior to drilling and once during campaign	Drilling Unit Vessel Captain
2.8	Sewage discharge	<ul style="list-style-type: none"> Correct operation of sewage treatment system (compliance with MARPOL 73/78 standards) 	At start and once during campaign	Drilling Unit Vessel Captain
2.9	Galley waste	<ul style="list-style-type: none"> Type and volume discharged/incinerated 	Recorded daily in the operational log inspection	Drilling Unit Vessel Captain
		<ul style="list-style-type: none"> Correct operation of macerator 	At start and once during campaign	
2.10	General waste	<ul style="list-style-type: none"> Type and volume of waste generated Type and volume transferred for onshore disposal/incinerated Compliance with Waste Management Plan 	Prior to waste transfers to supply vessel	Drilling Unit Vessel Captain

No.	Risk	Criteria to be monitored	Inspections	Accountability (indicative)
2.11	Hazardous waste	<ul style="list-style-type: none"> Volume of waste generated Volume transferred for onshore disposal Compliance with Waste Management Plan 	Prior to waste transfers to supply vessel	Offshore Installation Manager
2.12	Fuel usage	<ul style="list-style-type: none"> Type and volume on board Volume consumed 	Daily operational log inspection Fuel transfer log sheet	Drilling Unit Vessel Captain
2.13	Accidental oil and chemical spills	<ul style="list-style-type: none"> Type Volume Compliance with Ship-board Oil Pollution Emergency Plan and Oil Spill Response Plan 	Ongoing through daily operational log and incident reporting system	Offshore Installation Manager
2.14	Radioactive sources	<ul style="list-style-type: none"> Test to determine leak levels 	At start and once during campaign	Offshore Installation Manager
2.15	Vertical Seismic Profiling	<ul style="list-style-type: none"> Cetaceans in 500 m shut-down zone "Soft-starts" procedures and survey periods Responses of marine fauna Temporary termination requests 	Continuous during VSP	Offshore Installation Manager
2.16	Lost equipment	<ul style="list-style-type: none"> Establish a hazards database listing: <ul style="list-style-type: none"> > the type of gear left on the seabed > date of abandonment/loss > location; and where applicable, the dates of retrieval 	Ongoing through daily operational log and incident reporting system	Offshore Installation Manager
2.18	Disruption/interference to fishing/shipping	<ul style="list-style-type: none"> Interactions with other vessels (via radio) 	Continuous	Offshore Installation Manager

No.	Risk	Criteria to be monitored	Inspections	Accountability (indicative)
		> Number of grievances/incidents logged		
2.19	Fauna interaction	<ul style="list-style-type: none"> Bird reaction to lights Incidents of injury/death, Stray land birds resting on drilling unit 	Ongoing through daily operational log and incident reporting system	Offshore Installation Manager

4.4 Auditing

4.4.1 Monthly Audits

Beyond the routine inspection and monitoring activities conducted, formal monthly audits will be carried out internally by the operator's on-board HSSE representative to ensure compliance with the ESMP and its own HSSE standards and policies. The audit data will include the contractor's monitoring and inspection records.

The audit will include amongst other things, checking:

- Completeness of HSSE documentation, including planning documents and inspection records.
- Conformance with monitoring requirements.
- Efficacy of activities to address any non-conformance with monitoring requirements.
- Training activities and record keeping.

Findings will be documented in monthly audit reports, which will be submitted to the Operations Manager for action and follow-up.

4.4.2 ESMP close-out compliance audit

An ESMP close-out compliance audit(s) will also be conducted at the end of the pre-drilling surveys / sampling and drilling campaigns. These reports will, amongst other things, outline the implementation of the mitigation measures and compliance levels with achieving the performance objectives as detailed in the ESMP.

4.4.3 Audit methodology

An audit methodology, programme and protocol will be developed for the internal monthly audits and the ESMP close-out compliance audits. These audits are an integral part of the implementation of

the ESMP and audit findings can be used as a basis to measure compliance and confirm the efficacy and efficiency of the mitigation measures. The proposed approach to auditing consists of four basic steps:

- Planning the audit.
- Conducting the audit.
- Producing audit findings (measuring compliance and identifying problems).
- Reporting audit findings for management action.

Audit findings will undergo a root cause analysis to identify underlying causes to non-compliance events. Management actions will be taken to correct the underlying causes behind the audit findings and improvements will be made before another audit is conducted. This audit process allows for problems to be corrected, compliance to be improved and prevention of the same findings during subsequent audits.

A four level rating scale is proposed to assess the performance of the ESMP against each individual element. Elements are rated individually as “full compliance”, “partial compliance”, “non-compliance” or “not applicable” as per the Table 3 below.

TABLE 3: AUDIT RATING SCALE

Full compliance	All of the requirements of the ESMP element have been fulfilled. Element has been documented and monitored and upon verification is found to be fully implemented.
Partial compliance	Only certain of the key requirements have been fulfilled and a plan is in place to progress to full compliance. Element has been documented and monitored but not consistently or completely implemented.
Non-compliance	The requirements of the ESMP have not been fulfilled. No evidence or incomplete evidence of compliance.
Not applicable	The ESMP elements are not applicable.

4.5 Corrective Actions

The operator’s and contractor’s HSSE staff will implement a formal non-compliance and corrective action tracking procedure for investigating cause and identifying corrective actions in response to accidents, HSSE and/or social non-compliances.

Where corrective actions are deemed necessary, specific measures will be developed, with designated responsibility and timing, and implemented. In this way, continuous improvement in performance will be achieved.

The operator's and contractor's HSSE staff will be responsible for keeping records of corrective actions and for overseeing the modification of environmental or social protection procedures and/or training programmes to avoid repetition of non-conformances and non-compliances.

5. Management of Change

The development and implementation of the ESMP is an ongoing process that is iterative in nature. This document must thus be seen as a 'living' document and amendments may need to be implemented during the course of the project. Typical changes that can affect the ESMP include:

- A material project design change that occurs after the ESMP has been compiled and approved.
- Changes in the feasibility/availability of specific mitigation measures.
- Personnel changes on the project.

This document is the first version of the ESMP. Certain aspects of this document may be expanded/made more specific during the detailed design stage to ensure, firstly, that it includes all conditions of approval and, secondly, that it addresses all issues related to the detailed design.

These changes will be subject to a management of change procedure. Further detail on the management of change procedure, including levels of change and associated actions, is presented in Section 3.5 of the EIA Report.

6. Communication

Channels of communication will be established between the operator, the contractor(s) and external stakeholders. The operator will establish and maintain procedures for:

- Internal communication between the various levels and functions of the project staff organisation; and
- Receiving, documenting and responding to relevant communication from external interested parties.

A grievance procedure will be established and maintained by the operator to record any complaints or comments received from the public during the drilling programme. The grievance procedure will be underpinned by the following principles and commitments:

- Disseminate key information to directly impacted stakeholders;
- Seek to resolve all grievances timeously; and
- Maintain full written records of each grievance case and the associated process of resolution and outcome.

7. Document Control and Reporting

7.2 Documentation

The operator will control HSSE documentation, including project licences, approvals, management plans, associated procedures, checklists, forms and reports, through a formal procedure. The document control procedure will describe the processes that the project will employ for official communication of both hardcopy and electronic documents and the requirement for electronic filing, document tracking and version control numbers.

Contractor(s) will be required to develop a system for maintaining and controlling its own HSSE documentation and describe these systems in their respective HSSE plans.

7.3 Incident Reporting

Following any HSSE incidents, the operator will conduct an incident investigation and prepare a report detailing the events, root causes of the incident(s) and corrective and preventative measures implemented as a result. All incidents where local regulatory standards are exceeded will be reported to MET and MME.

7.4 ESMP Close-Out Compliance Report

The operator will submit an ESMP close-out compliance report to MME at the end of each pre-drilling survey / sampling and drilling campaign. Amongst other things, these reports will outline the implementation of the mitigation measures and compliance levels with achieving the performance objectives as detailed in the ESMP.

8. Environmental and Social Mitigation Measures

This section details the specific management commitments that will be implemented to prevent, minimise or manage significant negative impacts and optimise and maximise any potential benefits of the project. These commitments are presented for the two project phases, namely:

- Pre-drilling surveys and sampling – Section 8.1.
- Exploration Well Drilling – Section 8.2.

This ESMP tables are structured in the following manner so that the mitigation measures have a clear and logical context within which they are designed, implemented, monitored and evaluated:

- **Activities:** Activities are the physical activities that occur as a result of a project.
- **Aspect:** Environmental and social aspects are defined as 'an element of an organisation's activities, products or services that can interact with the environment' e.g. atmospheric emissions, underwater noise levels or discharge of waste to sea.
- **Environmental and Social Performance Objectives:** Every environmental and social management requirement must be translated into an objective, namely an outcome that is to be achieved. This is not to say that every requirement must be expressed as an objective, but requirements can be combined as appropriate into single objectives
- **Targets:** For every objective a performance target must be specified. If the target is met then the objective will have been deemed to be met, but if the target is not achieved then suitable corrective action must be defined and implemented so as to ensure that the performance is improved to the point that the target is met and the performance is sustained.
- **Mitigation and Management actions:** A key component of the EIA process is to explore practical ways of avoiding or reducing potentially significant impacts of the proposed drilling programme. These are commonly referred to as mitigation measures and are incorporated into the project as part of the ESMP. Mitigation is aimed at preventing, minimising or managing significant negative impacts to as low as reasonably practicable (ALARP) and optimising and maximising any potential benefits of the proposed project.
- **Responsibility:** Defining who is responsible for the implementation of the mitigation.
- **Timing:** Timing refers to the schedule. The 'timing' can be specified in terms of a specific date or relative to other actions (i.e. before project mobilisation, or after well spudding, as examples).

- **Monitoring and Record Keeping Requirements:** Monitoring and record keeping requirements must be defined, whereby the organisation responsible for implementing the action/s is given a prescribed reporting mechanism, limited as far as possible to documents plans, correspondence, records, registers, etc.



8.1 Pre-Drilling Surveys and Sampling

Pre-Drilling Surveys and Sampling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.1.1 MOBILISATION PHASE							
8.1.1.1 PREPARATION OF SUBSIDIARY PLANS AND DEVELOPMENT OF PROCESSES	Mobilisation	Have co-ordinated emergency activity and response action system and plans in place where all project and government parties are identified and their responsibilities documented and communicated	All plans to be finalised 30 days before start of mobilisation	Ensure the following plans are prepared and in place: <ul style="list-style-type: none"> Shipboard Oil Pollution Emergency Plan (SOPEP), as required by MARPOL. Emergency Response Plan submitted to the Petroleum Commissioner. Waste Management Plan. 	Operator and Contractors	Plans in place prior to commencement of operation	A copy of all plans
8.1.1.2 STAKEHOLDER CONSULTATION AND NOTIFICATION	Interaction, engagement and communication with national authorities	Minister of Mines and Energy informed about the commencement of the project	Distribute notification at least 30 days prior to commencement of operations	Compile the pre-drilling survey / sampling details into a notification document and submit to Ministry of Mines and Energy (Petroleum Commissioner). The notification should provide, <i>inter alia</i> , the details on the following: <ul style="list-style-type: none"> Survey / sampling programme (timing, co-ordinates and duration). Contractor details. Survey vessel specifications (including relevant certification and insurance). 	Operator	Notification distributed 30 days prior to commencement of operations	Correspondence to Minister of Mines and Energy
		Ensure navigational safety	Zero maritime incidents	Notify key Fishing industry / associations of the proposed survey / sampling programme (including location and duration). Stakeholders include:	Operator	30 days prior to mobilisation	Notice to Mariners

Pre-Drilling Surveys and Sampling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
				<ul style="list-style-type: none"> • Association of Namibian Fishing Industries. • Namibian Hake Association. • Namibian Monk and Sole Association. • Namibian Large Pelagic and Hake Long-lining Association. 			
8.1.1.3 MOBILISATION OF PROJECT STAFF	Training and allocation of responsibilities	Project staff have the capability and competence to achieve the ESMP objectives and know what are the ESMP environmental requirements	All staff receive HSSE training as part of their HSSE induction, refresher training and an ongoing awareness and behaviour system	<ul style="list-style-type: none"> • Undertake HSSE Awareness Training, including induction training to ensure the project personnel are appropriately informed of the purpose and requirements of the ESMP, including emergency procedures, spill management, etc. • Ensure that ESMP responsibilities are clearly defined in Job Descriptions of relevant staff. • Establish training and exercise programmes to ensure that the response activities can be effectively executed. 	Operator and Contractors	Before new staff commence with the start work on the project	Copy of attendance register and training records
8.1.1.4 POLLUTION CONTROL AND WASTE MANAGEMENT DURING TRANSIT TO SURVEY / SAMPLING AREA	Emissions to the atmosphere during transit Discharge of liquid and solid waste to sea	Similar to operation phase – refer to Section 8.1.2.3.					
8.1.1.5 ACCIDENTAL OIL SPILLS DURING TRANSIT TO	Diesel spills from refuelling or from tank rupture (e.g.	Similar to operation phase – refer to Section 8.1.2.6.					



Pre-Drilling Surveys and Sampling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
SURVEY / SAMPLING AREA	vessel collision)						
8.1.2 OPERATION PHASE							
8.1.2.1 STAKEHOLDER CONSULTATION AND NOTIFICATION OF VESSEL OPERATION	Presence of survey / sampling vessel	Ensure other users of the sea are notified and navigational safety, and prevention of emergencies / accidents	Zero maritime incidents	If necessary, distribute an updated Notice to Mariners to fishing companies and directly onto vessels. The notice should give updated notice of: <ul style="list-style-type: none">the co-ordinates of the survey / sampling area; andan indication of the proposed survey / sampling timeframes.	Operator	7 days prior to surveying / sampling	Copies of all correspondence
8.1.2.2 PREVENTION OF EMERGENCIES RELATED TO OPERATION OF SURVEY / SAMPLING VESSEL	Presence of survey / sampling vessel	Ensure navigational safety and prevention of emergencies / accidents	Zero maritime incidents	Prevent collisions by ensuring that the vessels display correct signals by day and lights by night (including twilight) and by visual radar watch.	Contractors	Throughout operation	Provide record of any incidents and interaction with other vessels
				Maintain standard vessel watch procedures.			
				Enforce the 500 m safety/exclusion zone around the vessel.			
				Notify any fishing vessels at a radar range of 24 nm from the survey / sampling vessel via radio regarding the safety requirements around the vessel.			
				Practice weekly emergency response drills.			
				Ensure access to current weather information.			
				Use flares or fog horn where necessary.			
				Co-operate with other legitimate users of the sea to minimise disruption to other marine activities.			



Pre-Drilling Surveys and Sampling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.1.2.3 POLLUTION CONTROL AND WASTE MANAGEMENT DURING OPERATION	Emissions to the atmosphere during operation	Reduce amount of diesel burned and emissions to the air	Sulphur content as specified by MARPOL	Use a low sulphur fuel that has a maximum sulphur content as specified by MARPOL.			Inventory of volume and type of fuel used
			Plan to be finalised 30 days before start of mobilisation	Implement a maintenance plan to ensure all diesel motors and generators receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.			Maintenance plan
8.1.2.3 POLLUTION CONTROL AND WASTE MANAGEMENT DURING OPERATION	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	Remain within specified effluent limitations	Implement the following plans: <ul style="list-style-type: none"> Waste Management Plan. Shipboard Oil Pollution Emergency Plan (SOPEP). 	Contractors	Prior to mobilisation and throughout operation	Copy of all plans
			Store, reuse, recycle and dispose of solid waste as per the Waste Management Plan	Ensure the following certificates are in place: <ul style="list-style-type: none"> A valid International Sewage Pollution Prevention Certificate, as required by vessel class. International Oil Pollution Prevention (IOPP) Certificate, as required by vessel class. 			Report the total discharge waste stream volumes
			Zero discharge of untreated sewage	Vessels will have: <ul style="list-style-type: none"> an onboard sewage treatment plant; a sewage comminuting and disinfecting system, and/or a sewage holding tank. 			Copy of all certificates
							Sewage Certificate containing the test results of the sewage treatment plant



Pre-Drilling Surveys and Sampling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
			Biological Oxygen Demand (BOD): <25 mg/l or <50 mg/l Chlorine (Cl): ≤1 mg/l	Ensure sewage discharges comply with : <ul style="list-style-type: none"> a BOD of <25 mg/l (if the treatment plant was installed after 1/1/2010,) or <50 mg/l (if installed before this date); and minimal residual chlorine concentration of 1 mg/l. 		Throughout operation, during discharges	
8.1.2.3 POLLUTION CONTROL AND WASTE MANAGEMENT DURING OPERATION	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	No visible floating solids Treatment (comminuted and disinfected): 3 nm – 12 nm of coast	Sewage discharge to comply with the following: <ul style="list-style-type: none"> No visible floating solids must be produced or discolouration of the surrounding water must occur. Sewage must be comminuted and disinfected for discharges between 3 nm and 12 nm from the coast. Disposal of sewage from holding tanks must be discharged at a moderate rate while the ship is proceeding on route at a speed not less than 4 knots. 	Contractors	Throughout operation, during discharges	
			No disposal: < 3 nm of coast No treatment: > 12 nm of coast Treatment: 3 nm – 12 nm of coast	Galley waste discharge to comply with the following: <ul style="list-style-type: none"> No disposal to occur within 3 nm of the coast. Disposal at >3 nm from coast to be comminuted to particle sizes smaller than 25 mm. 			Inventory of volume of waste discharged and discharge location
				Minimise the discharge of waste material should obvious attraction of fauna be observed.			



Pre-Drilling Surveys and Sampling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
			Zero harmful deck and machinery waste discharged to sea	Ensure all deck and machinery drainage is routed to: <ul style="list-style-type: none"> equipment for the control of oil discharge from machinery space bilges and oil fuel tanks, e.g. oil separating/filtering equipment and oil content meter. oil residue holding tanks; and oil discharge monitoring and control system 			Oil Record Book
			Oil concentration of oily bilge water must be lower than 15 ppm	Oil in water concentration must be less than 15 ppm prior to discharge overboard			
8.1.2.3 POLLUTION CONTROL AND WASTE MANAGEMENT DURING OPERATION	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	Zero deck waste discharged to sea	Ensure all process areas are banded to ensure drainage water flows into the closed drainage system.	Contractors	Throughout operation, during discharges	Quantity of oil residue (sludge) produced.
			Zero spills of oil residue (sludge)	Use low-toxicity biodegradable detergents in cleaning of all deck spillage.		After spills	Record all discharges, together with date, time and method of discharge, disposal route, any system failure and accidental oil spills in the Oil Record Book
				<ul style="list-style-type: none"> Mop up any spills immediately with biodegradable low toxicity detergents. Use oil absorbent. 			
				Use drip trays to collect run-off from equipment that is not contained within a banded area and route contents to a closed drainage system.		Throughout operation, during discharges	



Pre-Drilling Surveys and Sampling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
			Zero discharge of domestic waste, food waste, cooking oil, plastics and incinerator ash	Initiate a waste minimisation system. No disposal overboard. Ensure on-board solid waste storage is secure. Incinerate (non-hazardous) or to a licensed waste management facility transport ashore for disposal/recycling. Retain waste receipts. Recycle metal waste onshore.		Throughout operation	Inventory volume of waste generated Inventory of volume transferred for onshore disposal / incinerated Waste receipts
8.1.2.3 POLLUTION CONTROL AND WASTE MANAGEMENT DURING OPERATION	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	Zero discharge of operational waste	Segregate, classify and store all hazardous waste in suitable receptacles on board in order to ensure the safe containment and transportation of waste.	Contractors	Throughout operation	Record types and volumes of chemical and hazardous wastes and destination thereof
				Provide a specific waste management storage and segregation area at the onshore logistics base.		As required	Waste receipts
				Dispose of hazardous waste at a facility that is appropriately licensed and accredited.			
8.1.2.4 ROV SURVEYS	Sediment disturbance	Protect sensitive seabed habitats	Zero disturbance of sensitive seabed habitats	Avoid landing or resting the ROV on the seabed during the seabed survey.		During ROV survey	
8.1.2.5 BUNKERING / REFUELLING AT SEA	Spill of hydrocarbons to sea	Protect marine environment	Application to be submitted two weeks before bunkering	An application for the transfer of oil at sea (outside a harbour but within 50 nm of the Namibian coast) must be submitted to Ministry of Works and Transport at least two weeks before the proposed date of transfer.		As required, at least two weeks prior to refuelling	Provide copies of the correspondence with Ministry of Works and



Pre-Drilling Surveys and Sampling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
			Notice to be provided 24 hours before bunkering	Not less than 24 hours prior to the commencement of the transfer operation Ministry of Works and Transport must be informed, in writing, that the ship is, and will be kept, in a fit state to undertake the transfer operation and to contend with any emergency that may arise.			Transport and approval for bunkering
8.1.2.5 BUNKERING / REFUELLING AT SEA	Spill of hydrocarbons to sea	Protect marine environment	Zero spills or leaks	Offshore bunkering should not be undertaken in the following circumstances: <ul style="list-style-type: none"> • Wind force and sea state conditions of ≥ 6 on the Beaufort Wind Scale; • During any workboat or mobilisation boat operations; • During helicopter operations; • During the transfer of in-sea equipment; and • At night or times of low visibility. 	Contractors	During bunkering	Record of all spills (Spill Record Book), including spill reports; emergency exercise reports; audit reports. Incident log
8.1.2.6 ACCIDENTAL OIL SPILLS DURING VESSEL OPERATION	Diesel spills from refuelling or from tank rupture (e.g. vessel collision)	Protect marine fauna and coastal tourism by effective containment of oil, chemicals and fluids	Zero spills or leaks	Implement Shipboard Oil Pollution Emergency Plan.	Contractors	In event of spill	Record of all spills (Spill Record Book), including spill reports; emergency exercise reports; audit reports. Incident log
				Attempt to control and contain the spill at sea, as far as possible and whenever the sea state permits, using suitable recovery techniques to reduce the spatial and temporal impact of the spill.			
				Where diesel, which evaporates relatively quickly, has been spilled, the water should be agitated or mixed using a propeller boat/dinghy to aid dispersal and evaporation.			



Pre-Drilling Surveys and Sampling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
				<ul style="list-style-type: none"> Use low toxicity dispersants that rapidly dilute to concentrations below most acute toxicity thresholds. Use dispersants only with the permission of Ministry of Environment and Tourism / Ministry of Fisheries and Marine Resources. 			
8.1.2.6 ACCIDENTAL OIL SPILLS DURING VESSEL OPERATION	Diesel spills from refuelling or from tank rupture (e.g. vessel collision)	Protect marine fauna and coastal tourism by effective containment of oil, chemicals and fluids	Zero spills or leaks	Dispersants should not be used: <ul style="list-style-type: none"> On diesel or light fuel oil. On heavy fuel oil. On slicks > 0.5 cm thick. On any oil spills within 5 nautical miles offshore or in depths < 30 m. In areas far offshore where there is little likelihood of oil reaching the shore. 	Contractors	In event of spill	Record of all spills (Spill Record Book), including spill reports; emergency exercise reports; audit reports. Incident log
8.2.1.7 EQUIPMENT LOSS DURING VESSEL OPERATION	Dropped equipment	Protect sensitive seabed habitat	Zero loss and retrieval, where possible	Undertake frequent checks to ensure items and equipment are stored and secured safely on board each vessel.	Contractors	During operation	Establish a hazards database listing: <ul style="list-style-type: none"> the type of gear lost date of abandonment / loss location; and where applicable, the dates of retrieval
				Retrieve of lost objects / equipment, where practicable, after assessing the safety and metocean conditions.		As required	



Pre-Drilling Surveys and Sampling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
	Increased obstructions	Minimise risk of collision / accident and inform relevant parties		Notify Ministry of Works and Transport (Directorate of Maritime Affairs) and the SAN Hydrographer of any items left on the seabed or floating in the water column that constitute a seafloor or navigational hazard, and request that they send out a Notice to Mariners with this information.	Operator		Copies of all correspondence
8.1.3 DEMOBILISATION PHASE							
8.1.3.1 STAKEHOLDER CONSULTATION AND NOTIFICATION	Presence of survey / sampling vessel	Ensure navigational safety	Zero maritime incidents	Inform Ministry of Mines and Energy (Petroleum Commissioner) and key fishing industry / associations that surveying / sampling has been completed and the vessel is off location.	Operator	Within two weeks of survey / sampling completion	Copies of notification documentation required
8.1.3.2 FINAL WASTE DISPOSAL	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	Zero discharge of domestic waste, food waste, cooking oil, plastics and incinerator ash	Dispose all waste retained onboard at a licensed waste site using a licensed waste disposal contractor.	Contractors	When vessel is in port	Inventory volume of waste generated Inventory of volume transferred for onshore disposal / incinerated Waste receipts
8.1.3.3 POLLUTION CONTROL AND WASTE	Emissions to the atmosphere during transit	Similar to operation phase – refer to Section 8.1.2.3.					



Pre-Drilling Surveys and Sampling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
MANAGEMENT DURING TRANSIT FROM SURVEY / SAMPLING AREA	Discharge of liquid and solid waste to sea						
8.1.1.5 ACCIDENTAL OIL SPILLS DURING TRANSIT FROM SURVEY / SAMPLING AREA	Diesel spills from refuelling or from tank rupture (e.g. vessel collision)	Similar to operation phase – refer to Section 8.1.2.6.					



8.2 Exploration Well Drilling

Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.2.1 MOBILISATION PHASE							
8.2.1.1 PREPARATION OF SUBSIDIARY PLANS AND DEVELOPMENT OF PROCESSES	Mobilisation	Have co-ordinated emergency activity and response action system and plans in place where all project and government parties are identified and their responsibilities documented and communicated	All plans to be finalised 30 days before start of mobilisation	<p>Ensure the following plans are prepared and in place:</p> <ul style="list-style-type: none"> A project-specific Oil Spill Contingency Plan (OSCP) developed in consultation with the Ministry of Mines and Energy. Shipboard Oil Pollution Emergency Plan (SOPEP), as required by MARPOL. Emergency Response Plan submitted to the Petroleum Commissioner. Waste Management Plan. Ballast Water Management Plan submitted to Namport and the Directorate of Maritime Affairs, Ministry of Works and Transport. 	Operator and Contractors (drilling and support vessels, where applicable)	<p>Plans in place prior to commencement of operation</p> <p>Ballast Water Management Plans to be submitted at least 24 hours prior to arrival</p>	A copy of all plans
8.2.1.2 STAKEHOLDER CONSULTATION AND NOTIFICATION	Interaction, engagement and communication with national authorities	Minister of Mines and Energy informed about the commencement of the project	Distribute notification at least 30 days prior to commencement of operations	<p>Compile the drilling campaign details into a Drilling Notification document and submit to Ministry of Mines and Energy (Petroleum Commissioner). The notification should provide, <i>inter alia</i>, the details on the following:</p> <ul style="list-style-type: none"> Drilling programme (timing, co-ordinates and duration). Contractor details. Drilling unit and support vessel specifications (including relevant certification and insurance). 	Operator	Drilling notification distributed 30 days prior to commencement of operations	Correspondence to Minister of Mines and Energy



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.2.1.2 STAKEHOLDER CONSULTATION AND NOTIFICATION	Interaction, engagement and communication with local authorities	Local municipality informed about the commencement of the project	Communicate project information local Town Council at least 3 months prior to commencement of operations	Inform local Town Council and other stakeholders on the project database of the: <ul style="list-style-type: none"> • timing and duration of the project; and • opportunities for jobs and procurement of goods and services. 	Operator	Communicate project information local Town Council at least 3 months prior to commencement of operations	Meetings Notes Project Background Information Document
	Interaction, engagement and communication with key stakeholders	Ensure navigational safety	Zero maritime incidents All maritime stakeholders on project database notified	Notify key maritime stakeholders of the proposed drilling programme (including navigational co-ordinates of well location, timing and duration of proposed activities) and the likely implications thereof (specifically the 500 m exclusion zone and the movement of support vessels). Stakeholders include: <ul style="list-style-type: none"> • Fishing industry / associations: <ul style="list-style-type: none"> > Association of Namibian Fishing Industries. > Namibian Hake Association. > Namibian Monk and Sole Association. > Namibian Large Pelagic and Hake Long-lining Association. • Directorate of Maritime Affairs. • South African Navy (SAN) Hydrographer. • Namibian Ports Authority. • Monitoring, Control and Surveillance Unit in Walvis Bay (Vessel Monitoring System in particular). 	Operator	30 days prior to mobilisation	Notice to Mariners



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.2.1.2 STAKEHOLDER CONSULTATION AND NOTIFICATION	Interaction with local communities / stakeholders	Zero Community complaints	Respond to all complainants within 3 working days	Develop and implement a Complaints / Grievance Process and provide the local police and authorities with the name/s and contact details of a representative of the operator (and for key sub-contractors as needed) to be contacted in the event of any incidents being reported involving personnel involved on the project.	Operator	Develop Complaints / Grievance Mechanism prior to mobilisation and implement throughout all project phases	Complaints system in place for receipt, recording and tracking of the complaints process Grievance log with tracking cards
8.2.1.3 RECRUITMENT AND PROCUREMENT OF LOCAL GOODS AND SERVICES	Local employment and procurement	Optimise opportunities for recruitment of locals for semi-skilled and general work and procurement of goods and services	100% of unskilled and general work at the onshore Supply Base, where no vocational qualifications and experience in the Oil and gas sector is required, to be filled by Namibians	Define local content (employment and procurement) objectives in the contracts with all contractors.	Operator and Contractors (drilling and support vessels)	Local content objectives to be prepared prior to procurement of Contractors	Records of Namibians employed and business with Namibian companies
				Ensure contractors comply with the operator's supplier principles on business integrity, HSSE and Labour and Human Rights.	Operator		



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.2.1.4 MOBILISATION OF PROJECT STAFF	Training and allocation of responsibilities	Project staff have the capability and competence to achieve the ESMP objectives and know what are the ESMP environmental requirements	All staff receive HSSE training as part of their HSSE induction, refresher training and an ongoing awareness and behaviour system	<ul style="list-style-type: none"> Undertake HSSE Awareness Training, including induction training, periodic refresher training and toolbox talks, to ensure the project personnel are appropriately informed of the purpose and requirements of the ESMP, including emergency procedures, spill management, etc. Ensure that ESMP responsibilities are clearly defined in Job Descriptions of relevant staff. Establish training and exercise programmes to ensure that the response activities can be effectively executed. 	Operator and Contractors (drilling and support vessels)	Before new staff commence with the start of their rotation period	Copy of attendance register and training records
8.2.1.5 EXCHANGE OF BALLAST WATER	Discharge of ballast water and the introduction of non-indigenous invasive marine species	Control the spread of non-native invasive species to vulnerable ecosystems by fulfilling the requirements of the International Convention for the Control and Management of Ships' Ballast Water and Sediments ("the Ballast Water	Ships will conduct Ballast Water Management in accordance with Regulation D-2 of the IMO Ballast Water Management Convention and will discharge less than 10 viable organisms per cubic metre greater than or equal to 50	<ul style="list-style-type: none"> Avoid the unnecessary discharge of ballast water. Implement the Ballast Water Management Plan. Vessels need to comply with the Regulation D-2 standard associated with the IMO Ballast Water Management Convention. Each vessel (including the drilling unit) carrying ballast water should contain its own vessel specific Ballast Water Management Plan. Avoid uptake of ballast in darkness when bottom-dwelling organisms may rise up the water column. Avoid uptake in very shallow water or where propellers may stir up sediment. Carry out routine removal 	Contractors (drilling and support vessels)	During ballast water discharge	<p>Copy of Ballast Water Management Plan and ballast water management certificate</p> <p>Maintain a complete and accurate Ballast Water Record System</p>



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
		Management Convention")	micrometres in minimum dimension and less than 10 viable organisms per millilitre less than 50 micrometres in minimum dimension and greater than or equal to 10 micrometres in minimum dimension; and discharge of the indicator microbes will not exceed the specified concentrations Indicator microbes, as a human health standard, will include: <ul style="list-style-type: none"> Toxicogenic Vibrio cholerae (O1 and O139) with less than 1 colony forming unit (cfu) per 100 millilitres or less 	<p>and appropriate disposal of ballast water sediment.</p> <ul style="list-style-type: none"> No discharging of ballast water in Namibian harbours. Vessels will submit their Ballast Water Management Plans to Namport and the Directorate of Maritime Affairs, Ministry of Works and Transport at least 24 hours prior to arrival. <p>Use filtration procedures during loading in order to avoid the uptake of potentially harmful aquatic organisms, pathogens and sediment that may contain such organisms.</p>			<p>Records are to be maintained of ballast water uptakes, discharges and exchanges as per the Ballast Water Management Plan</p> <p>Records that should be kept in the vessel's ballast water recording system when conducting a ballast water exchange are:</p> <ul style="list-style-type: none"> start and finish coordinates start and finish times for pumping water during an exchange actual pumping



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
			than 1 cfu per 1 gram (wet weight) zoo-plankton samples ; <ul style="list-style-type: none">• Escherichia coli less than 250 cfu per 100 millilitres;• Intestinal Enterococci less than 100 cfu per 100 millilitres				times (these should not be affected by the crossing of time zones) <ul style="list-style-type: none">• residual volume remaining in the tank at the end the empty cycle prior to re-fill (empty refill method only)• signature of the officer in charge of the operation
			Discharge 200 nm from the nearest land and in water of at least 200 m depth	Whenever possible, conduct the exchange of ballast water at least 200 nm (± 370 km) from the nearest land and in water of at least 200 m depth. Where this is not feasible, the exchange should be as far from the nearest land as possible, and in all cases a minimum of 50 nm (± 93 km) from the nearest land and preferably in water at least 200 m in depth.			
				Ensure that routine cleaning of the ballast tank is carried out, where practicable, in mid-ocean in accordance with Ballast Water Management Plan.		During ballast tank cleaning	
8.2.1.7 POLLUTION CONTROL AND WASTE	Emissions to the atmosphere during transit	Similar to operation phase – refer to Section 8.2.2.3.					



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
MANAGEMENT DURING TRANSIT TO DRILL SITE	Discharge of liquid and solid waste to sea						
	Increased ambient lighting						
8.2.1.7 ACCIDENTAL OIL SPILLS DURING TRANSIT TO DRILL SITE	Diesel spills from refuelling or from tank rupture (e.g. vessel collision)	Similar to operation phase – refer to Section 8.2.2.12.					
8.2.2 OPERATION PHASE							
8.2.2.1 STAKEHOLDER CONSULTATION AND NOTIFICATION OF DRILLING UNIT OPERATION	Creation of an exclusion zone around drilling unit which other vessels cannot enter	Ensure other users of the sea are notified and navigational safety, and prevention of emergencies / accidents	Zero maritime incidents All maritime stakeholders on project database notified	Request, in writing, the SAN Hydrographer to release Radio Navigation Warnings via Navigational Telex (Navtext), Lüderitz Port Control and Walvis Bay radio.	Operator	7 days prior to establishment at drill site and throughout drilling	Confirm that request was sent to the SAN Hydrographer
				Distribute a Notice to Mariners to fishing companies and directly onto vessels. The notice should give notice of: <ul style="list-style-type: none">the co-ordinates of the well location;an indication of the proposed drilling timeframes;an indication of the 500 m safety zone around the drilling unit; andprovide details on the movements of support vessels servicing the drilling operation.		7 days prior to establishment at drill site	Copies of all correspondence
				Implement a Complaints / Grievance Process.	Operator	Throughout operation as needed	Record of complaints and responses



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.2.2.2 PREVENTION OF EMERGENCIES RELATED TO OPERATION OF DRILLING UNIT	Creation of an exclusion zone around drilling unit which other vessels cannot enter	Ensure navigational safety and prevention of emergencies / accidents	Zero maritime incidents	Prevent collisions by ensuring that the drilling unit and support vessels display correct signals by day and lights by night (including twilight), by visual radar watch and standby vessel(s).	Contractors (drilling and support vessels)	Throughout operation	Provide record of any incidents and interaction with other vessels
				Manage the lighting on the drilling unit and support vessels to ensure that it is sufficiently illuminated to be visible to fishing vessels and compatible with safe operations.			
				Maintain standard vessel watch procedures.			
				Enforce the 500 m safety/exclusion zone around the drilling unit.			
8.2.2.2 PREVENTION OF EMERGENCIES RELATED TO OPERATION OF DRILLING UNIT	Creation of an exclusion zone around drilling unit which other vessels cannot enter	Ensure navigational safety and prevention of emergencies / accidents	Zero maritime incidents	Ensure that a support vessel, equipped with appropriate radar and communications, is kept on 24-hour standby.	Contractors (drilling and support vessels)	Throughout operation	Provide record of any incidents and interaction with other vessels
				Notify any fishing vessels at a radar range of 24 nm from the drilling unit via radio regarding the safety requirements around the drilling unit.			
				Practice weekly emergency response drills.			
				Ensure access to current weather information.			
				Use flares or fog horn where necessary.			



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
				Establish lines of communication with the following emergency response agencies / facilities: Ministry of Environment and Tourism, Ministry of Mines and Energy, Ministry of Fisheries and Marine Resources, NAMPORT, Ministry of Works and Transport, and Sea Rescue Institute of Namibia. Co-operate with other legitimate users of the sea to minimise disruption to other marine activities.	Contractors (drilling and support vessels)	Throughout operation	Provide record of any incidents and interaction with other vessels
8.2.2.3 POLLUTION CONTROL AND WASTE MANAGEMENT DURING OPERATION	Emissions to the atmosphere during operation	Reduce amount of diesel burned and emissions to the air	Sulphur content as specified by MARPOL	Use a low sulphur fuel that has a maximum sulphur content as specified by MARPOL.	Contractors (drilling and support vessels)	Throughout operation	Inventory of volume and type of fuel used
				Optimise the drilling schedule and supply and support operations / logistics which will minimise the time of the operations.		During operation	
			Plan to be finalised 30 days before start of mobilisation	Implement a maintenance plan to ensure all diesel motors and generators receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.		Throughout operation	Maintenance plan
8.2.2.3 POLLUTION CONTROL AND WASTE MANAGEMENT	Emissions to the atmosphere during operation	Reduce air emissions due to leaks from valves, flanges, fittings and seals	Zero leaks	Implement leak detection and repair programmes for valves, flanges, fittings, seals, etc.		Throughout operation	



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
DURING OPERATION	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	Remain within specified effluent limitations	Implement the following plans: <ul style="list-style-type: none"> Waste Management Plan. Shipboard Oil Pollution Emergency Plan (SOPEP). 	Contractors (drilling and support vessels)	Throughout operation	Copy of all plans
			Store, reuse, recycle and dispose of solid waste as per the Waste Management Plan	Ensure the following certificates are in place: <ul style="list-style-type: none"> A valid International Sewage Pollution Prevention Certificate, as required by vessel class. International Oil Pollution Prevention (IOPP) Certificate, as required by vessel class. 			Report and monitor the quantities of chemicals added to any of the discharge waste streams
			Zero discharge of untreated sewage	Drilling unit and supply vessels will have: <ul style="list-style-type: none"> an onboard sewage treatment plant; a sewage comminuting and disinfecting system, and/or a sewage holding tank. 			Report the total discharge waste stream volumes
			Discharge depth: in accordance with MARPOL 73/78 Annex IV	Ensure the sewage discharge depth, depending upon the draught of the drilling unit / support vessel, complies with MARPOL 73/78 Annex IV			Copy of all certificates
							Sewage Certificate containing the test results of the sewage treatment plant



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.2.2.3 POLLUTION CONTROL AND WASTE MANAGEMENT DURING OPERATION	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	Biological Oxygen Demand (BOD): <25 mg/l or <50 mg/l Chlorine (Cl): ≤1 mg/l	Ensure sewage discharges comply with : <ul style="list-style-type: none"> a BOD of <25 mg/l (if the treatment plant was installed after 1/1/2010,) or <50 mg/l (if installed before this date); and minimal residual chlorine concentration of 1 mg/l. 	Contractors (drilling and support vessels)	Throughout operation, during discharges	
			No visible floating solids Treatment (comminuted and disinfected): 3 nm – 12 nm of coast	Sewage discharge to comply with the following: <ul style="list-style-type: none"> No visible floating solids must be produced or discolouration of the surrounding water must occur. Sewage must be comminuted and disinfected for discharges between 3 nm and 12 nm from the coast. Disposal of sewage from holding tanks must be discharged at a moderate rate while the ship is proceeding <i>on route</i> at a speed not less than 4 knots. 		Throughout operation, during discharges	
			No disposal: < 3 nm of coast No treatment: > 12 nm of coast Treatment: 3 nm – 12 nm of coast	Galley waste discharge to comply with the following: <ul style="list-style-type: none"> No disposal to occur within 3 nm of the coast. Disposal at >3 nm from coast to be comminuted to particle sizes smaller than 25 mm. 		Throughout operation, during discharges	Inventory of volume of waste discharged and discharge location
				Minimise the discharge of waste material should obvious attraction of fauna be observed.			



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.2.2.3 POLLUTION CONTROL AND WASTE MANAGEMENT DURING OPERATION	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	Zero harmful deck and machinery waste discharged to sea	Ensure all deck and machinery drainage is routed to: <ul style="list-style-type: none"> equipment for the control of oil discharge from machinery space bilges and oil fuel tanks, e.g. oil separating/filtering equipment and oil content meter. oil residue holding tanks; and oil discharge monitoring and control system 	Contractors (drilling and support vessels)	Throughout operation, during discharges	Oil Record Book
			Oil concentration of oily bilge water must be lower than 15 ppm	Oil in water concentration must be less than 15 ppm prior to discharge overboard			
			Zero deck waste discharged to sea	Ensure all process areas are bunded to ensure drainage water flows into the closed drainage system.			Quantity of oil residue (sludge) produced.
			Zero spills of oil residue (sludge)	Use low-toxicity biodegradable detergents in cleaning of all deck spillage.		After spills	Record all discharges, together with date, time and method of discharge, disposal route, any system failure and accidental oil spills in the Oil Record Book
				<ul style="list-style-type: none"> Mop up any spills immediately with biodegradable low toxicity detergents. Use oil absorbent. 			
				Use drip trays to collect run-off from equipment that is not contained within a bunded area and route contents to a closed drainage system.		Throughout operation, during discharges	
				Implement leak detection and maintenance programmes for valves, flanges, fittings, seals, hydraulic systems, hoses, etc.		Throughout operation	



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.2.2.3 POLLUTION CONTROL AND WASTE MANAGEMENT DURING OPERATION	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	Zero discharge of domestic waste, food waste, cooking oil, plastics and incinerator ash	Initiate a waste minimisation system.	Contractors (drilling and support vessels)	Throughout operation	Inventory volume of waste generated
				No disposal overboard.		Throughout operation	
				Ensure on-board solid waste storage is secure.		Throughout operation	Inventory of volume transferred for onshore disposal / incinerated
				Incinerate (non-hazardous) or transport to a licensed waste management facility ashore for disposal/recycling. Retain waste receipts.		Throughout operation	
				Recycle metal waste onshore.		Throughout operation	
			Zero discharge of operational waste	Segregate, classify and store all hazardous waste in suitable receptacles on board in order to ensure the safe containment and transportation of waste.		Throughout operation	Record types and volumes of chemical and hazardous wastes and destination thereof
				Provide a specific waste management storage and segregation area at the onshore logistics base.		Throughout operation	
				<ul style="list-style-type: none"> Dispose of hazardous waste at a facility that is appropriately licensed and accredited. Assess the available waste disposal facilities in the region prior to drilling to ensure waste disposal meets international best standards and Namibian legal requirements. If Namibian waste sites are deemed unsuitable (e.g. for hazardous wastes), evaluate sites outside Namibia for use. 		As required	Waste receipts



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.2.2.3 POLLUTION CONTROL AND WASTE MANAGEMENT DURING OPERATION	Increased ambient lighting	Protect marine fauna, migratory birds and seabirds by managing illumination of the drilling unit and supply vessels	Zero fatalities of marine fauna, migratory birds and seabirds	Reduce lighting to a minimum compatible with safe operations whenever and wherever possible by: <ul style="list-style-type: none"> Minimising the number of lights and the intensity of the lights. Automatically or manually controlling lighting in areas where it is not a continuous requirement through the process control system. Positioning light sources in places where emissions to the surrounding environment are minimised. 	Contractors (drilling and support vessels)	During operation	
			An adequate number of drilling unit staff members to take account of crew rotations will receive Marine Observer training before deployment on sea birds, seals and cetaceans	<ul style="list-style-type: none"> Relevant drilling unit staff to receive Marine Observer training prior to deployment. Assign relevant staff for observation, distance estimation and reporting, to perform marine mammal observations and notifications. 	Operator	During operation	Record information on patterns of bird reaction to lights and real incidents of injury/death, including stray land birds resting on the rig, during the drilling operation
				Keep disorientated, but otherwise unharmed, seabirds in dark containers for subsequent release during daylight hours.			
				Euthanise injured birds humanly.			
				Report ringed/banded birds to the appropriate ringing/banding scheme (details are provided on the ring.			



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.2.2.4 OPERATION OF HELICOPTERS	Increased ambient noise levels	Conserve and ensure the protection of marine and coastal fauna	Zero incidents of disturbance to bird and seal colonies and whale breeding areas	Pre-plan flight path to ensure it avoids (except in medical emergency):	Operator and Helicopter contractor	All flights between drilling unit and Lüderitz airport	Copy of set flight path (including altitude)
				<ul style="list-style-type: none"> Lüderitz Lagoon. Offshore islands (including Halifax and Possession) by at least 1 852 m (i.e. 1 nm). Seal colonies (including Atlas Bay, Wolf Bay and Long Islands). 			Helicopter logs
				Maintain an altitude of at least 1 000 m within the NIMPA and a cruising altitude of greater than 300 m, except when taking off and landing or in a medical emergency	Helicopter contractor		Deviations from set flight paths
			All pilots are briefed on sensitivity of bird and seal colonies and whale breeding areas	Avoid extensive low altitude coastal flights by ensuring that the flight path is perpendicular to the coast, as far as possible.	Helicopter contractor		
				Comply with aviation and authority guidelines and rules.	Helicopter contractor		Copy of set flight path (including altitude)
				Brief of all pilots, as part of the HSSE indication for pilots, on the ecological risks associated with flying at a low level along the coast or above marine mammals.	Operator and Helicopter contractor		Helicopter logs Deviations from set flight paths

Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.2.2.5 SPUDDING	Physical disturbance of the seabed sediments	Protect sensitive seabed habitats	Zero disturbance of hard substrates, which house sensitive benthic communities	<ul style="list-style-type: none"> Review ROV footage of pre-drilling surveys to identify potential vulnerable habitats within 500 m of the drill site. Ensure drill site is located more than 500 m from any identified vulnerable habitats. 	Drilling contractor and Operator	Prior to spudding	ROV footage
		Protect shipwrecks	Zero disturbance of historical shipwrecks	Adjust the well location to avoid any shipwrecks identified in pre-drilling ROV surveys.			
				If any historic shipwreck objects are found after drilling commencement, which could potentially be impacted by the activity, work in the directly affected area should cease until the National Heritage Council of Namibia (NHC) has been notified and the operator has complied with any additional mitigation as specified by the NHC.		During spudding, if wreck is identified	Heritage permit, if necessary
8.2.2.6 WELL DRILLING	Discharge of drill cuttings	Protect sensitive seabed habitats	5 m caisson used for cuttings discharge during risered drilling	Discharge of risered cuttings via a caisson at greater than 5 m below surface.	Drilling contractor and Operator	Prior to spudding	
			Use only low-toxicity and biodegradable additives in drilling fluid	<ul style="list-style-type: none"> Ensure only low-toxicity and partially biodegradable additives are used in drilling fluid. Avoid using any cement additives that have not undergone a documented risk assessment process and have been confirmed to have minimal impact to the marine environment. 	Drilling contractor	Prior to drilling	Volume discharged Additives in drilling fluid Oil content of SOBM drill cuttings



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.2.2.6 WELL DRILLING	Discharge of drill cuttings	Protect sensitive seabed habitats	Oil content: ≤6% PAH: 0.001 Hg: <1 mg/kg Cd: <3 mg/kg	Treatment of cuttings to reduce the: <ul style="list-style-type: none"> Oil content to 6% or less of dry cutting weight; PAH to less than 0.001; Hg to less than 1 mg/kg; and Cd to less than 3 mg/kg. 		Throughout riser drilling	Volume discharged
			A high efficiency solids control equipment will be used to treat cuttings	Use high efficiency solids control equipment to reduce the need for fluid change out and minimise the amount of residual fluid on drilled cuttings.			Additives in drilling fluid
				Ensure regular maintenance of the onboard solids control package.			Oil content of SOBM drill cuttings
			Zero discharge over board	Ensure all recovered SOBM is taken to shore for treatment and reuse.		During demobilisation	Waste receipts
8.2.2.6 WELL DRILLING	Discharge of residual cement	Protect sensitive seabed habitats	Zero residual cement discharge	Avoid excess cement usage during the initial riserless drilling stage by monitoring (by ROV) for discharges during cementing.	Drilling contractor	During cementing	Volume discharged
			Use only low-toxicity and biodegradable additives in cement additives	<ul style="list-style-type: none"> Ensuring that only low-toxicity and partially biodegradable cement additives are used. Avoid using any cement additives that have not undergone a documented risk assessment process and have been confirmed to have minimal impact to the marine environment. 	Drilling contractor	Prior to cementing	ROV footage
							Inventory of chemicals used and discharged



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.2.2.7 PLACEMENT OF WELLHEAD ON SEAFLOOR	Introduction of non-indigenous invasive marine species	Protect seabed habitats	Zero fouling of wellhead	Ensure all infrastructure (e.g. wellheads, BOPs and guide bases) that has been used in other regions is thoroughly cleaned before use in Namibia.	Drilling Contractor	Prior to mobilisation	
8.2.2.8 TRANSPORT, STORAGE AND HANDLING OF RADIOACTIVE DEVICES AND EXPLOSIVES	Increased levels of radioactivity	Protect the environment and workers	Zero radioactive leakage and contamination	Designate competent person/s in charge and to handle radioactive devices and/or explosives.	Drilling Contractor	Throughout drilling operations	Training certificates
				<ul style="list-style-type: none"> Comply with necessary regulations for the transport, storage and handling of radioactive devices. Transport and store radioactive devices in specially designed secured (locked) storage containers. 			
				<ul style="list-style-type: none"> Follow strict approved procedures when handling the devices. Wear personal monitoring devices to measure any unusual exposure. 			
8.2.2.8 TRANSPORT, STORAGE AND HANDLING OF RADIOACTIVE DEVICES AND EXPLOSIVES	Increased levels of radioactivity	Protect the environment and workers	Zero radioactive leakage and contamination	<ul style="list-style-type: none"> Follow radioactive sources procedure. When radioactive sources are to be used, secure the area between and around the storage containers and the floor and only allowed key personnel in the area. 	Drilling Contractor	Throughout drilling operations	
				Set up incident and emergency reporting procedures for actual or suspected individual over-exposure, theft or loss, logging tools stuck downhole in wells, and release or spillage into the environment.			



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
				Routinely test the sources according to industry requirements to document leak levels.			Provide results from routine tests on radioactive sources to determine leak levels
8.2.2.9 VERTICAL SEISMIC PROFILING (VSP)	Increased ambient underwater noise levels	Protect offshore marine fauna	Zero disturbance to whales and dolphins	Appoint a dedicated Marine Mammal Observer (MMO), with a recognised MMO training course, on board for marine mammal observation, distance estimation and reporting.	Operator	During operation	Observer close-out report
				Undertake a 30-minute (water depth <200 m) or 1-hr (water depths > 200 m) pre-start visual scan (prior to soft-starts) within the 500 m radius observation zone in order to confirm there is no cetacean activity within 500 m of the source.	Operator	During VSP	Record information on faunal observations, VSP activities and any mitigatory actions taken
				<ul style="list-style-type: none"> Implement a "soft-start" procedure of a minimum of 20 minutes' duration when initiating the VSP acoustic source. The "soft-start" procedure may only commence if no cetaceans have been sighted within the shut-down zone (i.e. a 500 m horizontal radius from the VSP acoustic source) during the pre-start-up visual scan. There must be a minimum of a 20-minute delay from the time of the last detection within the mitigation zone and the commencement of the soft-start. 	Drilling contractor	During VSP	



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
				<p>Implement the following procedures while the VSP acoustic source is operating:</p> <ul style="list-style-type: none"> • Maintain visual observations within the 500 m shut-down zone continuously to identify if there are any cetaceans present. • Shut down the acoustic source if a cetacean is sighted within 500 m shut-down zone until such time as the animal has moved to a point more than 500 m from the source. 	Operator	During VSP	
8.2.2.9 VERTICAL SEISMIC PROFILING (VSP)	Increased ambient underwater noise levels	Protect offshore marine fauna	Zero disturbance to whales and dolphins	<p>During periods of low visibility (where the observation zone cannot be clearly viewed out to 500 m), including night-time, the VSP source may be used, commencing with the "soft-start" procedure, provided that Passive Acoustic Monitoring (PAM) technology is used to detect vocalisations or during the preceding 24-hour period:</p> <ul style="list-style-type: none"> • there have not been three or more cetacean-instigated shut down situations, and • a two-hour period of continual observation was undertaken in good visibility (to the extent of the shut-down zone) and no cetaceans were sighted. 	Operator	During VSP	<p>Observer close-out report</p> <p>Record information on faunal observations, VSP activities and any mitigation actions taken</p>
8.2.2.10 BUNKERING / REFUELLING AT SEA	Spill of hydrocarbons to sea	Protect marine environment	Application to be submitted two weeks before bunkering	An application for the transfer of oil at sea (outside a harbour but within 50 nm of the Namibian coast) must be submitted to Ministry of Works and Transport at least two weeks before the proposed date of transfer.	Contractors (drilling and support vessels)	As required, at least two weeks prior to refuelling	Provide copies of the correspondence with Ministry of Works and



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
			Notice to be provided 24 hours before bunkering	Not less than 24 hours prior to the commencement of the transfer operation Ministry of Works and Transport must be informed, in writing, that the ship is, and will be kept, in a fit state to undertake the transfer operation and to contend with any emergency that may arise.	Contractors (drilling and support vessels)		Transport and approval for bunkering
8.2.2.10 BUNKERING / REFUELLING AT SEA	Spill of hydrocarbons to sea	Protect marine environment	Zero spills or leaks	Offshore bunkering should not be undertaken in the following circumstances: <ul style="list-style-type: none"> • Wind force and sea state conditions of ≥ 6 on the Beaufort Wind Scale; • During any workboat or mobilisation boat operations; • During helicopter operations; • During the transfer of in-sea equipment; and • At night or times of low visibility. 	Contractors (drilling and support vessels)	As required, at least two weeks prior to refuelling	Record of all spills (Spill Record Book), including spill reports; emergency exercise reports; audit reports. Incident log



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.2.2.11 ACCIDENTAL OIL SPILLS DURING DRILLING	Well blow-out	Protect marine fauna and coastal tourism by effective containment of oil, chemicals and fluids	Compliance with industry standards	Fully inspect the BOPs on the drilling unit in accordance with the American Petroleum Industries recommended practices (or equivalent) prior to drilling.	Drilling Contractor	Prior to and during drilling	Provide relevant certification and / or evidence of BOP inspection and risk control system
			All staff receive environmental training as part of their HSSE induction, refresher training and an ongoing awareness and behaviour system	Ensure that all responsible personnel are adequately trained in both accident prevention and immediate response.		Prior to drilling	Records of staff training
			Zero spills or leaks	Implement monitoring and management measures in accordance with normal well control practise to assist in the detection and control of uncontrolled releases.		Continuous during drilling	
				Inspect and maintain all chemical / fuel containers including the vessels fuel tanks and mud tanks.		During operation	



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.2.2.11 ACCIDENTAL OIL SPILLS DURING DRILLING	Well blow-out	Protect marine fauna and coastal tourism by effective containment of oil, chemicals and fluids	Zero spills or leaks	Implement Oil Spill Contingency Plan, Shipboard Oil Pollution Emergency Plan and Well Control Contingency Plan, as is necessary.	Operator and Contractors (drilling and support vessels)	In event of spill	Record of all spills (Spill Record Book), including spill reports; emergency exercise reports; audit reports. Incident log
				Report any emergency situation to the Commissioner for Petroleum Affairs in terms of the Petroleum (Exploration and Production) Act Regulations (1999).	Operator	In event of spill	Record of all spills (Spill Record Book), including spill reports; emergency exercise reports; audit reports. Incident log
				In the event of an oil spill that poses a risk of major harm to the environment immediately notify NAMPORT, Environmental Commissioner and the Petroleum Commissioner. Information that should be supplied when reporting a spill includes: <ul style="list-style-type: none"> The type and circumstances of incident, ship type, port of registry, nearest agent representing the ships company; Geographic location of the incident, distance offshore and extent of spill; Prevailing weather conditions, sea state in affected area (wind direction and speed, weather and swell); and Persons and authorities already informed of the spill. 	Operator and Contractors (drilling and support vessels)		



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.2.2.11 ACCIDENTAL OIL SPILLS DURING DRILLING	Well blow-out	Protect marine fauna and coastal tourism by effective containment of oil, chemicals and fluids	Zero spills or leaks	<ul style="list-style-type: none"> Use low toxicity dispersants that rapidly dilute to concentrations below most acute toxicity thresholds. Use dispersants only with the permission of Ministry of Environment and Tourism / Ministry of Fisheries and Marine Resources. 			
				Dispersants should not be used: <ul style="list-style-type: none"> On diesel or light fuel oil. On heavy fuel oil. On slicks > 0.5 cm thick. On any oil spills within 5 nautical miles off-shore or in depths < 30 m. In areas far offshore where there is little likelihood of oil reaching the shore. 	Operator and Contractors (drilling and support vessels)	In event of spill	Record of all spills (Spill Record Book), including spill reports; emergency exercise reports; audit reports.
				Dispersants are most effective: <ul style="list-style-type: none"> On fresh crude oils; Under turbulent sea conditions (as effective use of dispersants requires mixing); and When applied within 12 hours or at a maximum of 24 hours. The volume of dispersant application should not exceed 20-30% of the oil volume. 	Contractors (drilling and support vessels)		
				Ensure adequate resources are available to collect and transport oiled birds to a cleaning station.			Incident log



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.2.2.12 ACCIDENTAL OIL SPILLS DURING DRILLING UNIT OPERATION AND SUPPLY VESSELS TRANSIT TO AND FROM PORT	Diesel spills from refuelling or from tank rupture (e.g. vessel collision)	Protect marine fauna and coastal tourism by effective containment of oil, chemicals and fluids	Zero spills or leaks	Implement Shipboard Oil Pollution Emergency Plan.	Contractors (drilling and support vessels)	In event of spill	Record of all spills (Spill Record Book), including spill reports; emergency exercise reports; audit reports. Incident log
				Information that should be supplied when reporting a spill includes: <ul style="list-style-type: none">The type and circumstances of incident, ship type, port of registry, nearest agent representing the ships company;Geographic location of the incident, distance offshore and extent of spill;Prevailing weather conditions, sea state in affected area (wind direction and speed, weather and swell); andPersons and authorities already informed of the spill.	Operator and Contractors (drilling and support vessels)		
				Attempt to control and contain the spill at sea, as far as possible and whenever the sea state permits, using suitable recovery techniques to reduce the spatial and temporal impact of the spill.	Contractors (drilling and support vessels)		
				Where diesel, which evaporates relatively quickly, has been spilled, the water should be agitated or mixed using a propeller boat/dinghy to aid dispersal and evaporation.			



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.2.2.12 ACCIDENTAL OIL SPILLS DURING DRILLING UNIT OPERATION AND SUPPLY VESSELS TRANSIT TO AND FROM PORT	Diesel spills from refuelling or from tank rupture (e.g. vessel collision)	Protect marine fauna and coastal tourism by effective containment of oil, chemicals and fluids	Zero spills or leaks	<ul style="list-style-type: none"> Use low toxicity dispersants that rapidly dilute to concentrations below most acute toxicity thresholds. Use dispersants only with the permission of Ministry of Environment and Tourism / Ministry of Fisheries and Marine Resources. 	Contractors (drilling and support vessels)	In event of spill	Record of all spills (Spill Record Book), including spill reports; emergency exercise reports; audit reports. Incident log
				Dispersants should not be used: <ul style="list-style-type: none"> On diesel or light fuel oil. On heavy fuel oil. On slicks > 0.5 cm thick. On any oil spills within 5 nautical miles off-shore or in depths < 30 m. In areas far offshore where there is little likelihood of oil reaching the shore. 			
				Ensure adequate resources are available to collect and transport oiled birds to a cleaning station.			
8.2.2.13 EQUIPMENT LOSS DURING DRILLING UNIT AND VESSEL OPERATION	Dropped equipment	Protect sensitive seabed habitat	Zero loss and retrieval, where possible	Transfer equipment only under safe metocean conditions.	Contractors (drilling and support vessels)	During crane operations	Establish a hazards database listing: <ul style="list-style-type: none"> the type of gear lost date of abandonment / loss location; and where applicable, the dates of retrieval
				Ensuring that loads are lifted using the correct lifting procedure and within the maximum lifting capacity of crane system.			
				Minimise the lifting path between vessels.			
				Undertake frequent checks to ensure items and equipment are stored and secured safely on board each vessel.		During operation	
				Retrieve of lost objects / equipment, where practicable, after assessing the safety and metocean conditions.		As required	



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.2.2.13 EQUIPMENT LOSS DURING DRILLING UNIT AND VESSEL OPERATION	Increased obstructions	Minimise risk of collision / accident and inform relevant parties		Notify Ministry of Works and Transport (Directorate of Maritime Affairs) and the SAN Hydrographer of any items left on the seabed or floating in the water column that constitute a seafloor or navigational hazard.	Operator	As required	Copies of all correspondence
8.2.2.14 USE AND HANDLING OF HAZARDOUS MATERIALS	Chemical spills	Minimise damage to the environment by implementing response procedures efficiently	All staff receive environmental training as part of their HSSE induction, refresher training and an ongoing awareness and behaviour system	Induction and training (proper use, transfer procedures).	Operator and Contractors (drilling and support vessels)	Reduction in water quality and/or unsafe condition on deck	Copy of attendance register and training records
				Ensure Material Safety Data Sheets (MSDS) are made available in the appropriate language.			
		Minimise damage to the environment by implementing response procedures efficiently	Zero spills or leaks	Implement Emergency Response Plan to deal with all chemical spills.	Contractors (drilling and support vessels)	In event of spill	Maintain a spill record book for recording all significant spills, as required Inventory of chemicals used and discharged



Exploration Well Drilling								
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements	
8.2.3 DEMOBILISATION PHASE								
8.2.3.1 ABANDONMENT OF WELLS	Well blow-out	Isolate permeable and hydrocarbon bearing formations and avoid leakages	Plugging according to international best practices	Seal well by inserting cement plugs in the well bore at various levels according to good oilfield practice.	Drilling contractor	On completion of well drilling	Log on pres- sure testing the abandonment cement plugs	
			Zero leaks	Test well integrity.			Test results	
	Obstruction to demersal fishing and anchoring	Ensure safe demersal fishing operations	No BOPs remain on seafloor	Remove BOPs.			Operator	ROV footage
			Zero incidents	Fit wellheads drilled in water depth of less than 900 m with an over-trawlable structure to minimise the risk of damage to demersal trawl gear, as well as potential damage to the wellheads.				ROV footage
			Zero incidents		Notify the SAN Hydrographer regarding the positions of abandoned wells on the seafloor in order to inform the fishing industry of such obstructions through Navigation Warnings.	Provide copies of correspondenc e with the SAN Hydrographer		



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.2.3.2 WELL DRILLING AND TRANSFER OF EQUIPMENT AND SUPPLIES BETWEEN THE DRILLING UNIT AND SUPPLY VESSEL	Dropped equipment	Protect sensitive seabed habitat	Zero loss and retrieval, where possible	Scan seafloor for any dropped equipment.	Drilling Contractor	On completion of well drilling	ROV footage
				Retrieve of lost objects / equipment, where practicable, after assessing the safety and metocean conditions.			Establish a hazards database listing: <ul style="list-style-type: none"> the type of gear left on the seabed date of abandonment / loss location; and where applicable, the dates of retrieval
				Notify MWT (Directorate of Maritime Affairs) and the SAN Hydrographer of any hazards left on the seabed or floating in the water column, and request that they send out a Notice to Mariners with this information.			Copies of all correspondence



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.2.3.3 STAKEHOLDER CONSULTATION AND NOTIFICATION	Exclusion zone around drilling unit	Ensure navigational safety	Zero maritime incidents All maritime stakeholders on project database notified	Inform all key stakeholders (see Section 8.2.1.2) that the drilling unit and support vessels are off location and provide details of wellhead abandonment.	Operator	Within two weeks after completion of drilling	Copies of notification documentation required
	Interaction with local communities / stakeholders	Zero Community complaints	Respond to all complainants within 3 working days	Continue to implement Complaints / Grievance Process	Operator	Throughout phase as needed	Complaints system in place for receipt, recording, and tracking of the complaints process Grievance log with tracking cards
8.2.3.4 FINAL WASTE DISPOSAL	Discharge of liquid and solid waste to sea	Reduce discharges and improve quality of liquid and solid waste to sea by fulfilling the requirements of MARPOL 73/78 standards	Zero discharge of domestic waste, food waste, cooking oil, plastics and incinerator ash	Dispose all waste retained onboard at a licensed waste site using a licensed waste disposal contractor.	Contractors (drilling and support vessels)	When drilling unit / support vessels are in port	Inventory volume of waste generated
			Zero discharge of SOBM	All recovered synthetic-based mud should be stored on-board and taken to shore for treatment and reuse.	Drilling Contractor	When drilling unit is in port	Inventory of volume transferred for onshore disposal / incinerated Waste receipts



Exploration Well Drilling							
Activities	Aspect	Environmental and Social Performance Objectives	Targets	Mitigation and Management actions	Responsibility	Frequency / Timing	Monitoring and record keeping requirements
8.2.3.5 EXCHANGE OF BALLAST WATER	Discharge of ballast water and the introduction of non-indigenous invasive marine species	Similar to mobilisation phase – refer to Section 8.2.1.5.					
8.2.3.6 POLLUTION CONTROL AND WASTE MANAGEMENT DURING TRANSIT FROM DRILL SITE	Emissions to the atmosphere during transit	Similar to operation phase – refer to Section 8.2.2.3.					
	Discharge of liquid and solid waste to sea						
	Increased ambient lighting						
8.2.3.7 ACCIDENTAL OIL SPILLS DURING TRANSIT TO DRILL SITE	Diesel spills from refuelling or from tank rupture (e.g. vessel collision)	Similar to operation phase – refer to Section 8.2.2.12.					

9. References

SLR. 2019. Proposed offshore exploration well drilling in PEL 83: EIA Report and ESMP.