



**ENVIRONMENTAL MANAGEMENT PLAN REPORT**

**PROPOSED BASE MINERALAL EXPLORATION ON EPL NO.6933**

**ERONGO REGION – NAMIBIA**


**SWAKOPMUND**

**DISTRICT**

## ENVIRONMENTAL MANAGEMENT PLAN REPORT EPL 6933

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# ENVIRONMENTAL MANAGEMENT PLAN REPORT EPL 6933

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## 1. OVERVIEW

### 1.1. Project Background

The Proponent was granted the EPL 6933 by the Ministry of Mines and Energy to undertake mineral exploration activities for various mineral groups. These mineral groups are as follows, industrial minerals, precious metals, base and rare metals. The various groups of minerals, elements and rocks that fall under each category has been listed in the **MINERALS (PROSPECTING AND MINING) Act No. 33 of 1992 (Minerals Act) Schedule 1**.

EPL 6933 is located in the western part of Namibia approximately 30 km Northeast of Arandis, in the Swakopmund District of Erongo Region, and covers an area of 3028.988 hectares. The locality of the EPL is depicted in **Error! Reference source not found.** below.

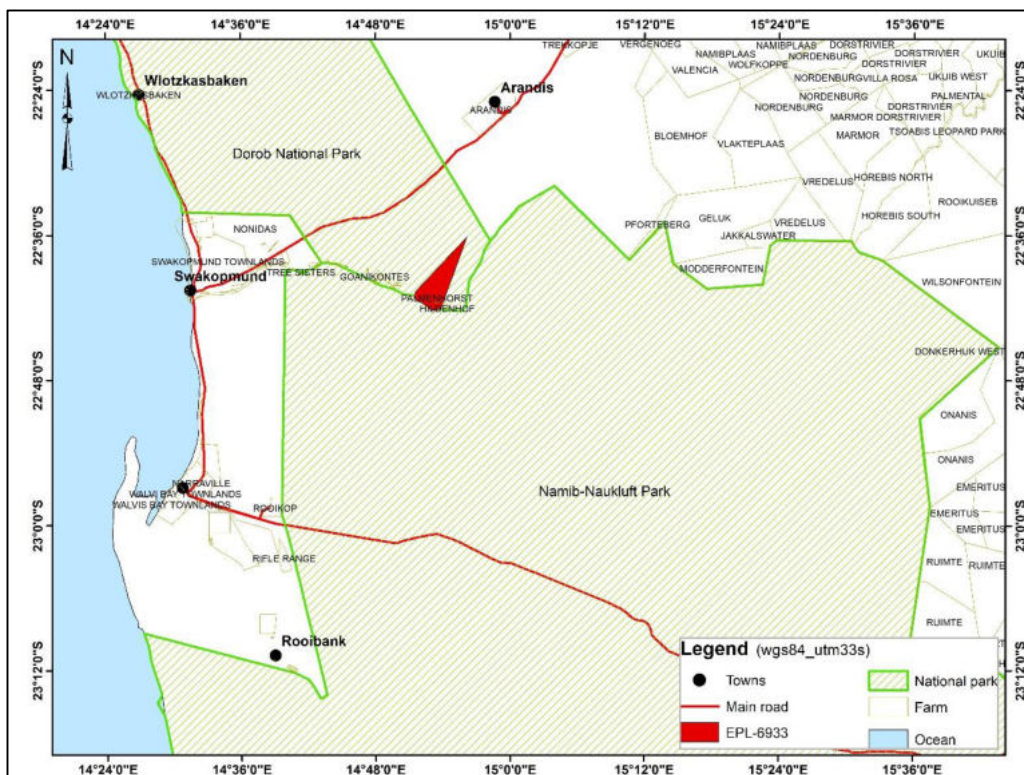


Figure 1: Locality Map for EPL 6933.

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### 1.2. Purpose of the EMP

Prior to commencement of the exploration activities, an Environmental Clearance Certificate (ECC) is required on the basis of an approved Environmental Management Plan (EMP). This is based on regulation 8 of the Environmental Management Act's (EMA) (7 of 2007) and the Environmental Impact Assessment Regulations (2012) it is mandatory that a draft of the Environmental Management Plan (EMP) is included as part of the scoping Environmental Assessment (EA) process. A 'management plan' is defined as:

*"...a plan that describes how activities that may have significant environments effects on the environment are to be mitigated, controlled and monitored."*

An EMP is one of the most important outputs of the EA process as it comprises all the proposed mitigation and monitoring actions, set to a timeline with specific assigned responsibilities. The EMP is a tool that links the impacts identified in the Environmental Impact Assessment (EIA) Process and the required environmental management on the ground during project implementation and operation together. It is important to note that an EMP is a legally binding document and a person who contravenes the provisions of this EMP may face imprisonment and/or a fine. This EMP is a living document and should be amended to adapt to project changes and/or environmental conditions and feedback from compliance monitoring.

The core value of this document is therefore to guide environmental management throughout the following life-cycle stages of the proposed project; pre-operation (planning and design), operation and decommissioning.

The overall objectives of the EMP:

- To develop measures that will mitigate the adverse impacts of the proposed project

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- Ensuring compliance with regulatory authority stipulations and guidelines
- To formulate measures to enhance the value of environmental components where possible.
- To formulate measures to protect environmental resources as well enhance the value of environmental components where possible.
- Responding to unforeseen events and providing feedback for continual improvement in environmental performance.

The following phases are addressed in this EMP:

- **Planning and design (Pre-operation)** – This is the period, prior to the exploration phase, during which preliminary legislative and administrative arrangements are carried out in preparation of exploration activities;
- **Operation** - the period during which the exploration activities will be operational.
- **Decommissioning** – Should the development be closed; this phase will be implemented.

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### **1.3. Environmental Assessment Practitioner (EAP)**

SS Consultants has been appointed by the Proponent as an independent environmental consultant to conduct the required Environmental Assessment (EA) which includes compiling an EMP for the proposed development. The EMP will be submitted together with the scoping EA report as supporting documents to the application for an Environmental Clearance Certificate (ECC) to the Environmental Commissioner at the Department of Environmental Affairs (DEA) of the Ministry of Environment, Forestry and Tourism (MEFT). The EMP will also be used by Contractors as well as the Proponent in guiding them during the proposed exploration operations to ensure that impacts on the environment are limited or avoided altogether.

### **1.4. Legal Requirements**

The contents of the EMP must meet the requirements of Section 8 (j) of the EIA Regulations. The EMP must address the potential environmental impacts of the proposed activity on the environment throughout the project life cycle. In addition, the EMP has to include a system for assessment of the effectiveness of monitoring and management arrangements after implementation. The proponent therefore must take the responsibility to ensure that the proposed activity as well as the EIA process conforms to the principles of EMA and must ensure that any contractors appointed by them also comply with such principles.

### **1.5. Assumptions and Limitations**

This EMP has been drafted with the acknowledgement of the following assumptions and limitations:



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- This EMP has been drafted based on the scoping-level Environmental Impact Assessment (EIA) conducted for the proposed development of EPL 6933 inclusive of a desktop Archeological Assessment. No detailed specialist studies were included as part of the assessment; and
- The mitigation measures recommended in this EMP document are based on the risks/impacts in the scoping report which were identified based on the provided project description and site investigation. Should the scope of the project change, the risks will have to be reassessed and mitigation measures provided accordingly.

### 1.6. Report Structure

The EMP points out the management actions for the proposed exploration activities on EPL 6933. The EMP addresses the following phases:

- **Pre-Operational (Planning and design) phase** - the period, prior to exploration, during which preliminary legislative and administrative arrangements are carried out in preparation for the proposed exploration activities;
- **Operation phase** - the period during which exploration activities will be operational and conducted by the proponent and/or their contractors; and
- **Decommissioning phase:** the period during which the Proponent may decide to discontinue the operations of exploration and its associated activities.

## 2. ROLES AND RESPONSIBILITIES

The Proponent is entirely responsible for the implementation of the EMP, and may delegate this responsibility at any time, as they deem necessary, from planning and design to operation and maintenance phase and decommissioning phase (if considered). The delegated responsibility for the effective implementation of this EMP will rest on the following key individuals which may be fulfilled by the same person:

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- Proponent's Representative
- Environmental Control Officer

### 2.1. Proponent's Representative

If the Proponent does not personally manage all aspects of the planning and design, operation and decommissioning activities throughout the above mentioned phases referred to in this EMP. They should assign this responsibility to a suitably qualified individual referred to in this plan as the Proponent's Representative (PR). The Proponent may decide to assign the role of a PR to one person for both phases of exploration. Alternatively, the Proponent may decide to assign a separate PR for each component i.e. planning and design, operation, and decommissioning phase. The PR's responsibilities are included in **Table 2-1** below.

Table 2-1: Responsibilities assigned to the Proponent's Representative for planning and design, operation and decommissioning phases.

Responsibility	Project Phase
Managing the implementation of this EMP and updating and maintaining it when necessary	Throughout the lifetime of the project
Ensure environmental policies are communicated to all personnel and that employees understand the guidelines of the EMP	Throughout the lifetime of the project
Management and monitoring of individuals and/or equipment on-site in terms of compliance with this EMP	Throughout the lifetime of the project
Issuing fines for contravening EMP provisions	Throughout the lifetime of the project

### 2.2. Environmental Control Officer

The Proponent shall assign responsibility for overseeing the on-site implementation of the

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entire EMP, from the planning and design phase to the operation and decommissioning phase, to a designated person, named herein as Environmental Control Officer (ECO). The Proponent may choose to assign this role to one person for both phases, or they may assign separate individual ECOs to oversee the implementation of the EMP during each phase. The ECOs will have the following responsibilities:

- Management and facilitation of communication between the Proponent, PR and Interested and Affected Parties (I&APs) with regard to this EMP;
- Conducting site inspections (recommended minimum frequency is monthly during exploration and bi-annually during decommissioning) of all areas with respect to the implementation of this EMP (monitor and audit the implementation of the EMP);
- Advising the PR on the removal of person(s) and/or equipment not complying with the provisions of this EMP;
- Making recommendations to the PR with respect to the issuing of fines for contraventions of the EMP; and
- Undertaking an annual review of the EMP and recommending additions and/or changes to this document.

### **3. ENVIRONMENTAL MANAGEMENT PLAN ACTIONS**

The purpose of this Environmental Management Plan (EMP) is to present the recommendations from the Scoping Report in the form of Environmental Specifications that can be practically implemented and enforced on site. These actions are required to minimise negative impacts and enhance positive impacts associated with the operations.

The EMP gives the commitments, which form the environmental contract between Proponent and the Government of the Republic of Namibia; represented by the Ministry of Environment, Forestry and Tourism (MEFT).

The management measures proposed to mitigate the potential impacts are detailed in the

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action plans below.

### 3.1. Key Potential environmental impacts to be managed

From the EA, the following main potential impacts per project phase have been identified and are summarised in the tables under subchapters 3.1, 3.2 to 3.5 as well as in the Scoping Report.

Table 3-1: Summary of key potential environmental impacts per project phase

	Project Phase	Potential impacts identified in the EA
1	Pre-Operation	Biodiversity and archaeological impacts
2	Operation	Health and safety, soil, surface and groundwater contamination, wildlife disturbance, dust, noise, environmental degradation, erosion, archaeological and social impacts.
3	Decommissioning	Loss of employment and soil, surface and groundwater contamination.

The aim of the management actions of the EMP is to avoid potential impacts where possible. Where impacts cannot be avoided, measures are provided to ensure the minimal significance of these impacts.

Management actions have to be put forward to manage the potential impacts rated in the EA carried out for the proposed exploration development are presented in the following tables. The management actions were compiled based on the three project phases:

- Planning and design phase (pre-exploration) (**Table 3-2**).
- Operation and maintenance phase management actions (during exploration activities)
- **Table 3-3**).

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- Decommissioning phase (**Table 3-4**)

The proponent or the delegated personnel should assess these commitments in detail and acknowledge their commitment to the specific management actions detailed in the table of the next subchapters.

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### Phase 1: Planning and Design Management Actions

The management requirements detailed in **Table 3-2** need to be carried out before any exploration activities commence on site while necessary preliminary legislative and administrative arrangements are made in preparation for the proposed exploration activities.

Table 3-2: Planning and design management actions

Aspect	Management Requirement
Labour Recruitment	<p>Provisions designed to maximise the use of local labour should be included within tenders concerning the:</p> <ul style="list-style-type: none"><li>• Provision stating that all unskilled labour should be sourced from local communities should be included within tenders concerning the exploration operations.</li><li>• Specific recruitment procedures ensuring local firms enjoy preference during tender adjudication should be included within tenders concerning the exploration operations.</li><li>• Provisions promoting gender equality pertaining to recruitment should be included within tenders concerning the exploration operations.</li></ul>

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Aspect	Management Requirement
Biodiversity	<ul style="list-style-type: none"> <li>• A vegetation study should be undertaken within those areas that will be affected by exploration activities and related infrastructure.</li> <li>• All trees (a “tree” is defined here as an indigenous woody perennial plant with a trunk diameter <math>\geq 150</math> mm) that occur within the development site should be surveyed and not removed from site.</li> <li>• Trees that have not been registered and surveyed and will be removed, the Proponent should apply for the licence to remove these trees from the local Forestry department (Ministry of Environment, Forestry and Tourism).</li> <li>• Large indigenous trees and protected tree species within to be kept the site should be surveyed and marked with red paint.</li> </ul>
EMP Implementation	<ul style="list-style-type: none"> <li>• The proponent should appoint a Proponent’s Representative (PR) that will act as their on-site implementing agent. This person should be responsible to ensure that the Proponent’s responsibilities are executed in compliance with relevant legislation and this EMP.</li> </ul>

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Aspect	Management Requirement
<p>Consultation with affected farmers</p>	<ul style="list-style-type: none"> <li>• Consultation meetings should be held with the affected farm owners prior to any exploration activities commencing on site in order to provide them with the following information                             <ul style="list-style-type: none"> <li>○ Detailed work plan with regards to the exploration activities.</li> <li>○ Discussion of access agreements.</li> <li>○ Discussion of compensation (as necessary).</li> <li>○ Any other concerns or information requirements that the farmers may have.</li> </ul> </li> </ul>
<p>Agreements with community affected by the activity</p>	<ul style="list-style-type: none"> <li>• Access agreements need to be made with the farm owner's members most likely to be affected by the exploration activities in the area.</li> <li>• The agreement should include but is not limited to:                             <ul style="list-style-type: none"> <li>○ Compensation agreements (if necessary).</li> <li>○ Agreed upon operating hours.</li> <li>○ A commitment by the exploration company for the rehabilitation of the site when exploration activities are decommissioned.</li> <li>○ Agreed upon access to the site.</li> <li>○ Commitment to the adherence and implementation of the EMP.</li> <li>○ The Scoping Report and EMP for reference.</li> </ul> </li> </ul>



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Aspect	Management Requirement
Archaeology	<ul style="list-style-type: none"><li>• An archaeological expert must be appointed to undertake a detailed archaeological survey once targets have been identified for drilling and/or other mechanically-assisted exploration</li><li>• This should be done in conjunction with the farm owners within the EPL area.</li><li>• Once the exact locations of the exploration sites are determined, and should a heritage or archaeological site be uncovered, an Archaeological Chance Finds Procedure should be applied as outlined in Appendix K of the Scoping Report.</li></ul>

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### Phase 2: Operational Phase Management Actions

The management actions for the operational phase during which the exploration activities will take place are listed in

#### Table 3-3.

Table 3-3: Operation phase management actions

Environmental Feature	Impact	Management Actions
EMP training	Lack of EMP awareness and the implications thereof	<ul style="list-style-type: none"><li>• Employees appointed for exploration work must ensure that all personnel are aware of necessary health, safety and environmental considerations applicable to their respective work.</li></ul>
Monitoring	EMP non-compliance	<ul style="list-style-type: none"><li>• The ECO or the Proponent/Proponents Representative should monitor the implementation of this EMP.</li><li>• The Proponents Representative should inspect the site throughout the exploration at least on a monthly basis.</li></ul>

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Environmental Feature	Impact	Management Actions
		<ul style="list-style-type: none"> <li>• Bi-annual audits should be conducted of site activities by an external ECO.</li> </ul>
Waste Management	Visual impact and soil contamination	<ul style="list-style-type: none"> <li>• The exploration site should always be kept tidy.</li> <li>• All domestic and general waste produced daily should be cleaned and contained daily.</li> <li>• No waste may be buried or burned.</li> <li>• Waste containers (bins) should be emptied regularly and removed from site to the nearest municipal waste disposal site.</li> <li>• All recyclable waste needs to be taken to the nearest recycling depot.</li> <li>• A sufficient number of separate waste containers (bins) for hazardous and domestic / general waste must be provided on site.</li> <li>• Exploration workers should be sensitised to dispose of waste in a responsible manner and not to litter.</li> <li>• No waste may remain on site after the completion of the project.</li> </ul>

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Environmental Feature	Impact	Management Actions
Hazardous Waste	Soil and groundwater contamination	<ul style="list-style-type: none"> <li>• All heavy operation vehicles and equipment on site should be provided with a drip tray.</li> <li>• All heavy operation vehicles should be maintained regularly to prevent oil leakages.</li> <li>• Maintenance and washing of operation vehicles should take place only at a designated workshop area.</li> </ul>
Wastewater	Groundwater contamination	<ul style="list-style-type: none"> <li>• Use of the toilets instead of the veld must be strictly adhered to.</li> <li>• If grey water can be collected from ablution facilities at the contractors’ camp it should be recycled and:               <ul style="list-style-type: none"> <li>○ Used for dust suppression;</li> <li>○ Used to water vegetable gardens or to support a small nursery in local communities (as and when agreed upon by such communities); and/or</li> <li>○ Used to clean equipment.</li> </ul> </li> <li>• All run off materials such as hydrocarbons, wastewater and other potential contaminants should be contained on site and disposed of</li> </ul>



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Environmental Feature	Impact	Management Actions
		<p>in accordance with municipal wastewater discharge standards, so that they do not reach to ground or surface water systems.</p> <ul style="list-style-type: none"> <li>• Wastewater (excluding sewage) should be drained into lined / impermeable catch pits, big enough for daily / weekly usage without overflowing. Water from these catch pits should be removed from site to the nearest wastewater treatment facility by an approved wastewater removal company.</li> <li>• Groundwater impact awareness training should be provided to the employees involved in this project phase.</li> <li>• An emergency plan should be available for major / minor spills and firefighting at the exploration site during exploration activities (with consideration of air, groundwater, soil and surface water).</li> </ul>
Soil	Soil contamination	<ul style="list-style-type: none"> <li>• Spill control preventative measures should be put in place to manage soil contamination.</li> </ul>

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Environmental Feature	Impact	Management Actions
		<ul style="list-style-type: none"> <li>• An impermeable liner should be laid down on the site area in order to prevent contaminants from reaching to surrounding soils and eventually groundwater systems.</li> <li>• Potential contaminants such as hydrocarbons and wastewater should be contained on site and disposed of in accordance to municipal wastewater discharge standards so that they do not contaminate surrounding soils.</li> <li>• Soil contamination should be monitored on site daily by PR and monthly by ECO.</li> <li>• ECO(s) should ensure that a sufficient number of drip trays are available on-site and that these are utilised in the event of leakage from construction trucks or vehicles.</li> </ul>

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Environmental Feature	Impact	Management Actions
		<ul style="list-style-type: none"> <li>Contaminated soils onsite that may have resulted from leakage/spillage from construction vehicles or equipment should be removed to a depth dependent on the size of the spill and replaced with clean soil. The contaminated soil should be removed and disposed at a designated landfill site suitable to receive contaminated soil.</li> </ul>
Biodiversity	Loss of Biodiversity	<ul style="list-style-type: none"> <li>Recommendations as provided by the vegetation study with regards to the protection of biodiversity in the area should be adhered to during exploration activities.</li> <li>Trees with a trunk size of 150 mm and bigger should be surveyed, marked with paint (readily visible) and protected.</li> <li>The Proponent should only remove trees within the actual footprint of the specific exploration activities. Trees that are not within the footprint should be left to preserve biodiversity in the area.</li> </ul>

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Environmental Feature	Impact	Management Actions
		<ul style="list-style-type: none"> <li>• If cleared, the numbers of protected, endemic and near endemic species removed should be documented.</li> <li>• Trees and plants protected under the Forest Act No 12 of 2001 are not to be removed without a valid permit from the local Department of Forestry.</li> </ul>
Dust and noise	Nuisance impacts	<ul style="list-style-type: none"> <li>• The contractor(s) should suppress dust associated with exploration activities by using a reasonable amount of water.</li> <li>• If feasible, wastewater should be treated to an acceptable water quality level, so that it can be used for exploration purposes (dust suppression).</li> <li>• Noise levels during exploration activities should be kept within the allowable standards for urban areas.</li> <li>• Noise levels should adhere to the SANS restrictions on noise.</li> </ul>



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Environmental Feature	Impact	Management Actions
		<ul style="list-style-type: none"> <li>• Work hours should be restricted to between 08h00 and 17h00 due to the use of heavy equipment, power tools and the movement of heavy vehicles.</li> <li>• Noisy equipment should be shut down when not in use (when not needed) to avoid unnecessary noise on site.</li> <li>• Workers performing noisy tasks should be rotated regularly (work on shifts) to avoid exposing them to excessive noise for a long period of time in a day.</li> <li>• Workers should be equipped with personal protective equipment (PPE) such as earplugs to reduce noise exposure.</li> <li>• Workers should ensure that they wear the PPE at all times on work sites.</li> </ul>
Health and Safety	Health and safety impacts	<ul style="list-style-type: none"> <li>• The contractor(s) should ensure that all personnel are provided with personal protective equipment (PPE), such as coveralls, gloves, safety boots, safety glasses and hard hats at all times.</li> </ul>

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Environmental Feature	Impact	Management Actions
		<ul style="list-style-type: none"> <li>• Workers should ensure that they wear the PPE at all times on work sites.</li> <li>• No workers should be allowed to drink alcohol during working hours.</li> <li>• No workers should be allowed on site if under the influence of alcohol.</li> <li>• An appropriate location should be indicated on the site for the parking of operation vehicles.</li> <li>• Public access to the exploration site should be prohibit.</li> </ul>
Exploration labourers		<ul style="list-style-type: none"> <li>• The Proponent should ensure that locals from the surrounding areas are employed for any unskilled labour.</li> <li>• Exploration labourers should not be recruited on-site.</li> <li>• Portable toilets (i.e. easily transportable) should be available on site.</li> <li>• Separate ablutions should be available for men and women and should clearly be indicated as such.</li> </ul>

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Environmental Feature	Impact	Management Actions
		<ul style="list-style-type: none"> <li>• Sewage waste needs to be removed on a regular basis to the nearest approved sewage disposal site.</li> <li>• Workers responsible for cleaning the toilets should be provided with latex gloves and masks.</li> <li>• No workers may reside on-site for the entire duration of the exploration period. Only a security guard will be allowed to sleep on-site (if there will be any).</li> <li>• The Proponent or contractor should draft a Communication Plan, which should outline as a minimum the following:               <ul style="list-style-type: none"> <li>• How stakeholders, who require ongoing communication for the duration of the exploration period, will be identified and recorded and who will manage and update these records.</li> <li>• How these stakeholders will be consulted on an ongoing basis.</li> </ul> </li> </ul>

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Environmental Feature	Impact	Management Actions
		<ul style="list-style-type: none"> <li>• Provision should be made for a grievance mechanism – outlining how concerns will be lodged/recorded and how feedback will be delivered, inclusive of further steps of arbitration in the event that feedback is deemed unsatisfactory.</li> <li>• Stakeholders need to be informed of the communication plan once drafted to ensure they are aware of the relevant communication channels.</li> </ul>
Water	Groundwater contamination	<ul style="list-style-type: none"> <li>• No wastewater / effluent should be allowed to leave the site premises without proper control.</li> <li>• These should be disposed of in accordance with municipal wastewater discharge standards.</li> <li>• Regular maintenance and monitoring of exploration equipment and vehicles should be done to detect early spills or leakages.</li> </ul>

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Environmental Feature	Impact	Management Actions
		<ul style="list-style-type: none"> <li>• An emergency plan should be available for major / minor spills at the exploration site during operation activities (with consideration of air, groundwater, soil and surface water).</li> <li>• Groundwater impact awareness training should be provided to the employees involved in this phase.</li> </ul>
Wildlife and Stock animals	Disturbance of wildlife and stock theft	<ul style="list-style-type: none"> <li>• Working hours should be limited to during the day, thus enabling the wildlife to roam freely at night.</li> <li>• The contractor is to compile a Non-Theft Policy to which all workers are to comply with.</li> <li>• All exploration workers are to adhere to the Non- Theft Policy.</li> </ul>

**Phase 4: Rehabilitation and Decommissioning Management Actions**

The table below presents the management action for decommissioning phase.

Table 3-4: Decommissioning phase management actions

Environmental Feature	Impact	Management Actions
Employment	Loss of employment	<ul style="list-style-type: none"> <li>• The Proponent should inform the employees, of its intentions to cease the exploration activities, and the expected date of such.</li> <li>• The Proponent should raise awareness of the possibilities for work in other industrial sectors.</li> </ul>
Rehabilitation	Groundwater contamination	<ul style="list-style-type: none"> <li>• During the initial prospecting phase, only limited surface rock and soil sampling will take place and it is unlikely that any scars be left by this activity.</li> <li>• Remove all waste, defunct samples, and any other remains from the site.</li> <li>• Remove all sample bags, plastic waste, survey pegs, materials used for sump creation etc. from site at completion of sampling schedule.</li> </ul>

		<ul style="list-style-type: none"><li>• Site should be rehabilitated to as close as possible to its original condition.</li><li>• Re-contour and rip the drill site before the site is finally decommissioned.</li><li>• Fill holes, rip up, rake track, and spread stockpiled topsoil back over the entire new tracks made, to allow re-vegetation.</li><li>• Make sure that the ECO has a site inspection prior to and after rehabilitation to check rehabilitation efforts of each drill site.</li></ul>
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## **Site closure and rehabilitation**

Rehabilitation is the process of repairing the damage done by exploration activities. Rehabilitation plan has been developed with a main aim of returning disturbed environment close to its pre exploration state. It is also planned to cater for the access road, vehicle tracks around the site, vegetation removal, abandoned exploration drill holes, and restoration of areas covered by sampling stockpile and rock piles. The closure vision for the proposed project is to establish a safe, stable and non-polluting post- prospecting landscape that can facilitate integrated, self-sustaining and value generating opportunities, thereby leave a lasting positive legacy.

### **Site closure and rehabilitation activities**

All waste (such as hazardous and domestic) waste will be transported offsite for disposal in licensed landfills in Swakopmund or surrounding towns like Arandis. Disturbed or/and contaminated areas will be cleaned up, treated where necessary and restored to its pristine state.

- ✓ Demolition of camping structures.
- ✓ Removing of equipment on site.
- ✓ Removal of associated infrastructures such as storage tanks, solar panels and heavy-duty generators.
- ✓ Where access tracks have been developed in cases where there are no roads, these will be rehabilitated and closed as part of normal closure actions in consultation with landowners.
- ✓ Existing secondary roads in the area should be used to prevent damages of the main road.
- ✓ The recovered topsoil and subsoil should be utilized to reconstruct the original soil profile

The rehabilitation actions intended to be undertaken at the end of the life of the proposed



exploration activities are described below.

### **Remediation of Contaminated Areas**

All soil, contaminated with hydrocarbons, will be identified, excavated and disposed in accordance with nearest town council disposal requirements at appropriate sites.

- ✓ Removed soils will be managed as determined by the nature and extent of the contamination.
- ✓ All equipment in which chemicals have been stored or transported will be cleaned and disposed of in a suitable disposal facility.

### **Waste Management**

Waste management activities will include:

- ✓ Hazardous waste will be managed handled, classified and disposed.
- ✓ No burring and burying of waste.
- ✓ Nonhazardous substances will be disposed in the nearby landfill sites.
- ✓ It may be necessary to fence temporary salvage yards for security reasons, particularly where these are located close to public roads.

### **3. CONCLUSION**

Based on the recommendation given in this EMP, Consultants is confident that the proposed exploration activities, as described in the EA report be granted an Environmental Clearance Certificate, provided that the EMP is implemented and that all the legal requirements pertaining to this development are complied with.

The Environmental Management Plan should be used as an on-site reference document during all phases of the proposed project, and auditing should take place in order to ensure compliance with the EMP of the proposed project. Parties responsible for transgression of the EMP should be held responsible for any rehabilitation that may need to be undertaken. Overall, the severity of potential environmental impacts of the proposed project activities on

the receiving environment (physical, biological, socioeconomic environments and ecosystem functions) will have low probability of occurrence, localized extent, and low magnitude and temporally duration. This report should be viewed as a framework for integrating mitigation measures and applicable legal tools to ensure both compliance and sustainability. It is therefore very important that the proponent provide adequate support for human and financial resources, for the implementation of the proposed mitigations and effective environmental management during the planned exploration activities.

Based on the recommendation given in this EMP, SS consultants is confident that the proposed exploration activities, as described in **Chapter 2** of the scoping report may be granted an Environmental Clearance Certificate, provided that the EMP is implemented and that all the legal requirements pertaining to this development are complied with.

### **Recommendations for Monitoring**

For the aforementioned environmental impacts to be prevented or minimized, the monitoring measures below must be implemented:

- Monitor whether provisions as set out in the EMP has been complied with.
- Non-compliance is to be recorded and discussed at weekly site meetings and timeous remedial actions taken.
- Should dust and noise complaints be received, abatement measures should be implemented such as water spraying, and continued communication should be held with the aggrieved parties until the noise and dust matters are clarified.

## **4. REFERENCES**

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