



ECC-128-361-REP-09-D

**ENVIRONMENTAL COMPLIANCE REPORT FOR ONGOING EXPLORATION /  
PROSPECTING UNDER THE EXCLUSIVE PROSPECTING LICENSE (EPL) NO. 4654  
WINDHOEK/GOBABIS/MARIENTAL DISTRICTS, KHOMAS/OMAHEKE/HARDAP  
REGIONS NAMIBIA**

**RENEWAL  
ENVIRONMENTAL CLEARANCE CERTIFICATE**

*PREPARED FOR*  
**HEADSPRING INVESTMENTS (PTY) LTD**

JULY 2021

## TITLE AND APPROVAL PAGE

<b>Project Name:</b>	Environmental Compliance Report for Ongoing Exploration / Prospecting under the Exclusive Prospecting License (EPL) No. 4654 Windhoek/Gobabis/Mariental Districts, Khomas/Omaheke/Hardap Regions
<b>Project Number</b>	ECC-128-361-REP-09-D
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**DEFINITIONS AND ABBREVIATIONS**

ECC	Environmental Compliance Consultancy
ECO	Environmental Control Officer
EMA	Environmental Management Act
EMP	Environmental Management Plan
EPL	Exclusive Prospecting Licence
MEFT	Ministry of Environment, Forestry and Tourism

## 1 INTRODUCTION

### 1.1 PROJECT INTRODUCTION

Headspring Investments (Pty) Ltd (herein referred to as the proponent or Headspring) is an exploratory mining prospector for base and rare metals and nuclear fuel minerals. Their current area of interest is located within a 40km radius of the town of Leonardville, in the Windhoek/Gobabis/Mariental Districts, Khomas, Omaheke and Hardap Regions of eastern Namibia. Headspring plans to expand its operations for this project and would like to continue to explore the availability of base and rare metals and nuclear fuel minerals at the Exclusive Prosecting Licence (EPL) 4654 located west of Leonardville.

The proponent proposes to carry out exploration activities on EPL 4654 for nuclear fuel minerals, specifically, but not limited to, uranium deposits. EPL 4654 occurs across the Khomas, Hardap and Omaheke Regions of Namibia. The prospect area is located approximately 10km north-west of Leonardville and 80 km south of Gobabis (Figure 1.)

A revised Environmental Management Plan (EMP) report was compiled by Risk-Based Solutions (RBS) CC in August 2018 to support the renewal application for an environmental clearance certificate for the exploration activities on EPL 4654. The environmental clearance certificate for the exploration activities on EPL 4654 was valid for a period of three (3) years as was issued by the Environmental Commissioner on 3rd of September 2018 (Appendix A).

In terms of the Environmental Management Act. No. 7 of 2007 a renewal application for the project's environmental compliance certificate is required. As part of this application an environmental compliance review of the works undertaken on site and compliance with the Environmental Management Plan (EMP) is to be submitted to the Ministry of Environment, Forestry and Tourism (MEFT).

#### **DISCLAIMER**

*This report has been compiled by means of a desktop study, including the revision of relevant reports and all records made available by the proponent. ECC did not conduct any field verification and therefore rely on the proponent's integrity to uphold conditions specified in the EMP.*



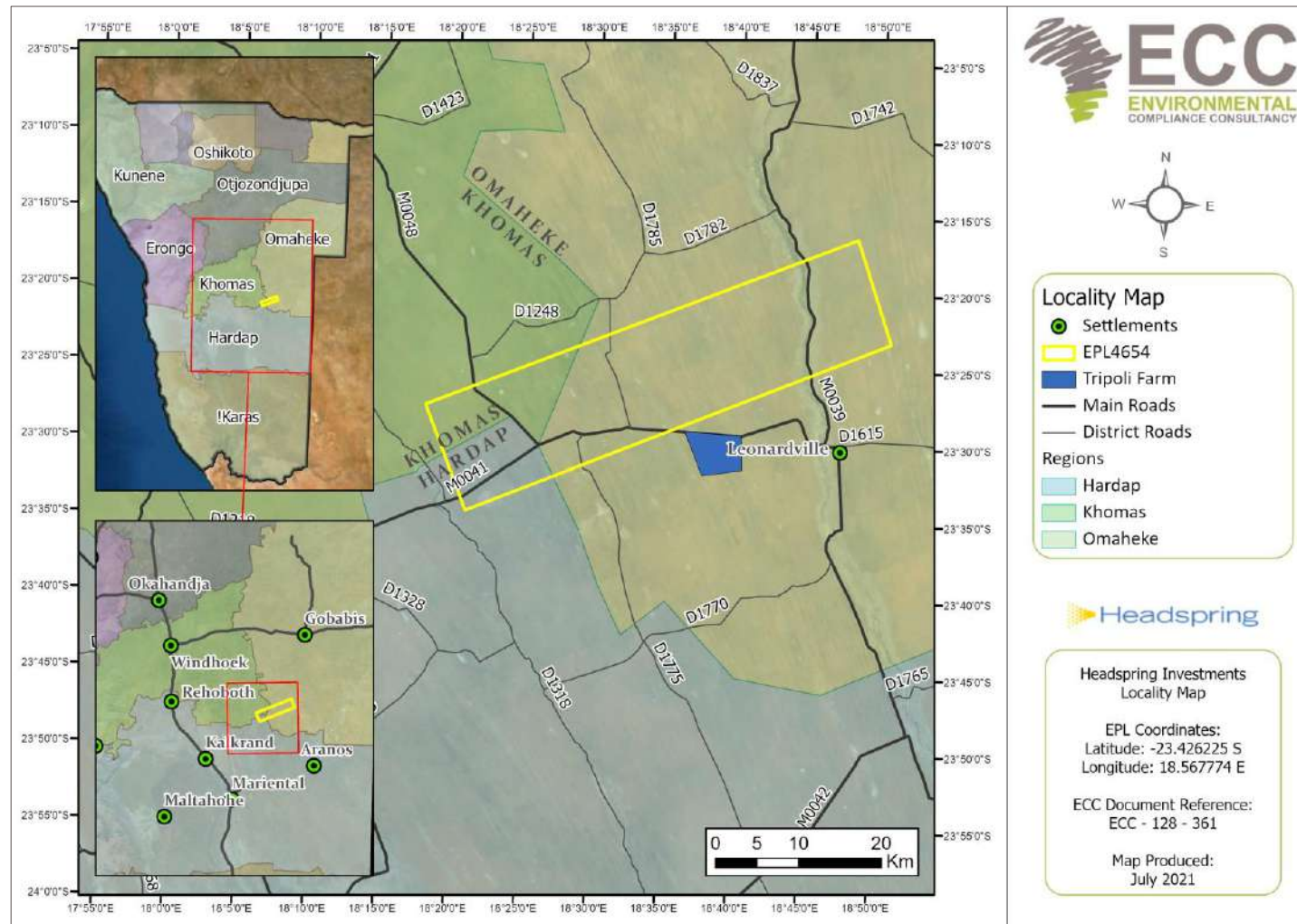


FIGURE 1 – LOCALITY MAP OF EPL 4654

## 1.2 THE PROPONENT OF THE PROJECT

The details of the proponent are set out in Table 1.

**TABLE 1 - PROPONENTS DETAILS**

CONTACT	POSTAL ADDRESS	EMAIL ADDRESS	TELEPHONE
HEADSPRING INVESTMENTS (PTY) LTD Mrs. Svetlana Bauer	P.O Box 318 Windhoek Namibia	Svetlana.Bauer@uranium1.com	061-304588

## 1.3 ENVIRONMENTAL CONSULTANCY

ECC, a Namibian consultancy registration number CC/2013/11401, has prepared this document on behalf of the proponent. ECC operates exclusively in the environmental, social, health and safety fields for clients across Southern Africa in the public and private sector. The curriculum vitae's of the authors of this report are contained in Appendix B. ECC is independent of the proponent and has no vested or financial interest in the proposed project except for fair remuneration for professional services rendered.

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## 1.4 PURPOSE OF REPORT

Environmental Compliance Consultancy (ECC) has been appointed by the proponent to apply for their renewal of an environmental clearance certificate for the exploration activities on EPL 4654 situated in the Omaheke, Hardap and Khomas Regions of Namibia. The purpose of this environmental compliance report is to document the findings of an environmental compliance audit covering the period since the approval of the renewal environmental clearance licence from the 3rd September 2018 to 3rd September 2021, which will be, submitted as part of the new renewal application.

## 2 BACKGROUND OF THE PROJECT

HeadSpring Investments is a licenced mining prospector operating in within a 40km radius of Leonardville town, in Eastern Namibia. It currently holds (pending renewal) EPLs for eight zones in the Hardap region, three of which are co-located in both the Hardap and Omaheke regions and one in the Hardap, Omaheke and Khomas regions. The license area covers both privately owned commercial farmland and communal land (Government land). Exploration activities have been undertaken as follows:

- (i) Initial desktop exploration activities (no field-work undertaken);
- (ii) (ii) Regional reconnaissance field-based mapping and sampling activities (Subject to the positive results of (i));
- (iii) (iii) Interpretation of existing aerial data, initial local field-based mapping and sampling activities followed by possible acquisition of new aerial data (radiometrics, magnetics and gravity) (Subject to the positive results of (i) and (ii) above),
- (iv) (iv) Detailed local field-based activities such as local geological mapping, geochemical mapping and sampling, trenching and drilling of closely spaced boreholes and bulk sampling (Subject to the positive results of (i) - (iii) above)

There are currently no ongoing mining activities in the specified area.

This document is subjected to periodical auditing as the project activities transition from the earliest exploration stage to the operation stage. The EMP is audited in order to monitor the progress of the project and ensure that all measures stipulated in the document are met and effectively adhered to as required by the Department of Environmental Affairs and Forestry (DEAF). In an event where the project activities alter, the EMP is required to be amended accordingly.

EPL 4654 does not fall within any ecologically sensitive areas of Namibia. It is however imperative that through studies are carried out to ascertain the biophysical condition of the area prior to the exploration or mining activities.

As per the EIA Regulations and Environmental Management Act No. 7 of 2007, exploration activities on EPL 4654 cannot be undertaken without an environmental clearance certificate. The exploration activities at EPL 4654 proposes to assess the amount of Uranium rich substrate and other minerals resources that can be found in the EPL 4654 area. The proposed method for exploration would have minimal impact as it will be done on small scale and rehabilitation of the natural vegetation will be done as per the Environmental Management Plan (EMP).



### 3 ENVIRONMENTAL COMPLIANCE AUDIT

#### 3.1 SITE INSPECTION

Environmental Compliance Consultancy (ECC) has not undertaken a site inspection for this project. This report was conducted through a series of desktop assessments, revision of relevant reports, and verification of owner documentation, and all records made available to ECC. The findings of this inspection are included in Table 2.

#### 3.2 ANNUAL COMPLIANCE AUDIT

During the licence period (2018-2021) there were significant exploration activities carried out on the EPL. The EMP compiled by Risk-Based Solutions (RBS) CC in August 2018 set of feasible and cost-effective mitigation, monitoring and institutional measures to avoid adverse environmental and social impacts, reduce them to acceptable levels or to compensate for them. Furthermore, the EMP covers all adverse environmental impacts, including any that may result from the exploration activities at EPL 4654. The EMP will provide the technical details for each mitigation, monitoring and institutional measure, including the impact(s) to which it relates and the conditions when it is required, together with designs, equipment descriptions and operating procedures in compliance with the approved EMP granted in terms of the Environmental Management Act, No. 7 of 2007.

In addition to the compliance audit, the EMP will be revised to identify gaps in order to recommend additional best practice measures that were not captured in the previous EMP.

#### 3.3 COMPLIANCE AUDIT FINDINGS

The section outlines the findings of the environmental audit completed for the project. It addresses obligations in terms of the key acts that govern the activities on the site, the commitments made in the EMP, and presents the findings and recommended corrective actions where applicable (Table 2 - 3).

The EMP:

- identifies all mineral exploration activities that could cause environmental damage (risks) and provides a summary of actions required;
- identifies institutions responsible for ensuring compliance with the EMP and provides their contact information;
- provides standard procedures to avoid, minimise and mitigate the identified negative environmental impacts and to enhance the positive impact of the proposed activities on the environment;
- provides for site and exploration rules and actions required;
- forms a written record of procedures, responsibilities, requirements and rules for contractor/s, their staff and any other person who must comply with the EMP;

- provides a monitoring and auditing programme to track and record compliance and identify and respond to any potential or actual negative environmental impacts, and
- Provides a monitoring programme to record any mitigation measures that are implemented.

**TABLE 2 - EXPLORATION ACTIVITIES COMPLIANCE TABLE**

ASPECT	MANAGEMENT OBJECTIVES	MANAGEMENT ACTIONS	COMPLIANCE	COMMENTS OR RECOMMENDATIONS
– <b>Biotic Environment</b>	<ul style="list-style-type: none"> <li>– Impact to ecological resources would be minimal and localized during exploration because of the limited nature of activities.</li> <li>– Introduction of fauna and flora through the introduction of seeds and fauna through the movement of people and vehicles.</li> </ul>	<ul style="list-style-type: none"> <li>– The proponent shall take adequate steps to educate all members of his workforce as well as his supervisory staff on the relevant environmental laws and protection requirements.</li> <li>– The proponent shall appoint a suitably qualified independent Environmental Control Officer (ECO).</li> <li>– The proponent shall construct and/or implement all the necessary environmental protection measures in each area before exploration work may proceed.</li> </ul>	– <b>Compliant</b>	– All activities were undertaken in accordance with the EMP.
– <b>Environmental awareness</b>	<ul style="list-style-type: none"> <li>– To ensure that all employees and Sub-Contractors are informed of their environmental obligations.</li> </ul>	<ul style="list-style-type: none"> <li>– The Environmental, Health, and Safety Induction Course should be conducted by the ECO and appointed Health and Safety officer.</li> <li>– The site manager responsible will provide feedback to his staff on their day-to-day environmental performance and address issues requiring attention and specific actions required.</li> </ul>	– <b>Compliant</b>	<ul style="list-style-type: none"> <li>– Transfer of skills by induction course.</li> <li>– Communication with the staff and sub-contractors to be conducted in accordance with the EMP.</li> </ul>
– <b>Safety to the public</b>	<ul style="list-style-type: none"> <li>– To reduce the risks posed by the project to the public.</li> </ul>	<ul style="list-style-type: none"> <li>– Where the public could be exposed to danger by any of the exploration or site activities, the project manager shall provide flagmen, barriers, and/or warning signs in English.</li> </ul>	– <b>Compliant</b>	– No evidence of non – compliance.

ASPECT	MANAGEMENT OBJECTIVES	MANAGEMENT ACTIONS	COMPLIANCE	COMMENTS OR RECOMMENDATIONS
		<ul style="list-style-type: none"> <li>No firearms shall be permitted on site without the prior approval of the Project Manager.</li> <li>The project manager shall implement appropriate measures to limit any adverse social impacts associated with the establishment of a exploration camp and/or the accommodation of contractors workforce on the local communities.</li> </ul>		
<ul style="list-style-type: none"> <li><b>Human resource and opportunities management</b></li> </ul>	<ul style="list-style-type: none"> <li>Preliminary assessment indicated activities conducted during exploration phase are temporary and limited in scope, they would not result in significant socioeconomic impacts on employment, local services or property values. Exploration activities shall be restricted to specified hours in order to limit disturbance to the public.</li> </ul>	<ul style="list-style-type: none"> <li>In order to enhance the benefits of employment creation for these communities, it is recommended that the Project manager shall establish a formal and organized recruitment process in line with this EMP. Ensure that local people are employed for semi-skilled labour where possible during exploration and after the mining activities commerce.</li> <li>The project manager shall restrict activities to the hours of 6h30 - 17h00 during summer and 07h00 - 17h00 during winter on Mondays to Saturdays and no work will be permitted on Sundays or public holidays.</li> </ul>	<ul style="list-style-type: none"> <li>Compliant</li> </ul>	<ul style="list-style-type: none"> <li>Activities were undertaken in accordance with the EMP.</li> </ul>

ASPECT	MANAGEMENT OBJECTIVES	MANAGEMENT ACTIONS	COMPLIANCE	COMMENTS OR RECOMMENDATIONS
– <b>Dust</b>	– Impacts on air quality during exploration activities such as emissions and dust from earth moving equipment, vehicles, geophysical surveys, bore hole completion and testing and drill rig exhaust.	<ul style="list-style-type: none"> <li>– Dust suppression method should be done to minimise any dust emission from exploration activities.</li> <li>– Exploration vehicles to only use designated roads;</li> <li>– During high wind conditions the site manager must make the decision to cease activities until the wind has calmed down; and</li> <li>– Cover any stockpiles with a suitable material, such as plastic or shade-cloth, to minimize windblown dust.</li> </ul>	– <b>Compliant</b>	– Activities were undertaken in accordance with the EMP.
– <b>Noise</b>	– Acoustics or noise associated with exploration from earth-moving equipment, vehicle traffic, geophysical surveys and drill rig operations	<ul style="list-style-type: none"> <li>– Install and maintain silencers on machinery</li> <li>– Appropriate directional and intensity settings are to be maintained on all hooters and sirens</li> <li>– No amplified sound shall be allowed on site other than in emergency situations</li> <li>– Noise pollution during exploration would be minimal. However, if deemed necessary, employees working on the exploration should exercise maximum care to avoid disruption</li> </ul>	– <b>Compliant</b>	– Activities were undertaken in accordance with the EMP.



ASPECT	MANAGEMENT OBJECTIVES	MANAGEMENT ACTIONS	COMPLIANCE	COMMENTS OR RECOMMENDATIONS
– <b>Visual Impacts</b>	– Visual impacts could be adverse if the landscape were substantially degraded or modified. However, exploration activities would have only temporary and minor visual effects, resulting from the presence of drills rigs, workers, vehicles and other equipment	– Ensure effective and formal communication between the Project Management Team and the project manager on exploration issues throughout all stages of the project	– <b>Compliant</b>	– No evidence of non – compliance.
– <b>Impacts on soil and vegetation</b>	– Uncontrolled off-road driving may have an impacts on the grasses and succulents that are found on the soils in the project area that stabilizes the surface and protect the underlying soil from erosion. Disturbance of organic and inorganic protective layers can lead to increased wind and water erosion, reduced infiltration rates, reduced soil moisture content and inhabitation of plant germination.	– The exploration team should guide the vehicles for exploration on which route should be used. – Off-road driving should be limited to specific areas and rehabilitation where possible should be done after the exploration activities.	– <b>Compliant</b>	– No evidence of non – compliance.

ASPECT	MANAGEMENT OBJECTIVES	MANAGEMENT ACTIONS	COMPLIANCE	COMMENTS OR RECOMMENDATIONS
<ul style="list-style-type: none"> <li>– <b>Health and Safety</b></li> </ul>	<ul style="list-style-type: none"> <li>– Potential impacts on human health and safety resulting from exploration activities such as occupational accidents and injuries, vehicle accidents, exposure to weather extremes, wildlife encounters, trips and falls on uneven terrain, adverse health effects from dust generation and emissions and contact hazardous materials</li> </ul>	<ul style="list-style-type: none"> <li>– All employees working on exploration should be inducted on human health and safety and should be provided with PPE</li> <li>– Health and safety training and procedures should be provided by the health and safety team</li> </ul>	<ul style="list-style-type: none"> <li>– <b>Compliant</b></li> </ul>	<ul style="list-style-type: none"> <li>– Activities were undertaken in accordance with the EMP.</li> </ul>
<ul style="list-style-type: none"> <li>– <b>Site demarcation</b></li> </ul>	<ul style="list-style-type: none"> <li>– The site manager shall restrict all his activities, materials, equipment and personnel to the designated Site.</li> <li>– Loss of biological crusts can substantially increase water and wind erosion. However, the amount of surface disturbance and use of geologic materials during exploration would be minimal.</li> </ul>	<ul style="list-style-type: none"> <li>– The site manager shall ensure that the clearance of vegetation is restricted only to that required to facilitate the execution of the works.</li> <li>– Exploration activity needs to be conducted in such way that disturbance to surface materials is minimized.</li> </ul>	<ul style="list-style-type: none"> <li>– <b>Compliant</b></li> </ul>	<ul style="list-style-type: none"> <li>– Activities were undertaken in accordance with the EMP.</li> </ul>

ASPECT	MANAGEMENT OBJECTIVES	MANAGEMENT ACTIONS	COMPLIANCE	COMMENTS OR RECOMMENDATIONS
– <b>Access, traffic and haul roads</b>	– Access traffic shall be controlled to ensure minimal disruption to normal road users.	– The contractor shall be held responsible for the control of all project related traffic, including that of his suppliers, in ensuring that vehicles associated with the project remain on designated routes and within the designated working times.	– <b>Compliant</b>	– No evidence of non – compliance.
– <b>Solid waste management</b>	– Geophysical and exploratory drill crews may generate waste i.e. drilling fluid and muds, used oil and filters, spilled fuel, drill cuttings, spent and unused solvents, scrap metal, solid waste and garbage – Ensure that there is no illegal disposal of waste.	– Ensure that waste generated during the exploration on site is disposed of at an appropriate site. – The contractor shall provide sufficient number of rubbish bins with secured lids. – No waste materials, including domestic, organic or exploration wastes shall be burnt, dumped or buried on the site.	– <b>Compliant</b>	– Activities were undertaken in accordance with the EMP.
– <b>Fuel and oil</b>	– To ensure that all liquid fuels are stored appropriately, and adequate firefighting equipment is stored on site.	– The project manager shall ensure that all liquid fuels are stored in tanks or mobile bowsers with lids that are kept firmly shut. – All tanks and/or mobile bowsers shall be situated in a bunded area. – The project manager shall ensure that there is adequate fire-fighting equipment at the fuel storage areas.	– <b>Compliant</b>	– All management actions have been adhered to as practically possible.

ASPECT	MANAGEMENT OBJECTIVES	MANAGEMENT ACTIONS	COMPLIANCE	COMMENTS OR RECOMMENDATIONS
– <b>Equipment maintenance and storage</b>	– All vehicles and equipment are kept in good working order.	<ul style="list-style-type: none"> <li>– Leaking or damaged equipment shall be repaired immediately or removed from the site.</li> <li>– Drip trays shall be provided at designated areas.</li> </ul>	– <b>Compliant</b>	– Activities were undertaken in accordance with the EMP.
– <b>Materials handling, use and storage</b>	– All delivery drivers are informed of the on-site procedures and restrictions.	<ul style="list-style-type: none"> <li>– The site manager shall ensure that any delivery drivers are informed of all procedures and restrictions, including “no-go” areas and designated haul routes.</li> <li>– All material shall be stored within the designated Site boundaries.</li> </ul>	– <b>Compliant</b>	– All management actions and have been adhered to as practically possible.
– <b>Hazardous substances</b>	– Any hazardous substances are stored appropriately.	<ul style="list-style-type: none"> <li>– Hazardous chemical substances used during exploration activities shall be stored in secondary containers.</li> <li>– The relevant Material Safety Data Sheets (MSDS) shall be available on site.</li> </ul>	– <b>Compliant</b>	– All management actions have been adhered to as practically possible in accordance with the EMP.
– <b>Trenching</b>	– Trenches are appropriately demarcated and secured.	– Trenches shall be demarcated appropriately and securely and regularly monitored to ensure that pedestrian (and vehicular) access to these areas is strictly prohibited.	– <b>Compliant</b>	– Activities were undertaken in accordance with the EMP.

ASPECT	MANAGEMENT OBJECTIVES	MANAGEMENT ACTIONS	COMPLIANCE	COMMENTS OR RECOMMENDATIONS
– <b>Fire control</b>	– To reduce the risk of fires	<ul style="list-style-type: none"> <li>– Fires are only permitted in designated area and shall not be left unattended.</li> <li>– Fire extinguishers shall be readily available.</li> </ul>	– <b>Compliant</b>	– All actions and mitigation measures have been adhered to as practically possible in accordance with the EMP.
– <b>Emergency procedures</b>	– All employees are aware of emergency procedures.	<ul style="list-style-type: none"> <li>– The site manager shall ensure that his employees are aware of the procedure to be followed for dealing with leaks and spills.</li> <li>– The site manager shall ensure that the necessary materials and equipment for mitigating leaks and spill incidents are available on site at all times.</li> </ul>	– <b>Compliant</b>	– Activities were undertaken in accordance with the EMP.
– <b>Erosion, water quality, and Surface water management</b>	<ul style="list-style-type: none"> <li>– Minimal impact to water resources (water quality, water flows and surface/groundwater interactions) would be anticipated from the exploration activities.</li> <li>– Pollution of the soil and groundwater through accidental spillage is unlikely given the presence of calcretes below the top soil</li> </ul>	<ul style="list-style-type: none"> <li>– The project manager shall take all reasonable steps to prevent or remediate damage to the environment resulting from the exploration activities in the form of erosion and sedimentation.</li> <li>– The project manager shall immediately remedy any situation that is or has the potential to result in soil erosion, water pollution and sedimentation.</li> <li>– Surface water should be managed appropriately and all water released</li> </ul>	– <b>Compliant</b>	– All management actions have been adhered to as practically possible in accordance with the EMP.



ASPECT	MANAGEMENT OBJECTIVES	MANAGEMENT ACTIONS	COMPLIANCE	COMMENTS OR RECOMMENDATIONS
	horizons. This provide good buffering capacity and any acidic pollution will soon be neutralized.	<p>into the environment should adhere to environmental specification.</p> <ul style="list-style-type: none"> <li>– Where excessive spillage occurred, it should be cleaned up and dumped at an appropriate waste area.</li> <li>– The Environmental Team should guide the exploration team on where hazardous waste should be disposed of.</li> </ul>		
– <b>Wildlife</b>	<ul style="list-style-type: none"> <li>– Temporary and localized impact to land use would result from exploration activities such as disturbance to wildlife</li> <li>– Illegal entry to the Sperrgebiet and hunting, poaching and illegal reptile collection were cited as the major concern of the public and authorities.</li> <li>– Bees and their possible effect on health and safety were raised as one of the concerns.</li> </ul>	<ul style="list-style-type: none"> <li>– Exploration activity needs to be conducted in such way that disturbance to wildlife is minimized</li> <li>– The exploration team should be inducted on Parks rules and that no one is allowed to hunt, poach or collect any illegal reptiles etc.</li> <li>– Where beehives are found, appropriate personnel (i.e. MET) should be notified as soon as possible.</li> <li>– The Environmental Team should provide guidelines / Park Rules to the Exploration team involved</li> </ul>	– <b>Compliant</b>	– No evidence of non – compliance.

ASPECT	MANAGEMENT OBJECTIVES	MANAGEMENT ACTIONS	COMPLIANCE	COMMENTS OR RECOMMENDATIONS
<ul style="list-style-type: none"> <li>Protection of natural systems, archaeological sites and Paleontological resources.</li> </ul>	<ul style="list-style-type: none"> <li>Impacts to natural systems are kept to a minimum.</li> <li>Paleontological resources could be disturbed by vehicular traffic, ground clearing and pedestrian vehicle activities</li> </ul>	<ul style="list-style-type: none"> <li>Disturbance of vegetation and faunal communities and their habitats is kept to a minimum.</li> <li>Heavy vehicles should be kept out of the seasonal and ephemeral stream channels and the movement of exploration vehicles should be limited where possible to the existing roads.</li> <li>All earthworks equipment operators shall be informed to cease operating immediately if any artefact is unearthed and to report the finding immediately to Project manager, who in turn shall notify the National Heritage Council.</li> <li>Exploration activity needs to be conducted in such way that disturbance to paleontology is minimized</li> </ul>	<ul style="list-style-type: none"> <li>Compliant</li> </ul>	<ul style="list-style-type: none"> <li>All management actions have been adhered to as practically possible in accordance with the EMP.</li> </ul>

**TABLE 3 - DECOMMISSIONING AND CLOSURE AUDIT**

ACTIVITY/PROCESSES	ASPECT	IMPACT	– MANAGEMENT ACTIONS	COMPLIANCE	COMMENTS OR RECOMMENDATIONS
<b>1) Decommissioning and Closure</b>	<ul style="list-style-type: none"> <li>– Decommissioning</li> <li>– This impact can be successfully mitigated through rehabilitation and control of movement on site.</li> </ul>	<ul style="list-style-type: none"> <li>– Social and Environmental Performance &amp; Visual</li> </ul>	<ul style="list-style-type: none"> <li>– Conduct a validation survey to ensure that all contaminated material at the substation has been removed; remove any contaminated material and dispose of at an appropriate disposal facility.</li> <li>– Rehabilitate access tracks not required for ongoing land use activities.</li> <li>– Remove all other equipment, waste, etc. from the area.</li> <li>– Reshape all disturbed areas to their original contours.</li> <li>– Cover disturbed areas with previously collected topsoil and spread evenly.</li> <li>– Manually rip disturbed areas, where compaction has taken place, and cover the areas with previously collected topsoil.</li> <li>– Replant any previously removed native plant species in disturbed areas.</li> </ul>	<ul style="list-style-type: none"> <li>– N/A</li> </ul>	<ul style="list-style-type: none"> <li>– No decommission occurred.</li> <li>– This phase will be implemented as a joint collaboration between the proponent, the local authorities, and other key stakeholders.</li> <li>– Specific activities will be contained in a detailed decommissioning and closure plan</li> </ul>
<b>2) Closure</b>	<ul style="list-style-type: none"> <li>– Loss of jobs and income</li> </ul>	<ul style="list-style-type: none"> <li>– Socio-economic</li> </ul>	<ul style="list-style-type: none"> <li>– Implement a skills development programme during the operations.</li> </ul>	<ul style="list-style-type: none"> <li>– N/A</li> </ul>	<ul style="list-style-type: none"> <li>– No decommission occurred.</li> </ul>

## 4 CONCLUSION AND RECOMMENDATIONS

Headspring Investments has focused all its exploration activities on the area and adjacent sites to EPL 4654. As such substantial physical prospecting has been conducted for the exploration activities on EPL 4654 for nuclear fuel minerals since the environmental clearance was issued in 2018. A number of regional reconnaissance field-based mapping and sampling activities as well as initial local field-based mapping and sampling activities have already been undertaken within the EPL area and will be extended to other parts of the EPL area where potential nuclear fuels could occur. All proposed activities shall be carried out in compliance with the relevant requirements of the granted licence in accordance with the approved EMP.

- (i) The proponent had Access Agreements with the land owner/s as was required;
- (ii) The Proponent adhered to all the provisions of the EMP and conditions of the Access Agreement entered between the proponent and the land owner/s in line with all applicable national regulations;
- (iii) Before entering any private property such as a private farm, the proponent gave advanced notices and obtained access permission from the land owners at all times;
- (iv) The proponent implemented the precautionary measures / approach to environmental management at all times;
- (v) The proponent provided all the necessary support including human and financial resources, for the implementation of the proposed / ongoing mitigations and effective environmental management, and;
- (vi) The proponent implemented internal and external (contracted Risk-Based Solutions) monitoring of the actions and management strategies developed during the mineral exploration process.

The ongoing exploration activities are being undertaken following the highest Health, Safety and Environment (HSE) commitments. It is recommended that the proponent continue to adhere to all environmental legislation and company standards to ensure that best practical environmental protection continues as the project activities progress.

## APPENDIX A: ENVIRONMENTAL CLEARANCE CERTIFICATE



REPUBLIC OF NAMIBIA

### MINISTRY OF ENVIRONMENT AND TOURISM

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3 September 2018

#### OFFICE OF THE ENVIRONMENTAL COMMISSIONER

The Managing Director  
Headspring Investments (Pty) Ltd  
P.O. Box 318  
Windhoek  
Namibia

Dear Sir/Madam

**SUBJECT: ENVIRONMENTAL CLEARANCE CERTIFICATE FOR EXPLORATION ON EXCLUSIVE PROSPECTING LICENCE 4654, HARDAP REGION**

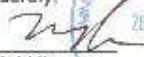
The Environmental Management Plan submitted is sufficient as it made provisions of the environmental management concerning the proposed activities. From this perspective, regular environmental monitoring and evaluations on environmental performance should be conducted. Targets for improvements should be established and monitored throughout this process.

This Ministry reserves the right to attach further legislative and regulatory conditions during the operational phase of the project. From this perspective, I issue the environmental clearance certificate with the following condition: that the key recommendations in the Environmental Management Plan shall be followed.

On the basis of the above, this letter serves as an environmental clearance certificate for the project to continue. However, this clearance letter does not in any way hold the Ministry of Environment and Tourism accountable for any misleading information, nor any adverse effects that may arise from this project's activities. Instead, full accountability rests with Headspring Investments (Pty) Ltd.

This environmental clearance is valid for a period of 3 (three) years from the date of issue unless withdrawn by this office.

Yours sincerely,

  
Teofilus Nghitila  
ENVIRONMENTAL COMMISSIONER



**"Stop the poaching of our rhinos"**

All official correspondence must be addressed to the Permanent Secretary.



# Headspring Investments (Pty) Ltd (the Proponent) EPL No. 4654

Final Environmental Compliance Monitoring  
Report for the Period October 2012 –  
August 2018 for Ongoing Exploration /  
Prospecting in the Exclusive Prospecting  
License (EPL) No. 4654 Windhoek  
/Gobabis/Mariental Districts, Khomas  
/Omaheke /Hardap Regions  
**SOUTH EASTERN NAMIBIA**

August 2018

Headspring Investments Pty Ltd  
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# Prepared By



## *Risk-Based Solutions (RBS) CC*

**The Consulting Arm of Foresight Group Namibia (PTY) LTD**  
**Our Investments and Consultancy Portfolio / Specialisation:**

- 
- ❖ Environmental Assessments (Scoping, SEAs, EIAs and EMPs)
  - ❖ Oil and Gas Exploration and Production Technical Support Services
    - ❖ Minerals Exploration and Mining Technical Support Services
      - ❖ Renewable Energy Technical Support Services
      - ❖ Property Development and Tourism Investments
      - ❖ Waste Management Technical Support Services
  - ❖ Geoenvironmental and Geotechnical Engineering Technical Support Services
    - ❖ Programme and Project Management and Logistics Support Services
      - ❖ Specialised Training and Industry Research Support
- 

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Global Office [URL:http://www.rbs.com.na](http://www.rbs.com.na)

**Foresight Group Namibia (FGN) (PTY) LTD – *Perfecting the Future***  
**Risk-Based Solutions (RBS) – *Delivering the Solutions***

# Summary Profile and Qualification of the Environmental Assessment Practitioner (EAP) – Dr. Sindila Mwiya

Dr. Sindila Mwiya has more than seventeen (17) years of resources field-based technical, management and negotiation knowledge and extensive experience in onshore and offshore resources coexistence assessments and utilisation covering minerals, oil and gas exploration and production support, energy (renewable and non-renewable energy sources) permitting, Environmental Assessment (SEA, EIA, EMP, EMS and monitoring support). His practical resources based knowledge and experience is fully linked to the Health, Safety and Environment (HSE) permitting for Geophysical Surveys such as 2D and 3D Seismic and Gravity Surveys support, mining, drilling, engineering planning, layout, designing, logistical support, utilisation, production / operations, compliance monitoring, rehabilitation, closure and aftercare stages). Through his companies, Risk-Based Solutions (RBS) and Foresight Group Namibia (FGN) (PTY) LTD, which he founded, he has undertaken more than 200 projects for local, regional (SADC) and international client. He continue to work for global reputable resources (petroleum and mining / minerals) and energy companies such as Shell Namibia B. V. Limited (Namibia/ the Netherlands), Tullow Oil (UK), Desert Lion (Canada/ Australia), Petrobras Oil and Gas (Brazil) / BP (UK), REPSOL (Spain), ACREP (Namibia/Angola), Preview Energy Resources (UK), HRT Africa (Brazil / USA), Chariot Oil and Gas Exploration (UK), Serica Energy (UK), Eco (Atlantic) Oil and Gas (Canada / USA), ION GeoVentures (USA), PGS UK Exploration (UK), TGS-NOPEC (UK), Maurel & Prom (France), GeoPartners (UK), PetroSA Equatorial Guinea (South Africa / Equatorial Guinea), Preview Energy Resources (Namibia / UK), Sintezneftegaz Namibia LTD (Russia), INA Namibia (INA INDUSTRIJA NAFTE d.d) (Croatia), Debmarine (Namibia), Namibia Underwater Technologies (NUTAM) (Namibia), InnoSun Holding (PTY) LTD (Namibia / France) and OLC Northern Sun Energy (Pty) Ltd (Namibia).

Dr. Sindila Mwiya is highly qualified with extensive technical knowledge and experience in petroleum, mining, renewable energy (Solar, Wind, Biomass, Geothermal and Hydropower), Non-Renewable energy (Coal, Oil, Gas, Wood, Charcoal), applied environmental assessment, management and monitoring (Scoping, EIA, EMP, EMP, EMS), High-End Exclusive Smart Automated Property Development and overall industry specific HSE, cleaner production programmes, geoenvironmental, geological and geotechnical engineering specialist fields. Dr. Sindila Mwiya has undertaken and continue to undertake and manage high value projects on behalf of international, regional (SADC) and local corporate cliental. Currently, (2017-2019), Dr. Sindila Mwiya is responsible for agreements negotiations, permitting, technical operational support through to projects completion and closure compliance monitoring for four (4) major upstream petroleum, several minerals exploration and mining operations for more than ten (10) international clients operating in Namibia and other parts of the World. Within the Exclusive Smart Automated Property Development portfolio, Dr. Mwiya, through his company FGN is developing the exclusive mixed use 16 Ha private waterfront named Mwale Mwiya Park, situated in Katima Mulilo Central Business District (CBD), Zambezi Region Namibia. He continue to worked as an Environmental Assessment Practitioner (EAP), Technical Consultant (RBS / FGN), Project Manager and has worked as a Lecturer (University of Namibia- UNAM), External Examiner/ Moderator (Namibia University of Science and Technology-NUST), National (Namibia) Technical Advisor (Department of Environmental Affairs, Ministry of Environment and Tourism / DANIDA – Cleaner Production Component) and Chief Geologist for Engineering and Environment Division and a Field-Based Geotechnician (Magnetics, Seismic, Gravity and Electromagnetics Exploration and Survey Methods) for Geophysics Division, Geological Survey of Namibia, Ministry of Mines and Energy.

He has supervised and continue to support a number of MScs and PhDs research programmes and has been a reviewer on international, national and regional researches, plans, programmes and projects with the objective to ensure substantial local skills development pivotal to the national socioeconomic development through the promotion of sustainable natural resources coexistence developmental approaches, utilisation, management and for development policies, plans, programmes and projects financed by governments, private investors and donor organisations. Since 2006, he has provided extensive technical support to the Department of Environmental Affairs (DEA), Ministry of Environment and Tourism (MET) through GIZ and continue to play a significant role in the amendments of the Namibian Environmental Management Act, 2007, (Act No. 7 of 2007), preparation of new Strategic Environmental Assessment (SEA) Regulations, preparation of the updated Environmental Impact Assessment (EIA) Regulations as well as the preparation of the new SEA and EIA Guidelines and Procedures all aimed at promoting effective environmental management practices.

Among his academic achievements, Dr Sindila Mwiya is a holder of a PhD (Geoenvironmental Engineering and Artificial Intelligence) – Research Thesis: Development of a Knowledge-Based System Methodology (KBSM) for the Design of Solid Waste Disposal Sites in Arid and Semiarid Environments (Namibia)), MPhil/PG Cert and BEng (Hons) (Engineering Geology and Geotechnics), qualifications from the University of Portsmouth, School of Earth and Environmental Sciences, United Kingdom. During the 2004 Namibia National Science Awards, organised by the Namibian Ministry of Education, and held in Windhoek, Dr. Sindila Mwiya was awarded the Geologist of the Year for 2004, in the professional category. Furthermore, as part of his professional career recognition, Dr. Sindila Mwiya is a life member of the Geological Society of Namibia, Consulting member of the Hydrogeological Society of Namibia and a Professional Engineer registered with the Engineering Council of Namibia.

**WINDHOEK AUGUST 2018**

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# EXECUTIVE SUMMARY

## 1. Introduction

Headspring Investments (Pty) Ltd (**the Proponent**) holds mineral rights under the Exclusive Prospecting Licence (EPL) No. 4654 covering a total area of 99712.1938 Ha. The license area falls within the Windhoek/ Gobabis / Mariental Districts in Khomas /Omaheke / Hardap Regions respectively, south-astern Namibia. The EPL No. 4654 was granted on the 15/08/2011 and will expire on the 14/08/2018.

The proponent intends to continue with prospecting for base and rare metals and nuclear fuels with special focus on using techniques such as desktop studies and review of historical exploration in the area, aerial surveys such as geophysical and hyperspectral surveys, initial and detailed field-based activities such as geological mapping, ground geophysics, trenching, drilling and sampling with laboratory testing.

## 2. The Environmental Monitoring Requirements and Reporting

This Environmental Monitoring Report covering the combined period from October 2012 to August 2018 has been prepared by Risk-Based Solution (RBS) CC on behalf of Headspring Investments (Pty) Ltd (the Proponent) in line with the provisions of the Environmental Management Plan (EMP) and the conditions of the Environmental Clearance Certificate (ECC) issued by the Environmental Commissioner in the Ministry of Environment and Tourism (MET) dated 9<sup>th</sup> October 2012. The EMP monitoring provisions were implemented by the proponent as well as all the contractors and subcontractors who undertook the various activities associated with the ongoing minerals exploration in the EPL 4654.

## 3. Environmental Monitoring Implementation

The following is the summary of the key EMP mitigation measures implemented by the proponent for period under review Oct 2012 – August 2018:

1. Project planning and implementation;
2. Implementation of the EMP;
3. Public and stakeholders relations;
4. Measures to enhance positive socioeconomic impacts;
5. Environmental awareness briefing and training;
6. Erection of supporting exploration infrastructure;
7. Use of existing access roads, tracks and general vehicle movements;
8. Mitigation measures for preventing flora destruction;
9. Mitigation measures for preventing faunal destruction;
10. Mitigation measures to be implemented with respect to the exploration camps and exploration sites;



11. Mitigation measures for surface and groundwater protection as well as general water usage;
12. Mitigation measures to minimise negative socioeconomic impacts;
13. Mitigation measures to minimise health and safety impacts;
14. Mitigation measures to minimise visual impacts;
15. Mitigation measures to minimise vibration, noise and air quality;
16. Mitigation measures for waste (solid and liquid) management;
17. Rehabilitation plan, and;
18. Environmental data collection.

Overall, the above EMP mitigation measures have been implemented for the period October 2012 – August 2018 under review and no diversion to the above EMPs has been observed.

## **4. Conclusions**

The environmental monitoring activities undertaken by the proponent for the period under review Oct 2012 to August 2018 have been performed in accordance with the provisions of the Environmental Clearance Certificate (ECC) that was issued by the Environmental Commissioner in the Ministry of Environment and Tourism in line with the Environmental Management Plan (EMP) that was submitted by the proponent.

Headspring Investments (Pty) Ltd implemented all the applicable EMPs with respect to the exploration activities that were undertaken for the period under review. Based on the results of the overall environmental performance monitoring undertaken for the period October 2012 to August 2018 under review, no diversions from the environmental commitments as outlined in the Environmental Policy of the Proponent (Headspring Investments (Pty) Ltd), Environmental Management Plan (EMP) and the Environmental Clearance Certificate (ECC) have been observed or recorded (Annex 1). The ongoing exploration activities are being undertaken with the highest Health, Safety and Environmental (HSE) commitments.



# **1. BACKGROUND**

## **1.1 Introduction**

Headspring Investments (Pty) Ltd (the Proponent) holds mineral rights under the Exclusive Prospecting Licence (EPL) No. 4654 covering a total area of 99712.1938 Ha. The EPL No. 4654 was granted on the 15/08/2011 and will expire on the 14/08/2018. The proponent intends to continue with prospecting for base and rare metals and nuclear fuels.

## **1.2 Location**

The license area falls within the Windhoek/ Gobabis / Mariental Districts in Khomas /Omaheke / Hardap Regions respectively, south-astern Namibia (Figs. 1.1 -1.3). The license area falls within privately owned commercial farmland, as shown in Fig. 1.3. The main access roads to the EPL area is accessible through the C23, C20 and C25 main gravel roads with a number of minor roads such as the D1775, D1785 and D1318 providing additional access from the main roads (Figs. 1.2 and 1.4)(Figs. 1.2 and 1.3). Within the EPL area, a number of private farm roads and minor tracks are available for internal access. The nearest settlements is Leonardville situated within the EPL area (Figs. 1.2 and 1.3).

## **1.3 Environmental Regulatory Requirements**

The ongoing minerals exploration / prospecting activities in the EPL 4654 falls under the activities that are listed in the Environmental Management Act, 2007, (Act No. 7 of 2007) and could not have been undertaken without a valid Environmental Clearance Certificate (ECC). In order to obtain the ECC, the proponent was required to undertake Environmental Assessment comprising Environmental Scoping and Environmental Management Plan (EMP) for the proposed minerals prospecting programme. The proponent was issued with an ECC by the Environmental Commissioner on the 9<sup>th</sup> October 2012 (Fig. 1.4).

## **1.4 Summary of the Project**

The proponent is undertaking prospecting for base, rare and nuclear fuels using techniques such as geological mapping, geophysical surveys, trenching, drilling and sampling and starting with the desktop studies, followed by regional and local detailed field-based activities. The following is the summary of the ongoing / proposed exploration activities covered for the period under review:

- (i) Initial desktop exploration activities (no field-work undertaken);
- (ii) Regional reconnaissance field-based mapping and sampling activities (Subject to the positive results of (i));
- (iii) Interpretation of existing aerial data, initial local field-based mapping and sampling activities followed by possible acquisition of new aerial data (radiometrics, magnetics, and gravity (Subject to the positive results of (i) and (ii) above),
- (iv) Detailed local field-based activities such as local geological mapping, geochemical mapping and sampling, trenching and drilling of closely spaced boreholes and bulk sampling (Subject to the positive results of (i) - (iii) above), and;
- (v) Prefeasibility and feasibility studies (Subject to the positive results of (i) - (iv) above).

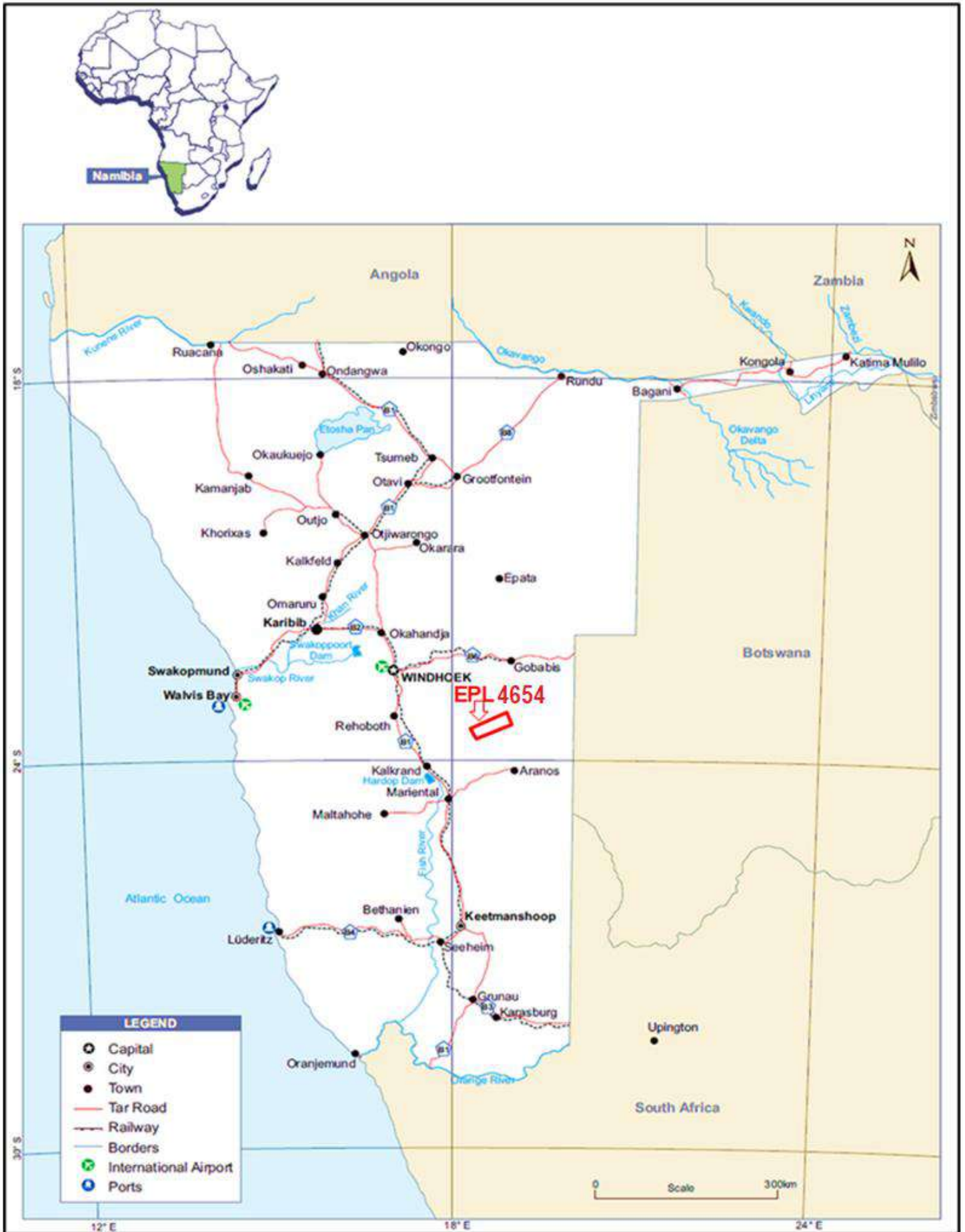


Figure 1.1: Regional location of the EPL 4654 (Source: Risk-Based Solutions, 2015).

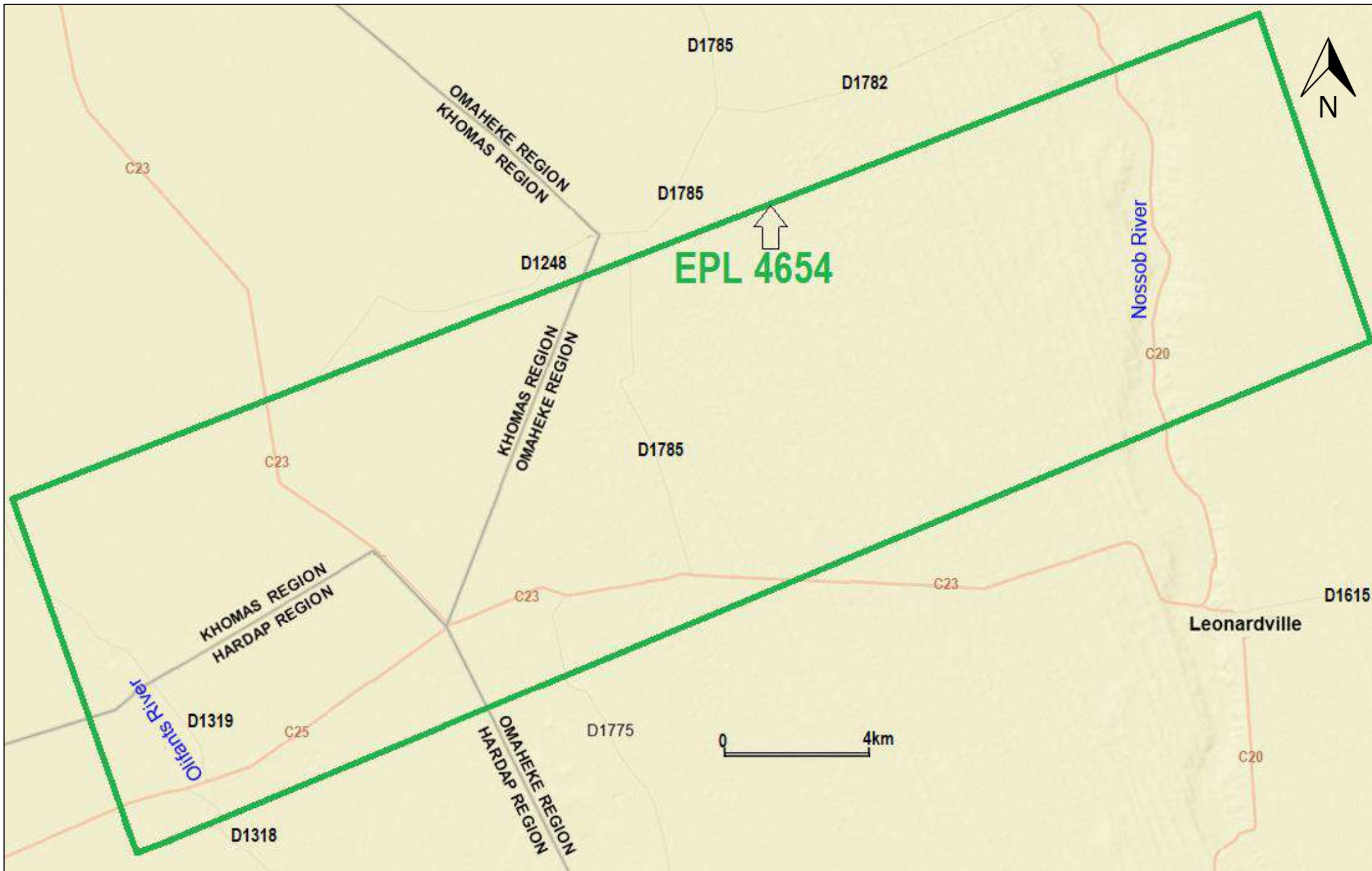


Figure 1.2: Detailed regional location of the EPL 4654 (Source: <http://portals.flexicadastre.com/Namibia>).



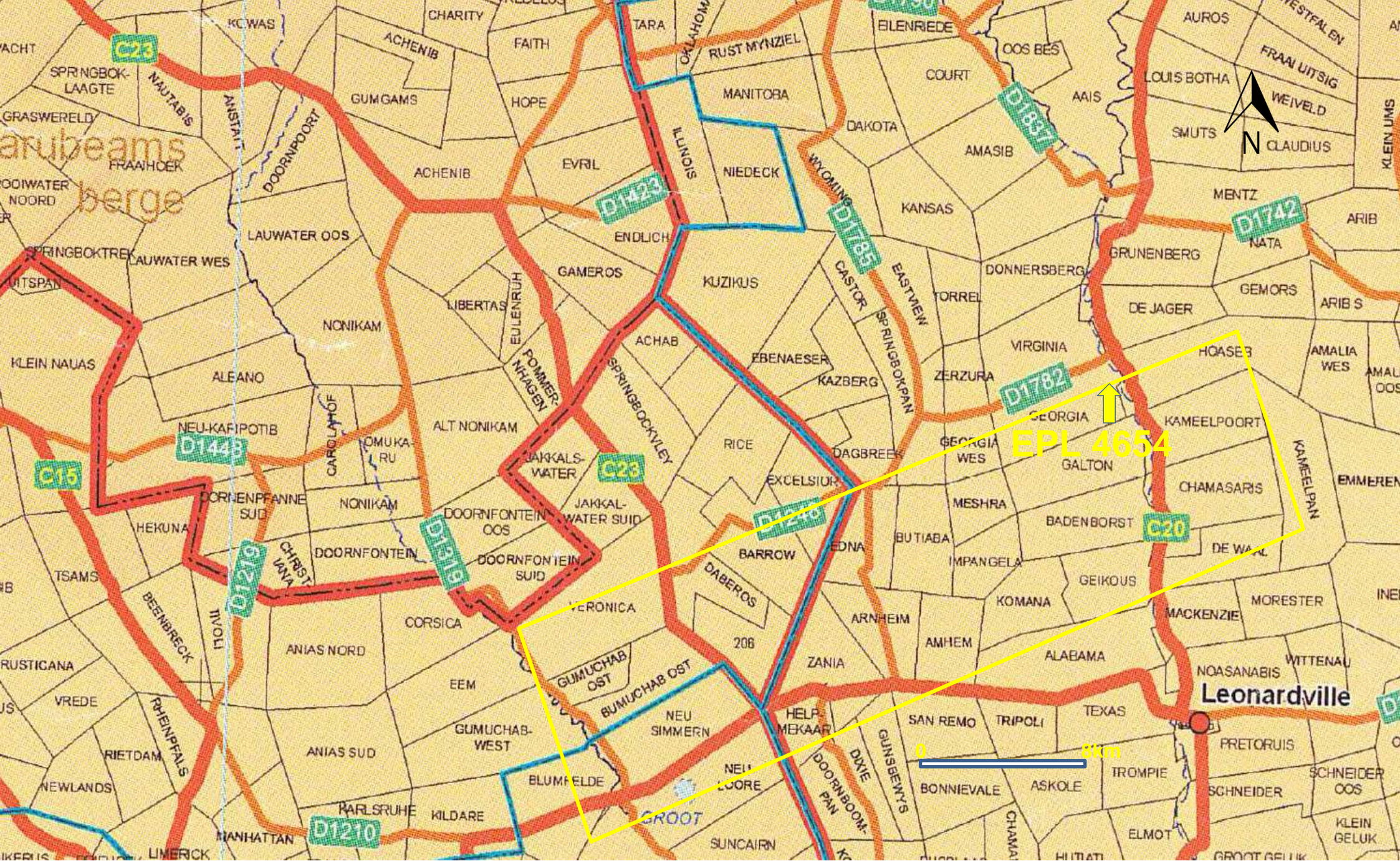


Figure 1.3: Location of the EPL 4654, roads and farms names (Extract 1:100000 Namibia Division Registration, Surveyor General).





## REPUBLIC OF NAMIBIA

### MINISTRY OF ENVIRONMENT AND TOURISM

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#### OFFICE OF THE ENVIRONMENTAL COMMISSIONER

The Director  
Headspring Investments (Pty) Ltd  
P.O. Box 318  
Windhoek

Dear Sir or Madam

**SUBJECT: ENVIRONMENTAL CLEARANCE FOR THE ENVIRONMENTAL IMPACT ASSESSMENT AND ENVIRONMENTAL MANAGEMENT PLAN FOR THE PROPOSED EXPLORATION AND POSSIBLE TEST MINING, EXCLUSIVE PROSPECTING LICENCE 4654, HARDAP REGION, SOUTHERN NAMIBIA**

The Environmental Impact Assessment (ELA) submitted is sufficient as it made an adequate provision of the environmental management during your exploration activities. From this perspective regular environmental monitoring and evaluations on environmental performance should be conducted. Targets for improvements should be established and monitored throughout this process.

In view of the fact that your project is located in an environmentally sensitive area, this Ministry reserves the right to attach further legislative and regulatory conditions during the operational phase of the project. From this perspective, we issue this clearance with the following condition: all key stakeholders must be properly consulted and written consent obtained prior to the implementation of the exploration activities.

On the basis of the above, this letter serves as an environmental clearance for the project to proceed. However, this clearance letter does not in anyway hold the Ministry of Environment and Tourism accountable of any wrong doing, for insufficient information, nor any adverse effects that may arise from this project activity. Instead, full accountability rests with the proponent and his/ her consultants.

Yours sincerely,

  
Teofilus Nghitila  
ENVIRONMENTAL COMMISSIONER



All official correspondence must be addressed to the Permanent Secretary

Figure 1.4: Copy of the expired Environmental Clearance Certificate (ECC) issued on 9<sup>th</sup> October 2012.

## 2. ENVIRONMENTAL MONITORING PLAN

### 2.1 Objectives of the Environmental Monitoring Plan

The main objectives of the environmental monitoring plan are the following:

- ❖ Verify of the correct application of the monitoring measures as presented in the Environmental Management Plan (EMP);
- ❖ Establish a monitoring program for the most relevant environmental parameters, identifying the monitoring activities and frequencies;
- ❖ Identify the impacts foreseen by the project and any unforeseen deviations, allowing for the implementation of corrective measures as needed;
- ❖ Provide assurance to stakeholders requirements with respect to environmental and social performance;
- ❖ Check the overall effectiveness of the preconstruction, construction and operational procedures in protecting the receiving environment;
- ❖ Comply with regulations, standards and EPL and ECC licence conditions, and;
- ❖ Compare actual impacts with those predicted in the Scoping and EMP Report and thereby aim to improve the assessment and monitoring processes for possible.

**Overall, the above objectives of the Environmental Monitoring Plan have been achieved for the period October 2012 to August 2018 under review.**

### 2.2 Roles and Responsibilities

#### 2.2.1 Implementation of the EMP

Management of the environmental elements that may be affected by the different activities of the proposed / ongoing exploration is an important element of the proposed / ongoing exploration activities. The EMP also identified the activity groups / environmental elements, the aspects / targets, the indicators, the schedule for implementation and who should be responsible for the management to prevent major impacts that the different exploration activities may have on the receiving environment (physical and biological environments).

#### 2.2.2 Proponent's Representative (PR) / Project Manager (PM)

Whenever required and necessary, the proponent appointed a **Proponent's Representative (PR) / Project Manager (PM)** with the following responsibilities with respect to the EMP implementation:

- ❖ Act as the site project manager and implementing agent;
- ❖ Ensure that the proponent's responsibilities are executed in compliance with the relevant legislation;
- ❖ Ensure that all the necessary environmental authorizations and permits have been obtained;

- ❖ Assist the exploration contractor/s in finding environmentally responsible solutions to challenges that may arise;
- ❖ Should the PR be of the opinion that a serious threat to, or impact on the environment may be caused by the exploration activities, he/she may stop work; the proponent must be informed of the reasons for the stoppage as soon as possible;
- ❖ The PR has the authority to issue fines for transgressions of basic conduct rules and/or contravention of the EMP;
- ❖ Should the Contractor or his/her employees fail to show adequate consideration for the environmental aspects related to the EMP, the PR can have person(s) and/or equipment removed from the site or work suspended until the matter is remedied;
- ❖ Maintain open and direct lines of communication between the landowners and proponent, as well as any other identified Interested and Affected Parties (I&APs) with regards to environmental matters, and;
- ❖ Attend regular site meetings and inspections as may be required for the proposed / ongoing exploration programme.

### **2.2.3 Project Health, Safety and Environment (Project HSE)**

Whenever required and necessary, the proponent appointed a Project Health, Safety and Environment (Project HSE) with the following responsibilities with respect to the EMP implementation:

- ❖ Assist the PR in ensuring that the necessary environmental authorizations and permits have been obtained;
- ❖ Assist the PR and Contractor in finding environmentally responsible solutions to challenges that may arise;
- ❖ Conduct environmental monitoring as per EMP requirements;
- ❖ Carry out regular site inspections (on average once per week) of all exploration areas with regards to compliance with the EMP; report any non-compliance(s) to the PR as soon as possible;
- ❖ Organize for an independent internal audit on the implementation of and compliance to the EMP to be carried out half way through each field-based exploration activity; audit reports to be submitted to the PR;
- ❖ Continuously review the EMP and recommend additions and/or changes to the EMP document;
- ❖ Monitor the Contractor's environmental awareness training for all new personnel coming onto site;
- ❖ Keep records of all activities related to environmental control and monitoring; the latter to include a photographic records of the exploration activities, rehabilitation process, and a register of all major incidents, and;



- ❖ Attend regular site meetings.

## 2.2.4 Contractors and Subcontractors

The responsibilities of the **Contractors and Subcontractors** appointed by the proponent to undertake certain field-based activities of the proposed / ongoing exploration programme include:

- ❖ Comply with the relevant legislation and the EMP provision;
- ❖ Preparation and submission to the proponent through the Project HSE of the following Management Plans:
  - Environmental Awareness Training and Inductions;
  - Emergency Preparedness and Response;
  - Waste Management; and;
  - Health and Safety.
- ❖ Ensure adequate environmental awareness training for senior site personnel;
- ❖ Environmental awareness presentations (inductions) to be given to all site personnel prior to work commencement; the Project HSE is to provide the course content and the following topics, at least but not limited to, should be covered:
  - The importance of complying with the EMP provisions;
  - Roles and Responsibilities, including emergency preparedness;
  - Basic Rules of Conduct (Do's and Don'ts);
  - EMP: aspects, impacts and mitigation;
  - Fines for Failure to Adhere to the EMP;
  - Health and Safety Requirements.
- ❖ Record keeping of all environmental awareness training and induction presentations, and;
- ❖ Attend regular site meetings and environmental inspections.

## 2.2.5 Risk-Based Solutions (External)

The responsibilities of Risk-Based Solutions (RBS) included the following:

- ❖ Provided external independent monitoring / auditing support services;
- ❖ Undertook independent monitoring activities;
- ❖ Provided external HSE compliance monitoring and reporting, and;

- ❖ Prepared this environmental monitoring report.

## **2.3 Reporting Process**

The daily, weekly, monthly and annual related environmental monitoring activities have all contributed to the preparation of this environmental monitoring report.

## **2.4 Monitoring Strategy**

### **2.4.1 Overview**

The monitoring programme was developed to allow maximum flexibility in both the timing and site conditions in order to allow adaptation to the conditions encountered and to allow decisions to be made in the field and based on all available data (Annex 1).

### **2.4.2 Monitoring Implementation**

The following is the summary of the monitoring, observations and auditing activities undertaken for the period October 2011 to August 2018 under review (Annex 1):

- (i) Monitoring of environmental performance implementation / environmental awareness training;
- (ii) Monitoring of environmental performance for the temporal and permanent structures;
- (iii) Environmental data collection;
- (iv) Health, Safety and Environment (HSE);
- (v) Relations with neighbours, site personnel and general public;
- (vi) Management of the natural habitat and surficial materials management;
- (vii) Tracks and off-road driving;
- (viii) Management of surface and groundwater, and;
- (ix) Public relations.

## **3. RESULTS OF THE ENVIRONMENTAL MONITORING**

### **3.1 Hierarchy of Mitigation Measures Implementation**

A hierarchy of methods for mitigating significant adverse effects was adopted with respect to the implementation of the EMP for the EPL 4654 and covered the following in order of preference:

- (i) Enhancement, e.g. provision of new habitats;
- (ii) Avoidance, e.g. sensitive design to avoid effects on ecological receptors;
- (iii) Reduction, e.g. limitation of effects on receptors through design changes, and;
- (iv) Compensation, e.g. community benefits.

### **3.2 Mitigation Measures Implementation**

The Environmental Management Plan (EMP) provides a detailed plan of action required in the implementation of the mitigation measures for minimising and maximising the identified negative and positive impacts respectively. The EMP also provides the management actions with roles and responsibilities requirements for implementation of environmental management strategies by the proponent through the Contractors and Subcontractors who will be undertaking the exploration activities. The EMP gives commitments including financial and human resources provisions for effective management of the likely environmental liabilities during and after the implementation of the proposed / ongoing exploration programme.

Detailed specific mitigations measures for implementation by the proponent with respect to the proposed / ongoing exploration programme activities and in particular for the field-based exploration activities were prepared in the Scoping and EMP Report. The following is the summary of the overall key areas of the mitigations measures provided in Tables 3.1- 6.18:

- 1. Project planning and implementation;
- 2. Implementation of the EMP;
- 3. Public and stakeholders relations;
- 4. Measures to enhance positive socioeconomic impacts;
- 5. Environmental awareness briefing and training;
- 6. Erection of supporting exploration infrastructure;
- 7. Use of existing access roads, tracks and general vehicle movements;
- 8. Mitigation measures for preventing flora destruction;
- 9. Mitigation measures for preventing faunal destruction;
- 10. Mitigation measures to be implemented with respect to the exploration camps and exploration sites;

11. Mitigation measures for surface and groundwater protection as well as general water usage;
12. Mitigation measures to minimise negative socioeconomic impacts;
13. Mitigation measures to minimise health and safety impacts;
14. Mitigation measures to minimise visual impacts;
15. Mitigation measures to minimise vibration, noise and air quality;
16. Mitigation measures for waste (solid and liquid) management;
17. Rehabilitation plan, and;
18. Environmental data collection.

Table 3.1: Project planning and implementation.

OBJECTIVES	INDICATOR	SCHEDULE	RESPONSIBILITY	MONITORING RESULTS
Establish a strong environmental awareness protocol from project implementation to final closure in order to ensure the least possible impact to the environment.	<ol style="list-style-type: none"> <li>Resources (Human and Financial) are provided for the Environmental Awareness and Training, Regular Safety, Health and Environment meetings and for internal and external Environmental Monitoring Costs as well as for any rehabilitation costs that may arise.</li> <li>Appointment of a senior and experienced persons as Proponent's Representative (PR), Project Manager (PM) and Project HSE to assume responsibility for environmental issues.</li> <li>All individuals including sub-contractors who work on, or visit, the sites are aware of the contents of the Environmental Policy and the EMP.</li> <li>The EMP and Environmental Policy will be included in Tender Documents.</li> <li>Field visit will take place during which main access tracks will be discussed in cooperation with the land owner/s</li> </ol>	<ol style="list-style-type: none"> <li>Regional reconnaissance field-based mapping and sampling activities;</li> <li>Initial local field-based mapping and sampling activities;</li> <li>Detailed local field-based activities such as local geological mapping, geochemical mapping and sampling, trenching and drilling of closely spaced boreholes and bulk sampling;</li> <li>Prefeasibility and feasibility studies.</li> </ol>	<ol style="list-style-type: none"> <li>Proponent's Representative (PR)</li> <li>Project Manager (PM)</li> <li>Project HSE</li> <li>Contractor</li> <li>Subcontractors</li> </ol>	Proponent met the provisions of the EMP.

Table 3.2: Implementation of the EMP.

OBJECTIVES	INDICATOR	SCHEDULE	RESPONSIBILITY	MONITORING RESULTS
<ol style="list-style-type: none"> <li>Define roles and responsibilities in terms of the EMP. To make all personnel, contractors and subcontractors aware of these roles and responsibilities to ensure compliance with the EMP provisions.</li> <li>Implement environmental management that is preventative and proactive.</li> <li>Establish the resources, skills, etc. required for effective environmental management.</li> </ol>	<ol style="list-style-type: none"> <li>Senior staff and senior contractors are aware of, and practice the EMP requirements. These persons shall be expected to know and understand the objectives of the EMP and will, by example, encourage suitable environmentally friendly behaviour to be adopted during the exploration</li> <li>Recognition will be given to appropriate environmentally acceptable behaviour.</li> <li>Inappropriate behaviour will be corrected. An explanation to why the behaviour is unacceptable must be given, and, if necessary, the person will be disciplined. e.g. fees set out for non-compliance</li> </ol>	<ol style="list-style-type: none"> <li>Regional reconnaissance field-based mapping and sampling activities;</li> <li>Initial local field-based mapping and sampling activities;</li> <li>Detailed local field-based activities such as local geological mapping, geochemical mapping and sampling, trenching and drilling of closely spaced boreholes and bulk sampling;</li> <li>Prefeasibility and feasibility studies.</li> </ol>	<ol style="list-style-type: none"> <li>Proponent's Representative (PR)</li> <li>Project Manager (PM)</li> <li>Project HSE</li> <li>Contractor</li> <li>Subcontractors</li> </ol>	Proponent met the provisions of the EMP.

Table 3.3: Public and stakeholders relations.

OBJECTIVES	MITIGATION MEASURES	SCHEDULE	RESPONSIBILITY	MONITORING RESULTS
Maintain sound relationships with the Other land users/ land owner/s and other stakeholders / public	<ol style="list-style-type: none"> <li>No littering or any other activity prohibited</li> <li>Permission to utilise water as well as all applicable permits are obtained.</li> </ol>	<ol style="list-style-type: none"> <li>Regional reconnaissance field-based mapping and sampling activities;</li> <li>Initial local field-based mapping and sampling activities;</li> <li>Detailed local field-based activities such as local geological mapping, geochemical mapping and sampling, trenching and drilling of closely spaced boreholes and bulk sampling;</li> <li>Prefeasibility and feasibility studies.</li> </ol>	<ol style="list-style-type: none"> <li>Proponent's Representative (PR)</li> <li>Project Manager (PM)</li> <li>Project HSE</li> <li>Contractor</li> <li>Subcontractors</li> </ol>	Proponent met the provisions of the EMP.

Table 3.4: Measures to enhance positive socioeconomic impacts.

OBJECTIVES	MITIGATION MEASURES	SCHEDULE	RESPONSIBILITY	MONITORING RESULTS
<p>Measures to enhance positive socioeconomic impacts in order to:</p> <ol style="list-style-type: none"> <li>Avoid exacerbating the influx of unemployed people to the area.</li> <li>Develop a standardised recruitment method for sub-contractor and field workers.</li> </ol>	<ol style="list-style-type: none"> <li>Stipulate a preference for local contractors in its tender policy. Preference to local contractors should still be based on competitive business principles and salaries and payment to local service providers should still be competitive;</li> <li>Develop a database of local businesses that qualify as potential service providers and invite them to the tender process;</li> <li>Scrutinise tender proposals to ensure that minimum wages were included in the costing;</li> <li>Stipulate that local residents should be employed for temporary unskilled/skilled and where possible in permanent unskilled/skilled positions as they would reinvest in the local economy;</li> <li>Must ensure that potential employees are from the area, they need submit proof of having lived in the area for a minimum of 5 years;</li> <li>Must ensure that contractors adhere to Namibian Affirmative Action, Labour and Social Security, Health and Safety laws. This could be accomplished with a contractual requirement stipulating that monthly proof should be submitted indicating payment of minimum wages to workers, against their ID numbers, payment of social security and submission of affirmative action data;</li> <li>Encouraged to cater for the needs of employees to increase the spending of wages locally.</li> </ol>	<ol style="list-style-type: none"> <li>Regional reconnaissance field-based mapping and sampling activities;</li> <li>Initial local field-based mapping and sampling activities;</li> <li>Detailed local field-based activities such as local geological mapping, geochemical mapping and sampling, trenching and drilling of closely spaced boreholes and bulk sampling;</li> <li>Prefeasibility and feasibility studies.</li> </ol>	<ol style="list-style-type: none"> <li>Proponent's Representative (PR)</li> <li>Project Manager (PM)</li> <li>Project HSE</li> <li>Contractor</li> <li>Subcontractors</li> </ol>	Proponent met the provisions of the EMP.

Table 3.5: Environmental awareness briefing and training.

OBJECTIVES	MITIGATION MEASURES	SCHEDULE	RESPONSIBILITY	MONITORING RESULTS
<p>Implement environmental awareness briefing / training for individuals who visit, or work, on site.</p>	<ol style="list-style-type: none"> <li>1. Every senior/supervisory member of the team shall familiarise themselves with the contents of the EMP. They shall understand their roles and responsibilities with regard to personnel and project compliance with the EMP.</li> <li>2. Subject to agreement of the parties, the Environmental Coordinator will hold an Environmental Awareness Briefing meeting, which shall be attended by all contractors before the start of the mineral exploration activities.</li> <li>3. Briefings on the EMP and Environmental Policy shall discuss the potential dangers to the environment of the following activities: public relations, littering, off-road driving, waste management, poaching and plant theft etc. The need to preserve soil, conserve water and implement water saving measures shall be presented.</li> <li>4. Individuals can be questioned on the Environmental Philosophy and EMP and can recall contents.</li> </ol>	<ol style="list-style-type: none"> <li>(i) Regional reconnaissance field-based mapping and sampling activities;</li> <li>(ii) Initial local field-based mapping and sampling activities;</li> <li>(iii) Detailed local field-based activities such as local geological mapping, geochemical mapping and sampling, trenching and drilling of closely spaced boreholes and bulk sampling;</li> <li>(iv) Prefeasibility and feasibility studies.</li> </ol>	<ol style="list-style-type: none"> <li>(i) Proponent's Representative (PR)</li> <li>(ii) Project Manager (PM)</li> <li>(iii) Project HSE</li> <li>(iv) Contractor</li> <li>(v) Subcontractors</li> </ol>	<p>Proponent met the provisions of the EMP.</p>

Table 3.6: Erection of supporting exploration infrastructure.

OBJECTIVES	MITIGATION MEASURES	SCHEDULE	RESPONSIBILITY	MONITORING RESULTS
<ol style="list-style-type: none"> <li>1. Get Environmental Clearance before implementation</li> <li>2. Establishment of the supporting exploration infrastructure done on an area with the least disturbance to the environment and within the non-sensitive areas</li> </ol>	<ol style="list-style-type: none"> <li>1. Documented Environmental Clearance from MET.</li> <li>2. All on site exploration infrastructure (e.g. water tanks, sewage tanks, waste disposal) are not situated on environmental sensitive area and have disturbed as less as possible.</li> <li>3. No littering.</li> </ol>	<ol style="list-style-type: none"> <li>(i) Regional reconnaissance field-based mapping and sampling activities;</li> <li>(ii) Initial local field-based mapping and sampling activities;</li> <li>(iii) Detailed local field-based activities such as local geological mapping, geochemical mapping and sampling, trenching and drilling of closely spaced boreholes and bulk sampling;</li> <li>(iv) Prefeasibility and feasibility studies.</li> </ol>	<ol style="list-style-type: none"> <li>(i) Proponent's Representative (PR)</li> <li>(ii) Project Manager (PM)</li> <li>(iii) Project HSE</li> <li>(iv) Contractor</li> <li>(v) Subcontractors</li> </ol>	<p>Proponent met the provisions of the EMP.</p>



Table 3.7: Use of existing access roads, tracks and general vehicle movements.

OBJECTIVES	MITIGATION MEASURES	SCHEDULE	RESPONSIBILITY	MONITORING RESULTS
<p>1. Plan a road/track network that considers the environmental sensitivity of the area and a long-term tourism potential, and which is constructed in a technically and environmentally sound manner.</p> <p>2. Stick to the recommended track and sensitivity management zones.</p>	<ol style="list-style-type: none"> <li>1. Avoid unnecessary affecting areas viewed as important habitat – i.e. Ephemeral River and its network of tributaries of ephemeral rivers; rocky outcrops; clumps of protected tree species;</li> <li>2. Make use of existing tracks/roads as much as possible throughout the area;</li> <li>3. Do not drive randomly throughout the area (could cause mortalities to vertebrate fauna and unique flora; accidental fires; erosion related problems, etc.);</li> <li>4. Avoid off-road driving at night as this increases mortalities of nocturnal species;</li> <li>5. Implement and maintain off-road track discipline with maximum speed limits (e.g.30km/h) as this would result in fewer faunal mortalities and limit dust pollution;</li> <li>6. Use of "3-point-turns" rather than "U-turns";</li> <li>7. Where tracks have to be made to potential exploration sites off the main routes, the routes should be selected causing minimal damage to the environment – e.g. use the same tracks; cross drainage lines at right angles; avoid placing tracks within drainage lines; avoid collateral damage (i.e. select routes that do not require the unnecessary removal of trees/shrubs, especially protected species);</li> <li>8. Leave vehicles on tracks and walk to point of interest, when possible;</li> <li>9. Rehabilitate all new tracks created.</li> </ol>	<ol style="list-style-type: none"> <li>(i) Regional reconnaissance field-based mapping and sampling activities;</li> <li>(ii) Initial local field-based mapping and sampling activities;</li> <li>(iii) Detailed local field-based activities such as local geological mapping, geochemical mapping and sampling, trenching and drilling of closely spaced boreholes and bulk sampling;</li> <li>(iv) Prefeasibility and feasibility studies.</li> </ol>	<ol style="list-style-type: none"> <li>(i) Proponent's Representative (PR)</li> <li>(ii) Project Manager (PM)</li> <li>(iii) Project HSE</li> <li>(iv) Contractor</li> <li>(v) Subcontractors</li> </ol>	<p>Proponent met the provisions of the EMP.</p>

Table 3.8: Mitigation measures for preventing flora and ecosystem destruction and promotion of conservation.

OBJECTIVES	MITIGATION MEASURES	SCHEDULE	RESPONSIBILITY	MONITORING RESULTS
<p>1. Prevent flora and ecosystem destruction and promote conservation</p>	<ol style="list-style-type: none"> <li>1. Limit the development and avoid rocky outcrops throughout the entire area;</li> <li>2. Avoid development and associated infrastructure in sensitive areas – e.g. Ephemeral River, in/close to drainage lines, cliffs, boulder and rocky outcrops in the area, etc. This would minimise the negative effect on the local environment especially unique features serving as habitat to various species;</li> <li>3. Avoid placing access routes (roads and tracks) through sensitive areas – e.g. over rocky outcrops/ridges and along drainage lines. This would minimise the effect on localised potentially sensitive habitats in the area;</li> <li>4. Avoid driving randomly through the area (i.e. “track discipline”), but rather stick to permanently placed roads/tracks – especially during the detailed field-based exploration phase. This would minimise the effect on localised potentially sensitive habitats in the area;</li> <li>5. Stick to speed limits of maximum 30km/h as this would result in less dust pollution which could affect certain flora – e.g. lichen species. Speed humps could also be used to ensure the speed limit;</li> <li>6. Remove unique and sensitive flora (e.g. all Aloe sp.) before commencing with the development activities and relocate to a less sensitive/disturbed site if possible;</li> <li>7. Prevent and discourage the collecting of firewood as dead wood has an important ecological role – especially during the development phase(s). Such collecting of firewood, especially for economic reasons, often leads to abuses – e.g. chopping down of live and/or protected tree species such as Acacia erioloba which is a good quality wood;</li> <li>8. Attempt to avoid the removal of bigger trees during the development phase(s) – especially with the development of access routes – as these serve as habitat for a myriad of fauna;</li> <li>9. Prevent and discourage fires – especially during the development phase(s) – as this could easily cause runaway veld fires causing problems (e.g. loss of grazing and domestic stock mortalities, etc.) for the neighbouring farmers;</li> <li>10. Rehabilitation of the disturbed areas – i.e. initial development access route “scars” and associated tracks as well as temporary accommodation sites. Preferably workers should be transported in/out to the EPL area on a daily basis to avoid excess damage to the local environment (e.g. fires, wood collection, poaching, etc.). Such rehabilitation would not only confirm the company’s environmental integrity, but also show true local commitment to the environment;</li> <li>11. Implement erosion control. The area(s) towards and adjacent the drainage line(s) are easily eroded and further development may exacerbate this problem. Avoid undertaking any exploration activities including supporting activities such as camping within 20m of the main drainage line(s) to minimise erosion problems as well as preserving the riparian associated fauna;</li> <li>12. Conduct a thorough investigation on the flora associated with the proposed exploration site(s);</li> <li>13. Prevent the introduction of potentially invasive alien plant species (e.g. Tecoma stans, Pennisetum setaceum, etc.) for ornamental purposes as part of the landscaping should mining activities eventually commence. Alien species often “escape” and become invasive causing further ecological damage;</li> <li>14. A thorough investigation of water use and ground water extraction should take place before actual mining activities commence as this would affect the local flora, especially the ephemeral riparian vegetation, not only locally, but downstream as well.</li> </ol>	<ol style="list-style-type: none"> <li>(i) Regional reconnaissance field-based mapping and sampling activities;</li> <li>(ii) Initial local field-based mapping and sampling activities;</li> <li>(iii) Detailed local field-based activities such as local geological mapping, geochemical mapping and sampling, trenching and drilling of closely spaced boreholes and bulk sampling;</li> <li>(iv) Prefeasibility and feasibility studies.</li> </ol>	<ol style="list-style-type: none"> <li>(i) Proponent’s Representative (PR)</li> <li>(ii) Project Manager (PM)</li> <li>(iii) Project HSE</li> <li>(iv) Contractor</li> <li>(v) Subcontractors</li> </ol>	<p>Proponent met the provisions of the EMP.</p>

Table 3.9: Mitigation measures for preventing faunal and ecosystem destruction and promotion of conservation.

OBJECTIVES	MITIGATION MEASURES	SCHEDULE	RESPONSIBILITY	MONITORING RESULTS
<p>Prevent faunal and ecosystem destruction and promote conservation</p>	<ol style="list-style-type: none"> <li>1. Limit the development and avoid rocky outcrops throughout the entire area;</li> <li>2. Avoid development &amp; associated infrastructure in sensitive areas – e.g. in/close to drainage lines, cliffs, boulder and rocky outcrops in the area, etc. This would minimise the negative effect on the local environment especially unique features serving as habitat to various species;</li> <li>3. Avoid placing access routes (roads &amp; tracks) through sensitive areas – e.g. over rocky outcrops/ridges and along drainage lines. This would minimise the effect on localised potentially sensitive habitats in the area;</li> <li>4. Avoid driving randomly through the area (i.e. “track discipline”), but rather stick to permanently placed roads/tracks – especially during the detailed field-based exploration phase. This would minimise the effect on localised potentially sensitive habitats in the area;</li> <li>5. Stick to speed limits of maximum 30km/h as this would result in fewer faunal road mortalities. Speed humps could also be used to ensure the speed limit;</li> <li>6. Remove (e.g. capture) unique fauna and sensitive fauna before commencing with the development activities and relocate to a less sensitive/disturbed site if possible;</li> <li>7. Prevent and discourage the setting of snares (poaching), illegal collecting of veld foods (e.g. tortoises, etc.), indiscriminate killing of perceived dangerous species (e.g. snakes, etc.) and collecting of wood as this would diminish and negatively affect the local fauna – especially during the development phase(s);</li> <li>8. Attempt to avoid the removal of bigger trees during the development phase(s) – especially with the development of access routes – as these serve as habitat for a myriad of fauna;</li> <li>9. Prevent and discourage fires – especially during the development phase(s) – as this could easily cause runaway veld fires affecting the local fauna, but also causing problems (e.g. loss of grazing &amp; domestic stock mortalities, etc.) for the neighbouring farmers;</li> <li>10. Rehabilitation of the disturbed areas – i.e. initial development access route “scars” and associated tracks as well as temporary accommodation sites. Preferably workers should be transported in/out to the EPL area on a daily basis to avoid excess damage to the local environment (e.g. fires, wood collection, poaching, etc.). Such rehabilitation would not only confirm the company’s environmental integrity, but also show true local commitment to the environment;</li> <li>11. Implement erosion control. The area(s) towards &amp; adjacent the drainage line(s) are easily eroded and further development may exacerbate this problem. Avoid undertaking exploration activities including supporting activities such as camping within 20m of the main drainage line(s) to minimise erosion problems as well as preserving the riparian associated fauna;</li> <li>12. Conduct a thorough investigation on the fauna associated with the proposed exploration site(s);</li> <li>13. Prevent the number of domestic pets – e.g. cats &amp; dogs – accompanying the workers during the field-based exploration activities as cats decimate the local fauna and interbreed &amp; transmit diseases to the indigenous African Wildcat found in the area. Dogs often cause problems when bonding on hunting expeditions thus negatively affecting the local fauna. The indiscriminate and wanton killing of the local fauna by such pets should be avoided at all costs.</li> </ol>	<ol style="list-style-type: none"> <li>(i) Regional reconnaissance field-based mapping and sampling activities;</li> <li>(ii) Initial local field-based mapping and sampling activities;</li> <li>(iii) Detailed local field-based activities such as local geological mapping, geochemical mapping and sampling, trenching and drilling of closely spaced boreholes and bulk sampling;</li> <li>(iv) Prefeasibility and feasibility studies.</li> </ol>	<ol style="list-style-type: none"> <li>(i) Proponent’s Representative (PR)</li> <li>(ii) Project Manager (PM)</li> <li>(iii) Project HSE</li> <li>(iv) Contractor</li> <li>(v) Subcontractors</li> </ol>	<p>Proponent met the provisions of the EMP.</p>

Table 3.10: Mitigation measures to be implemented with respect to the exploration camps and exploration sites.

OBJECTIVES	MITIGATION MEASURES	SCHEDULE	RESPONSIBILITY	MONITORING RESULTS
<p>Promotion of conservation through preservation of flora, fauna and ecosystem around the exploration camps and exploration sites</p>	<ol style="list-style-type: none"> <li>1. Select camp sites and other temporary lay over sites with care – i.e. avoid important habitats;</li> <li>2. Use portable toilets to avoid faecal pollution around camp and exploration sites;</li> <li>3. Initiate a suitable and appropriate refuse removal policy as littering could result in certain animals becoming accustomed to humans and associated activity and result in typical problem animal scenarios – e.g. baboon, black-backed jackal, etc.;</li> <li>4. Avoid and/or limit the use of lights during nocturnal exploration activities as this could influence and/or affect various nocturnal species – e.g. bats and owls, etc. Use focused lighting for least effect;</li> <li>5. Prevent the killing of species viewed as dangerous – e.g. various snakes – when on site;</li> <li>6. Prevent the setting of snares for ungulates (i.e. poaching) or collection of veld foods (e.g. tortoises) and unique plants (e.g. various Aloe and Lithop) or any form of illegal hunting activities;</li> <li>7. Avoid introducing dogs and cats as pets to camp sites as these can cause significant mortalities to local fauna (cats) and even stock losses (dogs);</li> <li>8. Remove and relocate slow moving vertebrate fauna (e.g. tortoises, chameleon, snakes, etc.) to suitable habitat elsewhere on property;</li> <li>9. Avoid the removal and/or damaging of protected flora potentially occurring in the general area – e.g. various Aloe, Commiphora and Lithop species;</li> <li>10. Avoid introducing ornamental plants, especially potential invasive alien species, as part of the landscaping of the camp site, etc., but rather use localised indigenous species, should landscaping be attempted, which would also require less maintenance (e.g. water);</li> <li>11. Remove all invasive alien species on site, especially Prosopis sp., which is already becoming a major ecological problem along various water courses throughout Central Namibia. This would not only indicate environmental commitment, but actively contribute to a better landscape;</li> <li>12. Inform contractors/workers regarding the above mentioned issues prior to exploration activities and monitor for compliance thereof throughout;</li> <li>13. Rehabilitate all areas disturbed by the exploration activities – i.e. camp sites, exploration sites, etc.;</li> <li>14. Implement a policy of replacing 2 tree species (preferably the same species) for every 1 protected tree species having to be removed (if necessary);</li> <li>15. Although fires are not expected to be a major issue in the general area due to the overall lack of grass cover, some years it may be necessary to consider fire prevention. Ensure that adequate firefighting equipment (e.g. fire beaters; extinguishers, etc.) is available at camp sites and clear kitchen areas to avoid accidental fires;</li> <li>16. Employ an independent environmental auditor to ensure compliance, especially of the rehabilitation of all the affected areas.</li> </ol>	<ol style="list-style-type: none"> <li>(i) Regional reconnaissance field-based mapping and sampling activities;</li> <li>(ii) Initial local field-based mapping and sampling activities;</li> <li>(iii) Detailed local field-based activities such as local geological mapping, geochemical mapping and sampling, trenching and drilling of closely spaced boreholes and bulk sampling;</li> <li>(iv) Prefeasibility and feasibility studies.</li> </ol>	<ol style="list-style-type: none"> <li>(i) Proponent's Representative (PR)</li> <li>(ii) Project Manager (PM)</li> <li>(iii) Project HSE</li> <li>(iv) Contractor</li> <li>(v) Subcontractors</li> </ol>	<p>Proponent met the provisions of the EMP.</p>

Table 3.11: Mitigation measures for surface and groundwater protection as well as general water usage.

OBJECTIVES	MITIGATION MEASURES	SCHEDULE	RESPONSIBILITY	MONITORING RESULTS
<p>Effective management / protection of surface and groundwater resources and general water resources usage</p>	<ol style="list-style-type: none"> <li>1. Always use as little water as possible. Reduce, reuse and re-cycle water where possible;</li> <li>2. All leaking pipes / taps must be repaired immediately they are noticed;</li> <li>3. Never leave taps running. Close taps after you have finished using them.</li> <li>4. Never allow any hazardous substance to soak into the soil;</li> <li>5. Immediately tell your Contractor or Environmental Control Officer / Site Manager when you spill, or notice any hazardous substance being spilled during the field-based exploration activities or around the camp site;</li> <li>6. Report to your Contractor or Environmental Control Officer / Site Manager when you notice any container, which may hold a hazardous substance, overflow, leak or drip;</li> <li>7. Immediately report to your Contractor or Environmental Control Officer / Site Manager when you notice overflowing problems or unhygienic conditions at the ablution facilities;</li> <li>8. No washing of vehicles, equipment and machinery, containers and other surfaces;</li> <li>9. Limit the operation to a specific site and avoid sensitive areas and in particular the Ephemeral River Channel. This would sacrifice the actual area for other adjacent Ephemeral River areas and thus minimise any likely negative effect on water resources;</li> <li>10. Disposal of wastewater into any public stream is prohibited;</li> <li>11. The Proponent must obtain permission of the land owners before utilising any water resources or any associated infrastructure;</li> <li>12. If there is a need to drilling a water borehole to support the exploration programme the proponent (Proponent) must obtain permission from the land owner and Department of Water Affairs in the Ministry of Agriculture and Forestry. In an event of discovery of economic minerals resources, the sources of water supply for the mining related operations will be supplied by NamWater;</li> <li>13. If there are any further (larger scale) exploration/drilling activities and/or mining activities to follow from the initial planned drill holes, groundwater monitoring must be implemented to include water level monitoring and also water sampling on a bi-annual basis. In order to have greater transparency on the water monitoring activities, the affected landowners / farmers must be given full access to the results of the water monitoring analyses.</li> </ol>	<ol style="list-style-type: none"> <li>(i) Regional reconnaissance field-based mapping and sampling activities;</li> <li>(ii) Initial local field-based mapping and sampling activities;</li> <li>(iii) Detailed local field-based activities such as local geological mapping, geochemical mapping and sampling, trenching and drilling of closely spaced boreholes and bulk sampling;</li> <li>(iv) Prefeasibility and feasibility studies.</li> </ol>	<ol style="list-style-type: none"> <li>(i) Proponent's Representative (PR)</li> <li>(ii) Project Manager (PM)</li> <li>(iii) Project HSE</li> <li>(iv) Contractor</li> <li>(v) Subcontractors</li> </ol>	<p>Proponent met the provisions of the EMP.</p>

Table 3.12: Mitigation measures to minimise negative socioeconomic impacts.

OBJECTIVES	MITIGATION MEASURES	SCHEDULE	RESPONSIBILITY	MONITORING RESULTS
<p>Effective management of socioeconomic benefits of the proposed / ongoing project activities</p>	<ol style="list-style-type: none"> <li>1. The employment of local residents and local companies should be a priority. To ensure that potential employees are from the area, they need submit proof of having lived in the area for a minimum of 5 years;</li> <li>2. Providing information such as the number and types of jobs available, availability of accommodation facilities and rental costs and living expenses, could make potential job seekers wary of moving to the area;</li> <li>3. Addressing unrealistic expectations about large numbers of jobs would be created;</li> <li>4. Exploration camp if required should be established in close consultation with the land owners;</li> <li>5. Exploration camp should consider provision of basic services;</li> <li>6. When employees contracts are terminated or not renewed, contractors should transport the employees out of the area to their hometowns within two days of their contracts coming to an end;</li> <li>7. Tender documents could stipulate that contractors have HIV/Aids workplace policies and programmes in place and proof of implementation should be submitted with invoicing;</li> <li>8. Develop strategies in coordination with local health officers and NGO's to protect the local communities, especially young girls.</li> <li>9. Contract companies could submit a code of conduct, stipulating disciplinary actions where employees are guilty of criminal activities in and around the vicinity of the EPL. Disciplinary actions should be in accordance with Namibian legislation;</li> <li>10. Contract companies could implement a no-tolerance policy regarding the use of alcohol and workers should submit to a breathalyser test upon reporting for duty daily;</li> <li>11. Request that the Roads Authority erect warning signs of heavy exploration vehicles on affected public roads;</li> <li>12. Ensure that drivers adhere to speed limits and that speed limits are strictly enforced;</li> <li>13. Ensure that vehicles are road worthy and drivers are qualified;</li> <li>14. Train drivers in potential safety issues.</li> </ol>	<ol style="list-style-type: none"> <li>(i) Regional reconnaissance field-based mapping and sampling activities;</li> <li>(ii) Initial local field-based mapping and sampling activities;</li> <li>(iii) Detailed local field-based activities such as local geological mapping, geochemical mapping and sampling, trenching and drilling of closely spaced boreholes and bulk sampling;</li> <li>(iv) Prefeasibility and feasibility studies.</li> </ol>	<ol style="list-style-type: none"> <li>(i) Proponent's Representative (PR)</li> <li>(ii) Project Manager (PM)</li> <li>(iii) Project HSE</li> <li>(iv) Contractor</li> <li>(v) Subcontractors</li> </ol>	<p>Proponent met the provisions of the EMP.</p>



Table 3.13: Mitigation measures to minimise health and safety impacts.

OBJECTIVES	MITIGATION MEASURES	SCHEDULE	RESPONSIBILITY	MONITORING RESULTS
<p>Promotion of health and safe working environment in line with national Labour Laws</p>	<ol style="list-style-type: none"> <li>1. Physical hazards: Follow national and international regulatory and guidelines provisions, use of correct Personal Proactive Clothing at all times, training programme, as well as the implementation of a fall protection program in accordance with the Labour Act;</li> <li>2. Some of the public access management measures that may be considered in an event of vandalism occurring are:               <ul style="list-style-type: none"> <li>• All exploration equipment must be in good working condition and services accordingly;</li> <li>• Control access to the exploration site through using gates on the access road(s) if required;</li> <li>• The entire site, must be fenced off; the type of fencing to be used would, however, be dependent on the impact on the visual resources and/or cost; and;</li> <li>• Notice or information boards relating to public safety hazards and emergency contact details to be put up at the gate(s) to the exploration area.</li> </ul> </li> <li>3. There is a comprehensive First Aid Kit on site and that suitable anti-histamine for bee stings / snake bites should be available.</li> <li>4. Rubber gloves are used in case of an accident to reduce the risk of contracting HIV/AIDS;</li> <li>5. All individuals have received instructions concerning the dangers of dehydration or hyperthermia. Encourage all to drink plenty of clean water not directly from the surface water bodies.</li> <li>6. No person under the influence of alcohol or drugs is allowed to work on site.</li> <li>7. The Exploration Manager ensures compliance with the requirements of the relevant Namibian Labour, Mining and Health and Safety Regulations.</li> <li>8. Dangerous or protected / sensitive areas are clearly marked and access to these areas is controlled or restricted.</li> <li>9. Due care must be taken when driving any vehicles on any roads particularly the gravel roads. ALL Drivers must drive with their headlights switched on when travelling on the gravel roads (day and night).</li> <li>10. Persons driving a vehicle must be in possession of a valid driver's license</li> <li>11. Awareness on HIV/AIDS among workers is raised</li> </ol>	<ol style="list-style-type: none"> <li>(i) Regional reconnaissance field-based mapping and sampling activities;</li> <li>(ii) Initial local field-based mapping and sampling activities;</li> <li>(iii) Detailed local field-based activities such as local geological mapping, geochemical mapping and sampling, trenching and drilling of closely spaced boreholes and bulk sampling;</li> <li>(iv) Prefeasibility and feasibility studies.</li> </ol>	<ol style="list-style-type: none"> <li>(i) Proponent's Representative (PR)</li> <li>(ii) Project Manager (PM)</li> <li>(iii) Project HSE</li> <li>(iv) Contractor</li> <li>(v) Subcontractors</li> </ol>	<p>Proponent met the provisions of the EMP.</p>



Table 3.14: Mitigation measures to minimise visual impacts.

OBJECTIVES	MITIGATION MEASURES	SCHEDULE	RESPONSIBILITY	MONITORING RESULTS
<p>Preserve the landscape character in the development of supporting infrastructure and choice of visual screening</p>	<ol style="list-style-type: none"> <li>1. Consider the landscape character and the visual impacts of the exploration area including camp site from all relevant viewing angles, particularly from public roads;</li> <li>2. Use vegetation screening where applicable. Do not cut down vegetation unnecessary around the site and use it for site screening;</li> <li>3. Avoid the use of very high fencing;</li> <li>4. Minimise access roads and no off-road that could result in land scarring is allowed;</li> <li>5. Minimise the presence of secondary structures: remove inoperative support structures;</li> <li>6. Remove all infrastructure and reclaim, or rehabilitate the project site after exploration activities are completed.</li> </ol>	<ol style="list-style-type: none"> <li>(i) Regional reconnaissance field-based mapping and sampling activities;</li> <li>(ii) Initial local field-based mapping and sampling activities;</li> <li>(iii) Detailed local field-based activities such as local geological mapping, geochemical mapping and sampling, trenching and drilling of closely spaced boreholes and bulk sampling;</li> <li>(iv) Prefeasibility and feasibility studies.</li> </ol>	<ol style="list-style-type: none"> <li>(i) Proponent's Representative (PR)</li> <li>(ii) Project Manager (PM)</li> <li>(iii) Project HSE</li> <li>(iv) Contractor</li> <li>(v) Subcontractors</li> </ol>	<p>Proponent met the provisions of the EMP.</p>

Table 3.15: Mitigation measures to minimise vibration, noise and air quality.

OBJECTIVES	MITIGATION MEASURES	SCHEDULE	RESPONSIBILITY	MONITORING RESULTS
<p>Promote of effective management of vehicle movement, drilling and blasting operations and use of Personal Protective Equipment (PPE) in mitigating air quality and vibrations impacts in line with national laws</p>	<ol style="list-style-type: none"> <li>1. Limit vehicle movements and adhere to the speed of 60 km/h;</li> <li>2. Vehicles and all equipment must be properly serviced to minimise noise pollution;</li> <li>3. Use of Personal Protective Equipment (PPE) to minimise Occupational Health Safety impacts dues to noise pollution around the site;</li> <li>4. National or international acoustic design standards must be followed.</li> <li>5. Drilling and blasting operations can major sources of vibration, noise and dust and where required the following mitigation measure shall be implemented; <ul style="list-style-type: none"> <li>• Drilling and blasting operations shall only be done by a qualified person who must at all times adhere to the required blasting protocol;</li> <li>• Prior warning shall be given to all persons, neighbor and visitors before the blasting takes place;</li> <li>• Careful planning and timing of the blast program to minimise the size of the charge;</li> <li>• Where practicable, use of explosive products with lower detonation velocities, but noting that this would require more explosives to achieve the same blast result;</li> <li>• Use of detonating caps with built-in time delays, as this effectively reduces each detonation into a series of small explosions;</li> <li>• Use of a procedure ("decking the charge") which subdivides the charge in one blast hole into a series of smaller explosions, with drill patterns restricted to a minimum separation from any other loaded hole;</li> <li>• Over-drilling the holes to ensure fracturing of the rock;</li> <li>• Staggering the detonation for each blast hole in order to spread the explosive's total overpressure over time;</li> <li>• Matching, to the extent possible, the energy needed in the "work effort" of the borehole to the rock mass to minimise excess energy vented into the receiving environment.</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>(i) Regional reconnaissance field-based mapping and sampling activities;</li> <li>(ii) Initial local field-based mapping and sampling activities;</li> <li>(iii) Detailed local field-based activities such as local geological mapping, geochemical mapping and sampling, trenching and drilling of closely spaced boreholes and bulk sampling;</li> <li>(iv) Prefeasibility and feasibility studies.</li> </ol>	<ol style="list-style-type: none"> <li>(i) Proponent's Representative (PR)</li> <li>(ii) Project Manager (PM)</li> <li>(iii) Project HSE</li> <li>(iv) Contractor</li> <li>(v) Subcontractors</li> </ol>	<p>Proponent met the provisions of the EMP.</p>

Table 3.16: Mitigation measures for waste (solid and liquid) management.

OBJECTIVES	MITIGATION MEASURES	SCHEDULE	RESPONSIBILITY	MONITORING RESULTS
<p>Promotion of effective waste (solid and liquid) management through the adoption of sound and hierarchical approach to waste management, which would include waste minimisation, re-use, recovery, recycling, treatment, and proper disposal.</p>	<ol style="list-style-type: none"> <li>1. Burial of waste on anywhere within the EPL area is not allowed and all generated solid waste must be disposed at the at an approved municipal waste disposal site;</li> <li>2. Toilet and ablution facilities must be provided on site and should not be located close to Ephemeral Rivers or visible discontinuities (fractures, joints or faults);</li> <li>3. Provide site information on the difference between the two main types of waste, namely: <ul style="list-style-type: none"> <li>• General Waste; and</li> <li>• Hazardous Waste.</li> </ul> </li> <li>4. Sealed containers, bins, drums or bags for the different types of wastes must be provided. Never dispose of hazardous waste in the bins or skips intended for general waste;</li> <li>5. All solid and liquid wastes generated from the proposed / ongoing project activities shall be reduced, reused, or recycled to the maximum extent practicable;</li> <li>6. Trash may not be burned or buried, except at approved sites under controlled conditions in accordance with the municipal regulations;</li> <li>7. Never overfill any waste container, drum, bin or bag. Inform your Contractor or the Environmental Control Officer / Site Manager if the containers, drums, bins or skips are nearly full;</li> <li>8. Never litter or throwaway any waste on the site, in the field or along any road. No illegal dumping;</li> <li>9. Littering is prohibited.</li> <li>10. Latrines and French drains built &gt;100m from watercourses or pans to avoid pollution of primary and secondary aquifers.</li> <li>11. Chemical toilets or suitable waste water management system shall be provided on site and around the camp as may be required.</li> </ol>	<ol style="list-style-type: none"> <li>(i) Regional reconnaissance field-based mapping and sampling activities;</li> <li>(ii) Initial local field-based mapping and sampling activities;</li> <li>(iii) Detailed local field-based activities such as local geological mapping, geochemical mapping and sampling, trenching and drilling of closely spaced boreholes and bulk sampling;</li> <li>(iv) Prefeasibility and feasibility studies.</li> </ol>	<ol style="list-style-type: none"> <li>(i) Proponent's Representative (PR)</li> <li>(ii) Project Manager (PM)</li> <li>(iii) Project HSE</li> <li>(iv) Contractor</li> <li>(v) Subcontractors</li> </ol>	<p>Proponent met the provisions of the EMP.</p>

Table 3.17: Rehabilitation plan.

OBJECTIVES	MITIGATION MEASURES	SCHEDULE	RESPONSIBILITY	MONITORING RESULTS
<p>Contributions toward environmental preservation and sustainability through rehabilitation of disturbed areas such as exploration sites and remove all unwanted part of the fixtures and restore the sites to close an approximation of the pristine state as is technically, financially and reasonably possible.</p>	<p>1. The following rehabilitation actions are practiced:</p> <ul style="list-style-type: none"> <li>• Small samples are preferably removed from site to avoid additional scars in the landscape;</li> <li>• Litter from the site has been taken to the appropriate disposal site.</li> <li>• Debris, scrap metal, etc is removed before moving to a new site or closure of the mine.</li> <li>• Water tanks are dismantled and removed if not need for after use.</li> <li>• Tracks on site and the access road are rehabilitated by smoothing the 'middle mannetjie'(middle ridge between the tracks) and raking the surface.</li> </ul> <p>2. The following should be undertaken at all disturbed areas that require further rehabilitation:</p> <ul style="list-style-type: none"> <li>• if applicable the stockpiled subsoil to be replaced (spread) and/or the site is neatly contoured to establish effective wind supported landscape patterns;</li> <li>• Replace the stored topsoil seed bank layer.</li> <li>• Five (5) years after rehabilitation the sites are not visible from 500 m away.</li> </ul>	<p>(i) Regional reconnaissance field-based mapping and sampling activities;</p> <p>(ii) Initial local field-based mapping and sampling activities;</p> <p>(iii) Detailed local field-based activities such as local geological mapping, geochemical mapping and sampling, trenching and drilling of closely spaced boreholes and bulk sampling;</p> <p>(iv) Prefeasibility and feasibility studies.</p>	<p>(i) Proponent's Representative (PR)</p> <p>(ii) Project Manager (PM)</p> <p>(iii) Project HSE</p> <p>(iv) Contractor</p> <p>(v) Subcontractors</p>	<p>Proponent met the provisions of the EMP.</p>

Table 3.18: Environmental data collection.

OBJECTIVES	MITIGATION MEASURES	SCHEDULE	RESPONSIBILITY	MONITORING RESULTS
<p>1. Collect data that will add value to environmental monitoring and reporting to the regulators</p> <p>2. Collect data that will add to the general scientific and geographic knowledge of the environment in which the exploration process takes place.</p> <p>3. Acknowledged that the required skills and knowledge to collect all the suggested data may not be available within the mine /exploration team, however, as much data as is practical should be collected.</p>	<p>1. Environmental Monitoring Report Compiled and submitted by the Environmental Coordinator to the regulators</p> <p>2. The following types of information should be gathered:</p> <ul style="list-style-type: none"> <li>• Fauna. What tracks or signs of animal activity have been seen? (photographs and GPS recording) What animals, birds etc were identified? Alternatively provide a description and/ or photo if unidentified.</li> <li>• Unusual weather conditions, e.g. records of the prevailing wind direction and the direction from which storm events come. Was there fog or rain, frost overnight or intense heat? Preferably have a thermometer and rain gauge on site.</li> <li>• Vegetation. Record trees, shrubs, grass, etc. that are found in the vicinity along each of the profiles. Some plants do only occur after rainfall and might not have been seen for decades.</li> <li>• Any archaeological, cultural or historical sites that may be found. GPS coordinates, photograph and plot the position on a 1: 50 000 map.</li> <li>• other including surface water, spring, large scale geological features etc</li> </ul>	<ul style="list-style-type: none"> <li>(i) Regional reconnaissance field-based mapping and sampling activities;</li> <li>(ii) Initial local field-based mapping and sampling activities;</li> <li>(iii) Detailed local field-based activities such as local geological mapping, geochemical mapping and sampling, trenching and drilling of closely spaced boreholes and bulk sampling;</li> <li>(iv) Prefeasibility and feasibility studies.</li> </ul>	<ul style="list-style-type: none"> <li>(i) Proponent's Representative (PR)</li> <li>(ii) Project Manager (PM)</li> <li>(iii) Project HSE</li> <li>(iv) Contractor</li> <li>(v) Subcontractors</li> </ul>	<p>Proponent met the provisions of the EMP.</p>

## 4. CONCLUSIONS AND RECOMMENDATIONS

### 4.1 Conclusions

Headspring Investments (Pty) Ltd (**the Proponent**) holds minerals rights under the Exclusive Prospecting Licence (EPL) No. 4654, with special focus on base, rare and nuclear fuels. The proponent intends to continue with prospecting for base and rare metals and nuclear fuels with special focus on using techniques such as desktop studies and review of historical exploration in the area, aerial surveys such as geophysical and hyperspectral surveys, initial and detailed field-based activities such as geological mapping, ground geophysics, trenching, drilling and sampling with laboratory testing

During the period under review Oct 2012 to August 2018 and as part of the implementation of the EMP, the following key recommendations of the Scoping and EMP Report were also addressed:

- (i) The proponent had Access Agreements with the land owner/s as was required;
- (ii) The Proponent adhered to all the provisions of the EMP and conditions of the Access Agreement entered between the proponent and the land owner/s in line with all applicable national regulations;
- (iii) Before entering any private property such as a private farm, the proponent gave advanced notices and obtained access permission from the land owners at all times;
- (i) The proponent implemented the precautionary measures / approach to environmental management at all times;
- (ii) The proponent provided all the necessary support including human and financial resources, for the implementation of the proposed / ongoing mitigations and effective environmental management, and;
- (iii) The proponent implemented internal and external (contracted Risk-Based Solutions) monitoring of the actions and management strategies developed during the mineral exploration process.

This final Environmental Monitoring report has been prepared with the support of the external specialist consultant (Risk-Based Solutions) and will be submitted to the regulators as part of the required environmental monitoring and reporting process.

Based on the results of this overall environmental performance monitoring report undertaken for the period under review from October 2012 to August 2018, no diversions from the environmental commitments as outlined in the Environmental Policy of the Proponent (Headspring Investments (Pty) Ltd), Environmental Management Plan (EMP) and the Environmental Clearance Certificate (ECC) have been observed or recorded (Annex 1). The ongoing exploration activities are being undertaken with the highest Health, Safety and Environment (HSE) commitments.

An updated environmental Scoping and Environmental Management Plan (EMP) report has also been prepared for implementations by the proponent for period 2018 -2021.

# Annex 1

## *Questionnaire Annex to the Environmental Monitoring Report*

# **ENVIRONMENTAL REPORT (ER)**

## **(Prospecting Companies)**

### **INSTRUCTIONS:**

1. An Environmental Report shall be submitted to the Ministry of Environment and Tourism (MET).

### **Period October 2012– August 2018**

2. This form shall be the minimum reporting format. Prospecting Companies are expected to attach a map of their prospecting area to this report. Prospecting Companies are welcome to attach any other information they like, such as copies of new agreements, letters of explanation, aerial photographs, or anything else of interest.
3. The map shall be used to indicate the following:
  - \* areas where prospecting has taken place,
  - \* roads or tracks made and/or used,
  - \* houses and other infrastructure erected,
  - \* excavations or other scars which have been rehabilitated,
  - \* conflict areas, etc....
4. It is recommended (but not compulsory) that Prospecting Companies attach photographs to their report which visually illustrate the activities described in their report.
5. Failure to submit an Environmental Report shall constitute a breach of the Environmental Contract, which could result in steps taken against the Prospecting Company.
6. All information contained in the Environmental Report shall be treated as confidential.
7. The Prospecting Company shall ensure that all the information recorded in the Environmental Report is, to their best knowledge, accurate and correct.

### **Completed Environmental Reports should be sent to:**

**Environmental Commissioner  
Department of Environmental Affairs (DEA)  
Ministry of Environment and Tourism  
Private Bag 13306  
WINDHOEK**







**F. INFRASTRUCTURAL DEVELOPMENT**

*Infrastructural Developments means any offices, houses, sheds, cement slabs, or other buildings or foundations for buildings. It also includes storage tanks (for water, fuel or other substances), temporary housing such as mobile homes & caravans, prefab units and tented camps. Please report on new construction or additions to buildings you reported on, in your previous Environmental Report.*

Was any NEW infrastructure established during this period ?      yes  No

If "yes" above, is this infrastructure :      Permanent  Temporary  A combination

Describe infrastructure by ticking boxes :      Offices       Housing       Sheds   
    Prefab structure       Garages       Storage tanks   
    Cement slabs       Foundations       Other

If "other", please specify : .....

**G. BOREHOLES, SAMPLE HOLES OR OTHER DRILLING**

*This category includes holes drilled for water, for taking mineral or other samples, for setting explosives, for testing mineral quality, or any other purpose.*

Were any holes drilled during this period ?      yes  no

If "yes", for which purpose were they drilled ?      Water  depth  Quantity   
    Sampling  depth  Quantity   
    Explosives  depth  Quantity

Other  (specify) ..... depth  Quantity

**H. WATER**

Your estimated monthly water consumption during this period was: None

Water was obtained from :      River       Borehole       Dam       Water Affairs       Other

Please estimate the percentage of water used for the following activities during this period:

Human consumption	10 %	
Toilets	<input type="checkbox"/> <input type="checkbox"/> %	
Prospecting activities	90 %	
Washing vehicles & equipment	<input type="checkbox"/> <input type="checkbox"/> %	
Dust control	<input type="checkbox"/> <input type="checkbox"/> %	
Building activities	<input type="checkbox"/> <input type="checkbox"/> %	
Gardens	<input type="checkbox"/> <input type="checkbox"/> %	
Recreation	<input type="checkbox"/> <input type="checkbox"/> %	
Other (specify)	<input type="checkbox"/> <input type="checkbox"/> %	

Were there any accidents which caused a loss of water ?      No

If "yes", please give details

**I. PROTECTION OF FAUNA AND FLORA**

<b>Please answer the following questions by ticking the appropriate boxes :</b>			
<b>Question :</b>	<b>Yes</b>	<b>No</b>	<b>Unsure</b>
Were any mammals, birds, reptiles or fish killed or wounded (purposefully or accidentally) in the prospecting site or area ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were any plants (excluding grasses) picked, damaged or removed ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Was there any wood collecting in the area ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**J. RELATIONS WITH NEIGHBOURS, OFFICIALS AND/OR THE GENERAL PUBLIC**

Were there any conflicts with neighbours, land-owners, Government Officials or the public during this period ?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input checked="" type="checkbox"/>
If "yes" above, what was the nature of these conflicts ? (tick boxes to provide answers)		
People entered the prospecting area without permission or prior arrangement	<input type="checkbox"/>	
Complaints about reduced access to water or other resources	<input type="checkbox"/>	
Complaints about danger posed to livestock or wildlife	<input type="checkbox"/>	
Allegations about stock-theft or poaching	<input type="checkbox"/>	
Complaints about vehicle or equipment movement on access roads / tracks	<input type="checkbox"/>	
Complaints about litter or other types of pollution (eg. Noise, dust, etc.)	<input type="checkbox"/>	
Complaints about the activities / actions of company staff	<input type="checkbox"/>	
Allegations that the Company was not adhering to contracts / agreements	<input type="checkbox"/>	
Allegations that the Company damaged property or installations	<input type="checkbox"/>	
Allegations that gates were left open or unlocked	<input type="checkbox"/>	
Other (specify).....	<input type="checkbox"/>	

If conflicts arose, indicate how these were resolved ? (tick boxes)	
Verbal agreement after discussions.....	<input type="checkbox"/>
Written agreement by special contract.....	<input type="checkbox"/>
Instructions to company staff to avoid conflicts.....	<input type="checkbox"/>
Company rectified its mistakes and undertook to avoid future wrong-doing...	<input type="checkbox"/>
Court action or other third party arbitration.....	<input type="checkbox"/>
Other (specify) .....	<input type="checkbox"/>
The conflicts remain unsolved.....	<input type="checkbox"/>

Any other comments or information :

.....  
 .....  
 .....

See next page for more space for "additional comments".....

