Environmental Impact Assessment for the Exploration
Activities of the Base Metals and Rare Metals, Dimensions
Stone and Precious Metals on Exploration Prospecting
License 7125, Outjo District, Kunene Region



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This report has been prepared by GTC with all reasonable skill, care, and diligence taking into account the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid. The interpretations and conclusions reached in this technical report are based on current scientific understanding and the best evidence available to the authors at the time of writing. It is the nature of all scientific conclusions that they are founded on an assessment of probabilities and, however high these probabilities might be, they make no claim for absolute certainty.

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#### **DOCUMENT CONTROL**

## **Statement of Purpose**

This document aims to produce an environmental scoping and impact assessment report for Exploration of Base and Rare Metals, Dimensions Stone and Precious Metals on the Exclusive Prospecting License 7125. This report gives insight to the competent authorities for considerations and to Calculus Commodities (Pty) Ltd, represented by Mr. Elias Sipunga, on the environmental, social impact of the exploration activities in area and the environmental management plans. This report is in the context of the provisions of EIAs, EMPs and exploration best practices offered by Green Team Consultants.

#### Confidentiality

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### **EXECUTIVE SUMMARY**

Calculus Commodities (Pty) Ltd is a private research and development firm dedicated to researching and investing in commodity markets – and has identified the opportunity to explore activities of base and rare metals, dimension stones and precious metals. The proposed exploration activities are located on Exclusive Prospecting License (EPL) 7125, which is situated approximately 5 km north of Kamanjab, Outjo District in Kunene Region. The proposed exploration activities will include both Reverse Circulation (RC) and diamond drilling to about 200 m depth. Soil and rock sampling will be conducted and if required, geological mapping, electromagnetic and geophysical surveys shall be conducted.

The proposed project triggers the Environmental Management Act No.7 of 2007 and its associated Regulations, as a Listed activity, as such an application to obtain the Environmental Clearance Certificate will be submitted to the competent authority for review and decision making.

The conditions of the natural, cultural, social and economic systems and their interrelations of the receiving environment with low-to-medium diversity of reptiles, birds and mammals which are associated with the rocky escarpment. Whereas, the vegetation varies from dwarf shrub savannah to grassland ecosystem.

The environmental impacts were assessed based on the International Finance Corporation (IFC) standard methodology, in terms of probability (likelihood of occurring), scale/extent (spatial scale), magnitude (severity) and duration (temporal scale). This methodology ensures uniformity and that potential impacts can be addressed in a standard manner so that a wide range of impacts are comparable.

The environmental assessment process has not identified significant social and environmental impacts resulting from the proposed exploration activities. Further analysis has identified social and environmental impacts which includes, but are not limited to employment creation; increase in economic growth, minor waste management, minimal fugitive sand and fine dust emission, disturbance to the biodiversity and the surrounding community. However, by using the national and international best practice, mitigation measures were identified to avoid and/or reduce the impact, as such, the effects on the social and environment were deemed not significant, localised and of short duration.

On this basis, it is the opinion of Green Team Consultants that an Environmental Clearance Certificate could be issued, with conditions attached that the management and mitigation

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measures as set out in the Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) are implemented and enforced at all times.

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# **LIST OF ACRONYMS**

Acronym	
CC	Closed Corporation
CTD	Current, Temperature, Depth
DO	Dissolved Oxygen
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EIS	Environmental Information Service
EMP	Environmental Management Plan
EPL	Exclusive Prospecting License
ESIA	Environmental and Social Impact Assessment
FDI	Foreign Direct Investments
GHG	Greenhouse Gas
HPP	Harambee Prosperity Plan
IAP	Interested and Affected Party
IBA	Important Bird Area
IFC	International Finance Corporation
IUCN	International Union f or the Conservation of Nature
MME	Ministry of Mines and Energy
MEFT	Ministry of Environment, Forestry and Tourism
MODVA	Ministry of Defense and Veteran Affairs
MOL	Ministry of Labour
N/A	Not applicable
NDP	National Development Plan
(PTY) Ltd	Proprietary Limited
RC	Reverse Circulation
SADC	Southern African Development Community
SADC	Southern African Development Community
SASSCAL	Southern African Science Service Centre for Climate Change and Adaptive Land Management

#### 1 INTRODUCTION

# 1.1 Project Background

Green Team Consultants have been appointed by Calculus Commodities (Pty) Ltd to undertake an Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) in terms of the Environmental Management Act No.7 of 2007 and its associated Regulations. Calculus Commodities (Pty) Ltd is a private research and development firm dedicated to researching and investing in commodity markets – and has identified the opportunity to explore activities of base and rare metals, dimension stones and precious metals. The proposed exploration activities are located on EPL 7125, which is situated approximately 5 km north of Kamanjab town, crosscutting the C35 and D2763 roads in Kunene Region (Figure 1).

# 1.2 Purpose of the Project

The purpose of this report is to present the findings for EIA and EMP of the proposed exploration activities of base and rare metals, dimension stones and precious metals to the stakeholders, Interest & Affected Parties (I&APs) and the competent authority. The competent authority will review the predicted impacts and associated management actions required to avoid, minimise or mitigate the negative impacts; or to enhance the benefits of the proposed project.

The environmental assessment process aims to determine the potential environmental impacts, mitigation and rehabilitation of the proposed exploration activities with the specific objectives which include, but are not limited to:

- Assess and determine the policy and legislation that apply to the proposed project across the footprint of the development;
- Describe the need and desirability of the proposed project;
- Assess and determine the nature, significance, consequence, extent, duration and
  probability of the impacts occurring to inform identified preferred alternatives; and the
  degree to which these impacts e.g., reversibility, irreplaceable, avoided, managed or
  mitigated and identify their mitigation measures.

# 1.3 Environmental requirements

The proposed project triggers the Environmental Management Act No.7 of 2007 and its associated Regulations, as a Listed activity, as such an application to obtain the Environmental Clearance Certificate will be submitted to the competent authority (e.g., Ministry of Mines and Energy (MME) and Ministry of Environment, Forestry and Tourism (MEFT) for review and decision making.

Listed activities that have been triggered by the proposed project as per the Environmental Management Act No.7 of 2007 and its associated Regulations includes;

#### Mining and quarrying activities

- (3.1) The construction of facilities for any process or activities which requires a licence, right or other form of authorisation, and the renewal of a licence, right or other form of authorisation, in terms of the Minerals (Prospecting and Mining Act), 1992).
  - Calculus Commodities will require a licence for the extraction of metals and industrial minerals.
- (3.2) Other forms of mining or extraction of any natural resources whether regulated by law or not.
  - The proposed project will require the extraction of minerals (e.g., soil and sand) and metals.
- (3.3) Resource extraction, manipulation, conservation and related activities.
  - Calculus Commodities proposed to extract metals and industrial minerals.

#### Forestry activities

- (4.) The clearance of forest areas, deforestation, afforestation, timber harvesting or any other related activity that requires authorisation in terms of the Forest Act, 2001 (Act No. 12 of 2001) or any other law.
  - If required to access target sites, minimal vegetation clearing or thinning shall, but this will only be dirt roads.

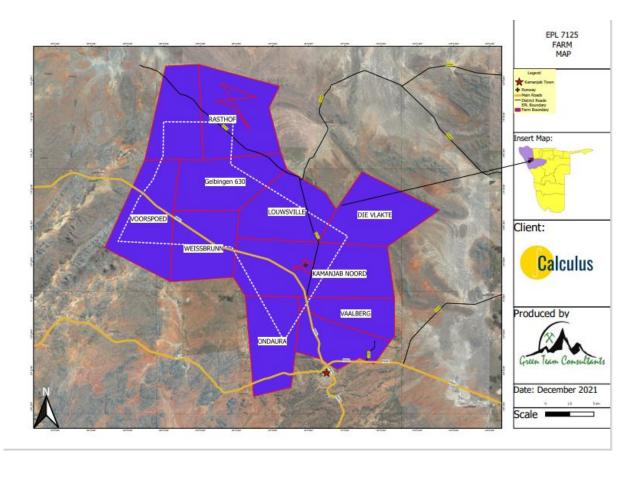


Figure 1 – Location of EPL 7125 near Kamanjab Town in the Kunene Region, Namibia

# 1.4 Scope of Work and Report Structure

This scoping study was carried out in terms of the Environmental Management Act No.7 of 2007 and its Regulations based on the information as provided by Calculus Commodities (Pty) Ltd, site visit, public participation and literature review.

The environmental assessment report has been compiled as per the following chapters:

- Chapter 1: Introduction, covering the purpose, environmental requirement, need and desirability of the proposed project;
- Chapter 2: Legislation, policies and guidelines frameworks governing the proposed project;
- Chapter 3: Description of the project and its related activities and services;
- Chapter 4: Alternatives considered for the proposed project;
- Chapter 5: Environmental baseline of the proposed project;
- Chapter 6: Public consultation process followed to engage the interested and affected members of the public;
- Chapter 7: Impact identification and assessment. This chapter presents the mitigation measures on how to minimize and/or avoid the potential impacts;
- Chapter 8: The recommendations and conclusions reached will be presented in this chapter.
- Chapter 9: References List. The list of all data sources consulted for the assessment and report compilation.
- Chapter 10: Appendices (A F)

## 1.5 Need and Desirability of the Project

Mining exploration could be a challenging business, especially in an economically disadvantaged country such as Namibia. The current economic status has not been easy either hence adding to an unsustainable economy. To improve the country's economic stability, Calculus Commodities (Pty) Ltd identified the need to explore the possible presence of base and rare metals, dimension stones and precious metals on a Exclusive Prospecting License(EPL) which covers several farms, namely Gelbingen 630 Voorspoed, Lousville, Weisbrunn and Rasthof near Kamanjab town in the Kunene Region.

The exploration activities will result in income generation and the creation of employment opportunities for the local community. These will both contribute to the socio-economic development in the project vicinity, and the country at large, especially for the planned larger phase for mine, plant construction and operations.

The proposed project also supports the Governmental objectives (NDP5) and Harambee Prosperity Plan (HPP) which aims to implement mining strategies that will promote industries that can produce mining inputs and services. This can be achieved by strengthening local suppliers to expand the procurement sector and boost local supplies.

# 1.6 Appointment of the Environmental Assessment Practitioner (EAP)

Calculus Commodities (Pty) Ltd appointed Green Team consultants cc as an independent environmental consultant to conduct an Environmental Assessment and submit the required documents as part of an application for an Environmental Clearance Certificate to the Environmental Commissioner. The findings of the Environmental Assessment process are incorporated in this report and together with the Environmental Management Plan, will be submitted as part of an application for an Environmental Clearance Certificate to the relevant competent authorities for evaluation, recommendation and consideration.

Mr Titus Shuuya was appointed as a Lead Environmental Assessment Practitioner to facilitate the Environmental Assessment process and was assisted by Ms. Lydia Ilonga, a qualified and experienced Research Assistant. Mr. Sakaria Nalusha, a Project Manager managed the Environmental Assessment process with the required support, including the report review. The CVs of the project team are attached under Appendix A.

## 2 LEGISLATION, POLICIES AND GUIDELINES

A review of applicable and relevant Namibian legislation, policies and guidelines to the proposed project are summarised in this chapter. This review serves to inform stakeholders, Interested and Affected Parties and the competent authority of the requirements and expectations to be fulfilled to extract minerals for exploration purposes.

# 2.1 Environmental Management Act No.7 of 2007

This environmental scoping assessment was carried out by the Environmental Management Act No.7 of 2007 and its associated Regulations (GG No. 4878 GN No. 30). This Act has stipulated requirements to complete the required documentation to obtain an Environmental Clearance Certificate for permission to undertake Listed activities.

The Act aims at promoting sustainable management of the environment and the use of natural resources. It is a broad Act that crosscut multidisciplinary fields because regulates land use development through the Environmental Clearance Certification and/or Environmental Impact Assessments. Lists of other relevant and applicable legislations are presented in the table below.

Table 1 Applicable and Relevant Namibian and relevant international legislation, policies and guidelines conducted during the EA process

Legislation/Policy/ Guideline	Relevant Provisions	Implications for this project
Environmental  Management Act  No. 7 of 2007	Requires that projects with significant environmental impacts are subject to an environmental assessment process (Section 27).  Details principles which are to guide Environmental Assessment Practitioners	The Act and its regulations should inform and guide this Environmental Assessment process.
Environmental Impact Assessment Regulations GN 28-30 (GG 4878)	Details requirements for public consultation within a given environmental assessment process (GN 30 S21).  Details the requirements for what should be included in a Scoping Report (GN 30 S8) and an Assessment Report (GN 30 S15).	Green Team Consultants need to perform an EIA on behalf of the Calculus Commodities (Pty) Ltd.

Legislation/Policy/	Relevant Provisions	Implications for this project
Guideline		
Minerals Prospecting and Mining Act No.33 of 1992	The construction of facilities for any process or activities that requires a license, right or other form of authorisation and the renewal of a licence, right or other form of authorisation.  Section 52 states that the holder of a mineral licence shall not exercise any rights conferred upon such holder by this Act or under any terms and conditions of such mineral licence:	Calculus Commodities (Pty) Ltd need to obtain an exploration permit from the Ministry of Mines and Energy (MME) before exploration activities and renewal of the license.  Calculus Commodities (Pty) Ltd to ensure compliance with sections 76, 50 and 52 of the Act.
	<ul><li>(a) In, on or under any private land until such holder-</li><li>(i) Has agreed in writing with the owner of such land containing terms and conditions.</li></ul>	
Forest Act No.12 of 2001	Clearance of forest areas, deforestation, afforestation, timber harvesting or any other related activity.	Calculus Commodities (Pty) Ltd should acquire a forest clearance license from the Ministry of Environment, Forestry and Tourism (MEFT).
Public and Environmental Health Act No. 1 of 2015	To provide a framework for a structured uniform public and environmental health system in Namibia, and to provide for incidental matters.	The Calculus Commodities (Pty) Ltd should ensure adherence to this Act and its Regulations.
Soil Conservation Act No. 76 of 1969	The Act makes provision for the prevention and control of soil erosion and the protection, improvement and conservation of soil, vegetation and water supply sources and resources, through directives declared by the Minister.	Duty of care must be applied for soil conservation.

Legislation/Policy/	Relevant Provisions	Implications for this project
Guideline		
The Regional	These Acts set out the conditions under	The relevant Regional
Councils Act (No.	which Councils must be elected and	Councils are considered to
22 of 1992)	administer each delineated region. From	be IA&Ps.
22 01 1002)	land use and project planning point of	50 17 (61 6)
	view, their duties include; "undertaking	
	the planning of the development of the	
	region/ local authority for which it has	
	been established with a view to physical,	
	social and economic characteristics,	
	urbanisation patterns, natural resources,	
	economic development potential,	
	infrastructure, land utilisation pattern and	
	sensitivity of the natural environment."	
	-	
Labour Act No 6	Ministry of Labour (MOL) is aimed at	Calculus Commodities (Pty)
of 1992	ensuring harmonious labour relations	Ltd should ensure that the
	through promoting social justice,	activities do not compromise
	occupational health and safety and	the safety and welfare of
	enhanced labour market services for the	workers.
	benefit of all Namibians. This ministry	
	ensures effective implementation of the Labour Act No.6 of 1992.	
	Labour Act No.6 or 1992.	
	This provides the provision of the	It is likely for heritage objects
	protection and conservation of places and	
2004	objects with heritage significance.	Provision, as stated in the
	Continue FF garante Calculus	Act, has been taken into
	Section 55 compels Calculus	consideration and are
	Commodities (Pty) Ltd to report any	summarised into the EMP.
	archaeological findings to the National Heritage Council.	
	Tierrage Couricii.	

#### 3 PROJECT DESCRIPTION

The proposed project site is located on several farms i.e., Gelbingen 630, Voorspoed, Lousville, Weisbrunn and Rasthof farms that fall under the jurisdiction of EPL 7125 about 5 km North-West of Kamanjab along the C35 road. The area is mostly commercial farms with activities such as livestock farming and wildlife hunting. The proposed project has the potential to create employment, generate income from sales and contribute to regional, national and international economic growth. Once the exploration activities are successfully and commercially viable, the next stage envisions will be mining operations which can result in significant socio-economic development.

#### **Background on Mining Exploration**

Mineral exploration is the first stage in the process of mineral extraction and supply. An increase in global mining exploration is due to an increase in demand for metals, growth of industrial output, greatly improved geological knowledge, exploration technology and attractive investments environments among others (Gandhi & Sarkar, 2016).

Mining plays a vital role in the economic development of many countries. In Namibia it has been the backbone of the economy for a long time, having a positive impact on the economy measured through job creation and income generation (Nambinga & Mubita, 2021).

Namibia's abundant minerals have made the mining sector a major source of Foreign Direct Investment (FDI), contributing 12% to Gross Domestic Product (GDP) and providing critical upstream, downstream and side stream linkages for the Namibian economy.

Mineral exploration also contributes to Government revenue, and the revenue generated has been increasing from 2012 up to 2018. The sector generated about N\$35.5 billion in 2018 relative to N\$ 18.5 in 2012 which is an 81.8% growth in revenue generated over that period. Mining accounts for 25% of the country's income, contribution (10.4% in 2009, 8.5% in 2010, 9.5% in 2011, 12,3% in 2012, 13.2% in 2013 and 11,6% in 2014).

# 3.1 Project Location

The proposed project is situated on several farms i.e. Gelbingen 630, Voorspoed, Lousville, Weisbrunn and Rasthof farms which fall under the jurisdiction of EPL 7125. One of the farms, Gelbingen 630 is owned by the Ministry of Defense and Veteran Affairs (MODVA) and several liberation struggle veterans are housed on the farm. MODVA has been contacted and they have granted permission to access the site and other farms (Appendix B). The EPL 7125 is situated approximately 5 km north of Kamanjab town, cross-cutting the C35 and D2763 roads in Kunene Region. The proposed exploration activities are the first phase of a larger version of the project, another Environmental and Social Impact Assessment (ESIA) will be done for mine and plant construction and operation.

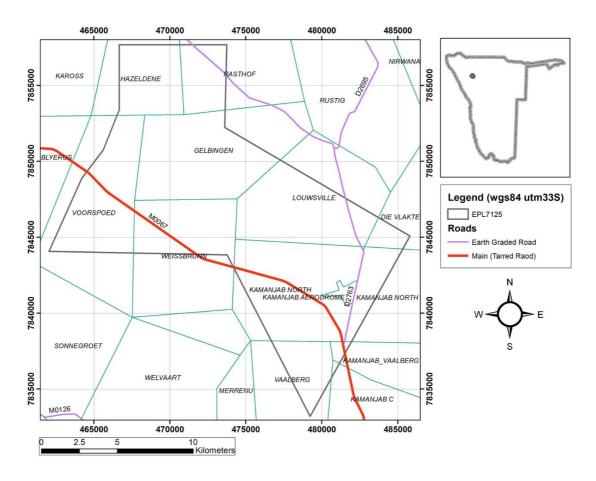


Figure 2-Project location and surrounding farms.

# 3.2 Proposed Exploration Activities

The proposed exploration activities will occur on EPL 7125, and it will include both Reverse Circulation (RC) and diamond drilling to about a 200 m depth. Soil and rock sampling will be conducted. Geological mapping, electromagnetic and geophysical surveys shall be conducted should there be a need, in accordance with the designed exploration program. If required, some vegetation may be cleared or thinned to create dirty roads to allow access to the targeted locations, however, existing tracks will be used as far as reasonably practical. The proposed exploration is anticipated to be conducted over 3 years.

## 3.3 Operational and Maintenance

#### 2.2.1 Labor Requirements

Approximately five (10) workers will be employed during the exploration phase, and they will be transported daily from Kamanjab town.

#### 2.2.2 Equipment and Material

Workers will be transported to and from the site using a double or single cap vehicle during the exploration phase. Materials such as sampling bags, compasses, beacons and geo hammers will be brought to the site. A drill rig truck will be brought to the site for drilling exploration holes, an excavator, as well as low delivery vehicles (LDVs) to transport exploration materials. About 100 litres of water for human consumption will be sourced from Kamanjab town and transported to the site daily and a water borehole will be drilled for exploration activities.

#### 2.2.3 Waste Management

Non-Hazardous waste will be generated throughout the process of exploration activities. The waste includes fugitive sand, fine dust, cleared shrubs and bushes. All solid waste will be collected off-site and disposed of at the nearest permitted landfill facility and no waste shall be discharged into the environment. The excavated material and cores drilled will be collected in bags and taken offsite for analysis and logging. Workers will make use of the toilet from Farm Gelbingen 630.

#### 2.2.4 Proposed Drilling Method for Exploration

To acquire the minerals from the ground and analyse the available commodities, Calculus Commodities (Pty) Ltd will be using two drilling methods known as Reverse Circulation (RC) and Diamond drilling. RC method of drilling uses dual wall drill rods that consist of an outer drill rod with an inner tube (Figure 3). These hollow inner tubes allow the drill cuttings to be transported back to the surface in a continuous, steady flow. Unlike diamond drilling, it compiles sample rock cuttings instead of rock core. The drilling mechanism is most often a pneumatic reciprocating piston called a hammer, which in turn is driving a tungsten-steel drill bit, specifically made to be able to crush hard rock.

The diamond drilling method is a precise, cost-effective form of core drilling used to create holes in a range of materials (Figure 4). Diamonds are embedded into hollow drill bits to ensure they can cut or drill through this material. The hollow drill shaft allows water to be pumped through the bit whilst drilling, providing effective cooling and dust suppression that makes diamond drilling one of the cleanest methods in construction.

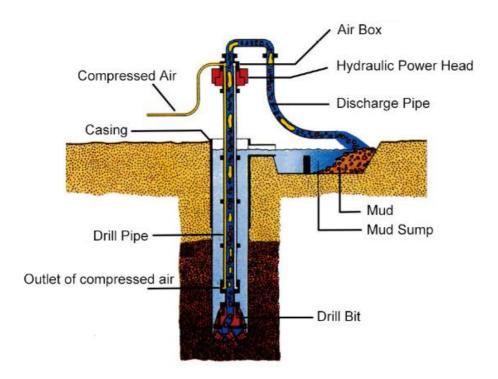


Figure 3 - Reverse Circulation Drilling Method (Epiroc, 2000).

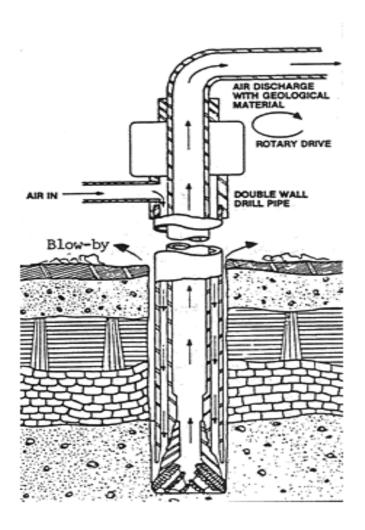


Figure 4 - Diamond Drilling method design (Earth Science, Australia, 1998).

### 3.4 Rehabilitation

Once the exploration activities have been completed, the EPL 7125 will be rehabilitated as per the competent authority procedures. The rehabilitation programme details will be defined as the project progress and shall be agreed upon with the landowners.

# 3.5 Site Access and Power Supply

The site is accessible by the existing tarred road C35 which cuts through Weissbrunn and Voorspoed farm to the western boundary of EPL 7125. Alternatively, the site can also be accessed via the district road (D2763) or which crosscut on the eastern boundary of the EPL 7125.

It is unlikely that the proposed project will require a power supply, however, if required, a mobile generator shall be used.

Environmental Scoping Assessment

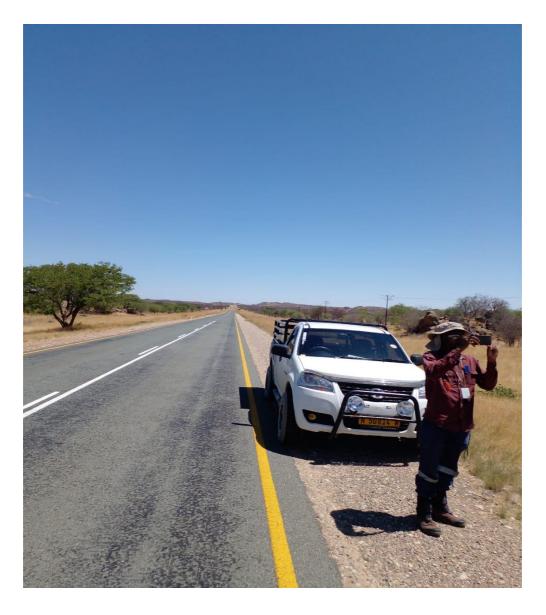


Figure 5-Access & Tarred road that cuts through EPL 7125.

# 4 ALTERNATIVES AND THE NO-GO OPTION

Alternatives are defined as: "different means of meeting the general purpose and requirements of the activity" (Environmental Management Act No. 7 of 2007 and its Regulations. The alternatives considered for the proposed mineral extraction are discussed in the following subchapters.

## 4.1 The No-Go Alternative

The "No-go" alternative is the option of not proceeding with the proposed exploration activities. Should the proposed project not proceed, the anticipated environmental impacts from exploration activities would not occur, but also the anticipated social and economic benefits will not occur, thus a missed opportunity that is supposed to contribute to the Namibian economy at large.

In considering the proposed activity, the no-go option is not a preferred option.

# 4.2 Conclusion on Weighed Alternatives

The following alternatives have been considered for the project. The preferred alternatives are summarized as follows:

No-go vs. continuation of the proposed project (exploration): Should the proposed project be discontinued; the government will not earn revenue from exploration activities; local people will lose out on the benefits that come with the project, including the geological data.

#### 5 BASELINE ENVIRONMENT

The conditions of the natural, cultural, social and economic systems and their interrelations of the receiving environment are detailed in this chapter. These include, but is not limited to climatic conditions, geology and soils, hydrogeology and water resources, fauna, flora, avifauna, socioeconomic, archeology and heritage sites within the vicinity of EPL 7125. The baseline environment is vital in predicting and evaluating potential environmental impacts of the proposed project before any development, by understanding the existing environmental conditions.

#### 5.1 Climatic Conditions

#### 5.1.1 Temperature

Climatic conditions may have a major influence on the ecology, including the geohydrology in the vicinity of EPL 7125. The climate condition within the vicinity of the proposed project is considered to be a local steppe climate. The average temperature of 22.1°C, with the mean maximum temperature exceeding 34°C per year.

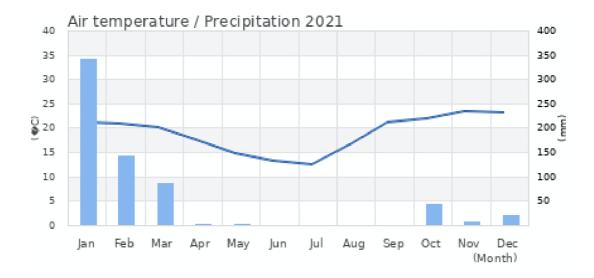


Figure 6-Temperature data for 2021 adopted from SASSCAL Weathernet, 2021.

## 5.1.2 Rainfall and Wind

The annual rainfall in this ecoregion range is from 250 mm to 300 mm. Over the years, it has been observed that most of the rain falls as thundershowers in the summer months, for example between October to March. However, there is great variation between years, with unpredictable rainfall.

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Wind in the EPL 7125 vicinity is relatively higher in the afternoon and evening between April and June.

# 5.2 Landscape, Geology and Soils

The nature of the landscape across the EPL 7125 is characterized by a combination of topography, geological processes and drainage network. The EPL 7125 is situated between the Owambo and Waterberg Basin surrounded by Otavi and Swakop group rock formation.



Figure 7- Natural view, landscape and common rocks within which EPL 7125 falls.

The Kalahari Sandveld which dominates the eastern and northern regions of Namibia is also common within the vicinity of the proposed project. The common sedimentary rock types within the vicinity of the EPL 7125 include, but are not limited to dolostone, limestone, diamictite, shale, sandstone and volcano-metamorphic rocks, for example, amphibolite. The area is surrounded by Petric Calsisols which are soils that contain Calcium Carbonate, with a solid layer at a shallow depth that remains hard even when wet. An ecoregion is also surrounded by minor Calcaric Regosols which are fine-textured soils also containing Calcium Carbonate material.

### 5.3 Hydrogeology and Water Resources

The EPL 7125 is located within the moderately productive aquifer and is situated in the Okavango Omatako Basin and the Ugab-Huab Basin, which is one of the largest basins that contains about 4500 m<sup>3</sup> average water volume per year. The EPL 7125 is situated in the ecoregion with moderately productive to the fractured aquifer, with boreholes that can supply water for domestic purposes, subsistence and small-to-large scale commercial farming.

# 5.4 Fauna species

EPL 7125 is located in the ecological region with low-to-medium diversity of reptiles, birds and mammals which are associated with the rocky escarpment. The most important species that are expected to occur in the proposed project include, but are not limited to *Pedioplanis undata* (Sand lizard), *Trachylepis sulcate* (Western Rock Skink), *Chondrodactylus turneri* (Turner's thick toed Gecko), *Bitis arientans* (Puff Adder), *Stigmochelys pardalis* (Leopard Tortoise), *Trachylepis binotata* (Ovambo Tree Skink), *Geosceurus inauris* (South African Ground Squirrel), *Madoqua kirkii* (Kirks Dik-Dik), *Caracal caracal* (Caracal), *Achaea catela* (Banded Achaea), *Amadina erythrocephala* (Red Headed finch), *Anthene amarah* (black-striped hairtail), *Scolopendra morsitans* (Red-headed centipede), *Phacochoerus africanus* (Common Warthog), *Danaus chrysippus* (Plain tiger or African monarch), *Crocuta Crocuta* (Spotted Hyena), *Struthio camelus* (Common Ostrich). The most important habitat is the rocky outcrops and drainage lines.

# 5.5 Flora Species

The EPL 7125 is located in the ecoregion with low vegetation cover and scattered bare areas of sparsely distributed trees as well as shrubs. Across the proposed project area, the vegetation varies from dwarf shrub savannah to grassland ecosystem. Tree species such as *Acacia mellifera*, *Acacia reficiens*, *Grewia flavescens*, *Crton gratissimus*, *Boscia albitrunca*, *Cyphostemma currorri and Colophospermum mopane* are common. Low-to-medium biodiversity within the proposed project vicinity is probably associated with changing climate or shift in climatic condition, poor nutrient levels and unpredictable rainfall.



Figure 8-Acacia Mellifera tree species in the area.

# 5.6 Avifauna

There are approximately 687 bird species currently recorded in Namibia of which 61 are considered to be vagrants. About 71% of species are recognized nationally as threatened or near-threatened Red Data Species (Simmons, Brown, & Kemper, 2015).

Approximately 201 – 200 bird species can be found within the proposed project vicinity.

# CALCULUS COMMODITIES (PTY) LTD

Table 2 Bird species that are likely to occur within the site area

Scientific Name	Common Name
Cinnyris mariquensis	Mariqua Sunbird
Pycnonotus nigricans	African Red-Eyed Bulbul
Pytilia melba	Green-winged Pytilia
Ploceus velatus	Southern Masked Weaver
Prinia flavicans	Black-Chested Prinia
Philetairus socius	Sociable Weaver
Amadina erthyrocephala	Red-headed Finch
Leptoptilos crumenifer	Marabou stork
Laniarius atrococcineus	Crimson-breasted Ganolek
Plocepasser mahall	White-browed sparrow-weaver
Turdoides gymnogenys	Bare-Cheeked Babbler
Ploceus velatus	Southern Masked Weaver
Pternistis adspersus	Red-billed-spurfowl
Tricholaema leucomelas	Acacia Pied Barbet
Polemaetus bellicosus	Martial Eagle

#### 5.7 Socio-Economic

Mining is considered to be the backbone of income generation, employment creation, contributing to government revenue and source of foreign direct investments for most developing countries like Namibia. This sector plays a vital role in the economic development of the country, for example, it has both social and economic benefits. It should however not be considered from one perspective of being a source of employment and income generation as it also can present social environmental and economic challenges such as water contamination loss of habitats (plants and animals), exposure of humans and wildlife to toxic materials, noise pollution etc. Namibia is viewed as an attractive mining and exploration investment destination in Africa ranking 6<sup>th</sup> position out of 15 in the year 2016 (Nambinga & Mubita, 2021).

## 5.8 Archeology and Heritage Sites

No rock art sites or declared heritage sites appear to be in the area reserved exclusively for mineral exploration at this stage of the project. However, in the event where a heritage site or items of heritage significance are found in the course of the exploration activities, then a chance finds procedure should be followed.

Some of the closest declared heritage site within the region includes, but are not limited to the Cultural Landscape (e.g., Brandberg Area - 012/1951) and Palaeontological (Petrified Forest - 004/1950).

# 5.9 Identified Potential Impacts

The following potential impacts have been identified and are summarized in Table 3. The assessments of the potential impacts are presented in the Impact Assessment Chapter 7.

**Table 3 Summary of Identified and Potential Impacts** 

Positive impacts  community will be employed to better their  s an important source of fiscal revenue and	Socio-economic improvement through employment creation and capacity building		
	and capacity building		
an important source of fiscal revenue and	Economic growth		
foreign exchange.	Economic growth		
Negative impacts			
ed exploration general waste, effluent	Soil, groundwater and surface water pollution		
ion workers will be exposed to mineral in machinery handling of materials and equipment may	Environment, health and safety risks		
i	Negative impacts  d exploration general waste, effluent on workers will be exposed to mineral m machinery		

	Incorrect use or lack of appropriate personnel protective equipment (PPE)	
	Fugitive sand and fine dust emission during exploration	
	Disruption to the surrounding community, e.g., some increase in noise levels resulting from exploration activities	
Waste management	Mineral exploration usually generates wastes that lead to environmental pollution, if not properly handled	Environmental pollution
Loss of Biodiversity	Extensive areas of land and vegetation are cleared or thinned, if required, thus resulting in animal habitat loss	Habitat disruption
Land use	Wildlife and livestock disruption from areas where activities are occurring	Wildlife and livestock disturbance and change disturbance or land-use change, illegal hunting and grievance
Heritage sites	Heritage sites resources undiscovered	Potential damage to the heritage site

#### **6 PUBLIC CONSULTATION**

Public Participation forms an important component of the Environmental Assessment process. It is defined by the Environmental Management Act No. 7 of 2007, as a 'process in which potential interested and affected parties are allowed to comment on or raise issues relevant to, specific matters. Communication with stakeholders about this proposed development was facilitated through the following means:

- Key stakeholders were identified as the Kamanjab village council, Kamanjab Rural
  constituency office, various Ministries (including Environment Forestry and Tourism
  Ministry of Agriculture, Water and Land Reform, Ministry of Defence and Veteran Affairs
  and Ministry of Mines and Energy). Their contact details were added to a stakeholders
  list. The stakeholders' list is attached as Appendix C of this report.
- A Background Information Document (BID) was compiled. It contained brief information about the project (Appendix D). The BID was forwarded to all relevant authorities and registered interested and affected parties (I&APs).
- Public notices were placed in the press in two (2) daily Newspapers being <u>Confidente</u> (12<sup>th</sup> 19<sup>th</sup> and 19<sup>th</sup> 25<sup>th</sup> November 2021) and <u>New Era</u> (11<sup>th</sup> and 18<sup>th</sup> November 2021), briefly explaining the proposed project and its locality, inviting the public to register as stakeholders (Appendix E).
- A public participation meeting was arranged and held on 27<sup>th</sup> November 2021 at Anns Lodge, Kamanjab and at least four (4) people from the area were present (Figure 9), and no issues were raised.



Figure 9 - Evidence of public meeting at Anns Lodge, Kamanjab

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## 7 IMPACT ASSESSMENT

The EIA was conducted in accordance with the Environmental Management Act No.7 of 2007 and the Regulations No. 30 of 2012. The process involves identifying, predicting, evaluating and mitigating the potential effects of a proposed project on the receiving environment.

This section describes the assessment and the potential impacts on the biophysical and socio-economic environments, which may occur due to the proposed project. These impacts on the biophysical and socio-economic environment were assessed and relevant mitigation measures have been proposed to reduce and/ or avoid negative impacts and enhance positive impacts. The potential impacts that have been identified and assessed for the proposed project include:

- Employment creation
- Increase in economic growth
- Minor waste management
- Minimal fugitive sand and fine dust emission
- Disturbance to the biodiversity e.g., minimal vegetation clearing or thinning
- Minor disruption to the surrounding community e.g., increase in noise levels
- Potential to unearth, damage or destroy undiscovered heritage remains

## 7.1 Impact Assessment Methodology

The identified impacts were assessed in terms of <u>probability</u> (likelihood of occurring), <u>scale/extent</u> (spatial scale), <u>magnitude</u> (severity) and <u>duration</u> (temporal scale). To enable a scientific approach to the determination of the environmental significance, a numerical value is linked to each rating scale. This methodology ensures uniformity and that potential impacts can be addressed in a standard manner so that a wide range of impacts are comparable.

It is assumed that an assessment of the significance of a potential impact is a good indicator of the risk associated with such an impact. The following process will be applied to each of the identified potential impacts:

- Provision of a brief explanation of the impact;
- · Assessment of the pre-and post-mitigation significance of the impact; and
- Description of recommended mitigation measures.

The recommended mitigation measures prescribed for each of the potential impacts contribute towards the attainment of environmentally sustainable operational conditions of the project for various features of the biophysical and social environment. The following criteria were applied in this impact assessment:

## **Extent (spatial scale)**

Extent is an indication of the physical and spatial scale of the impact. Table 4 shows rating of impact in terms of extent of spatial scale.

Table 4 Extent or spatial impact rating

Low (1)	Low/Medium (2)	Medium (3)	Medium/High (4)	High (5)
Impact is	Impact is beyond	Impacts felt	Impact	Impact extends
localised within	the site	within adjacent	widespread far	National or over
the site	boundary: Local	biophysical and	beyond site	international
boundary: Site		social	boundary:	boundaries
only		environments:	Regional	
		Regional		

## **Duration**

Duration refers to the timeframe over which the impact is expected to occur, measured in relation to the lifetime of the project. Table 5 shows the rating of impact in terms of duration.

**Table 5 Duration impact rating** 

Low/Medium (2)	Medium (3)	Medium/High (4)	High (5)
Impact is quickly	Reversible over	Impact is long-	Long term;
reversible, short-	time; medium-	term	beyond closure;
term impacts (0-5	term (5-15 years)		permanent;
years)			irreplaceable or
			irretrievable
			commitment of
			resources
	Impact is quickly reversible, short-term impacts (0-5	Impact is quickly Reversible over reversible, short-term impacts (0-5 term (5-15 years)	Impact is quickly Reversible over Impact is long- reversible, short- time; medium- term impacts (0-5 term (5-15 years)

## Intensity, Magnitude / severity

Intensity refers to the degree or magnitude to which the impact alters the functioning of an element of the environment. The magnitude of alteration can either be positive or negative. These were also taken into consideration during the assessment of severity. Table 6 shows the rating of impact in terms of intensity, magnitude or severity.

Table 6 Intensity, magnitude or severity impact rating

Type of			Negative		
criteria	H-	M/H-	M-	M/L-	L-
	(10)	(8)	(6)	(4)	(2)
Qualitati	Very high	Substantial	Moderate	Low	Minor deterioration,
ve	deteriorati	deterioration	deterioration,	deteriorati	nuisance or
	on, high	, death,	discomfort,	on, slight	irritation, minor
	quantity of	illness or	partial loss of	noticeable	change in
	deaths,	injury, loss of	habitat/biodiver	alteration	species/habitat/dive
	injury of	habitat/diver	sity or	in habitat	rsity or resource, no
	illness /	sity or	resource,	and	or very little quality
	total loss	resource,	moderate	biodiversit	deterioration.
	of habitat,	severe	alteration	y. Little	
	total	alteration or		loss in	
	alteration	disturbance		species	
	of	of important		numbers	
	ecological	processes			
	processes,				
	extinction				
	of rare				
	species				

## **Probability of occurrence**

Probability describes the likelihood of the impacts occurring. This determination is based on previous experience with similar projects and/or based on professional judgment. See Table 7 for impact rating in terms of probability of occurrence.

Table 7 Probability of occurrence impact rating

Low (1)	Medium/Low (2)	Medium (3)	Medium/High (4)	High (5)
Improbable; low likelihood; seldom. No known risk or vulnerability to natural or induced hazards.	Likely to occur from time to time. Low risk or vulnerability to natural or induced hazards	A possible, distinct possibility, frequent. Low to medium risk or vulnerability to natural or induced hazards.	Probable if mitigating measures are not implemented. Medium risk of vulnerability to natural or induced hazards.	Definite (regardless of preventative measures), highly likely, continuous. High risk or vulnerability to natural or induced hazards.

## **Significance**

Impact significance is determined through a synthesis of the above impact characteristics. The significance of the impact "without mitigation" is the main determinant of the nature and degree of mitigation required. As stated in the introduction to this chapter, for this assessment, the significance of the impact without prescribed mitigation actions was measured.

Once the above factors have been ranked for each potential impact, the impact significance of each is assessed using the following formula:

## SP = (magnitude + duration + scale) x probability

The maximum value per potential impact is 100 significance points (SP). Potential impacts were rated as high, moderate or low significance, based on the following significance rating scale - Table 8 below.

**Table 8 Significance rating scale** 

SIGNIFICANCE	ENVIRONMENTAL SIGNIFICANCE POINTS	COLOUR CODE
High (positive)	>60	Н
Medium (positive)	30 to 60	M
Low (positive)	<30	L
Neutral	0	N
Low (negative)	>-30	L
Medium (negative)	-30 to -60	M
High (negative)	>-60	Н

For an impact with a significance rating of high, mitigation measures are recommended to reduce the impact to a low or medium significance rating, provided that the impact with a medium significance rating can be sufficiently controlled with the recommended mitigation measures. To maintain a low or medium significance rating, monitoring is recommended for some time to enable the confirmation of the significance of the impact as low or medium and under control.

## 7.2 Potential Impacts Assessment

The assessment of the potential negative impacts and their mitigation measures are presented under the following subchapters. Some mitigation measures will be provided under the relevant (assessed) component and the full management action plans will be provided under the Environmental Management Plan (Appendix G).

## **Socio-Economics Impact**

The socio-economic impacts of the proposed project on the received environment are of minor impact. Minor fugitive sand and fine dust emission will be produced from the drilling machines and the exploration process, which are likely to disruption in the surrounding area. However, the proposed project has the potential of improving the local community living standard through direct employment creation, investment and capacity building.

Table 9 Assessment of Exploration Activities on the Socio-Economics

	Extent	Duration	Intensity	Probability	Significance
Pre- mitigation	L/M - 2	M - 3	M - 6	M/H - 4	M - 52
Post- mitigation	L/M - 2	L/M - 2	L//M - 4	L/M - 2	M - 50

## <u>Mitigation measures of minimizing the negative impact of exploration on the socio-</u> economics

- Goods and services should be sourced locally as practical as possible;
- · Promote the use of small and medium enterprises;
- Capacity-building strategies and programmes should be in place before exploration activities to maximise the use of the local labour force;
- The local community should be considered first for the available employment opportunity, especially for the unskilled workers;
- Assist and promote local authorities to diversify their economic activities;
- Establish and maintain a complainant register, to document all complaints and make efforts to address the area of concern
- Plant and equipment should be well-maintained and fitted with the correct and appropriate noise reduction measures.

## **Impacts from Waste Generation**

The proposed project usually general wastes of all kinds, however, the current phase have minimal waste generation.

Table 10 Assessment of exploration activities on waste generation

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M - 3	L/M - 2	M - 6	M/H - 4	M – 44
Post mitigation	L/M - 2	L/M - 1	L/M - 4	L/M - 2	L - 16

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## Mitigation measures of minimizing the impact on waste generation

- Workers should be sensitized to dispose of waste responsibly and not to litter.
- All domestic and general operations waste produced daily should be contained until such that time it will be transported to the approved designated waste facilities.
- If applicable, hazardous waste should be properly handled, stored and disposed of at the nearest authorized waste sites.
- No waste should be buried or burned on-site or anywhere else throughout the project lifecycle.
- Appropriate waste bins shall be placed at designated places.

## **Health and Safety**

Even though the potential impacts from exploration activities are deemed to be of low significance, when handling machinery and equipment during the operations, workers may be exposed to health and safety risks, such as injuries. The impact can be rated as medium significant if no mitigation measures are implemented, but upon implementation, the impact will be of low significance if personnel protective equipment is employed as mitigation measures below.

Table 11 Assessment of exploration activities on health and safety

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	L/M - 2	L/M - 2	M - 6	M/H - 4	M - 44
Post mitigation	L - 1	L/M - 2	L/M - 4	L/M - 2	L - 16

## Mitigation measures of minimizing the impact health and safety

- The site should be equipped with a security control gate, once in operation. This is to limit restrict access to authorised personnel only.
- As part of their induction, the workers should be provided with awareness training of the risks of mishandling equipment and materials on site.
- When working on-site, employees should be properly equipped with personal protective equipment relevant to the type of work they are doing on-site.
- No employee should be allowed to drink alcohol before and during working hours as this may lead to mishandling of equipment which may lead to injuries and other health and safety risks.

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• Employees should not be allowed on-site if under the influence of alcohol.

## Impact on Land-use and Biodiversity

The project works may potentially put pressure on the existing roads when project materials and goods are delivered to and from the site. The presence of the project will potentially increase traffic and workers in the area, resulting in the disturbance of biodiversity, and possible illegal hunting and grievances. However, if the mitigation measures are implemented, as per the assessment, the impact will be of low significance.

Table 12 Assessment of the impacts of exploration land-use and biodiversity

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M - 3	L/M - 2	M - 6	M/H - 4	M – 44
Post mitigation	L/M - 2	M- 3	L/M - 4	L/M -2	L - 18

## Mitigations and recommendations to minimize the impact on land use and biodiversity

- Stakeholder engagement should be implemented throughout the exploration program, especially with the surrounding landowners and other relevant stakeholders.
- A written agreement to access the property for the landowner should be in place before the work commences in their area.
- All complaints, including verbal, should be recorded into the complainant register and resolved within a reasonable time frame.
- All the project personnel should attend the site induction before they start working, and they should have their identification card.
- Develop a policy that limits independent movements of all workers into the veld that could create suspicion of poaching. Strictly prevent poaching, harvesting and making fire, including the collection of firewood, or possession of any such natural materials.
- Project vehicles should not park by the roadside, but on designated sites within the farm where they cannot interfere or pose danger to other road users.
- The designated site access roads provided shall be used as practical as possible.
- No heavy trucks or project related vehicles should be parked outside the project footprint.

 Control traffic movement on site, deliveries and collection of goods and waste to and from the site, for example, movement can be restricted during weekdays between the hours of 08h00 and 17h00.

## Impact on Heritage Site

There are no archaeological sites identified within the project area, therefore the exploration activities are not expected to have any implications in terms of the National Heritage Act.

Table 13 Assessment of the impacts of exploration on heritage sites

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M - 3	L/M - 2	M - 6	M/H - 4	M – 44
Post mitigation	L/M - 2	M- 3	L/M - 4	L/M -2	L - 18

## Mitigations and recommendations to minimize the impact of heritage sites

- In case heritage sites or items of significance are found in the course of the exploration activities, a chance finds procedure should be followed.
- Work should stop immediately, and the National Heritage Council should be informed as soon as possible.

## 8 RECOMMENDATIONS AND CONCLUSIONS

The purpose of this report is to present the findings for the EIA and EMP of the proposed exploration activities of base and rare metals, dimension stones and precious metals to the competent authority as part of the application for an Environmental Clearance Certificate. The competent authority will review the predicted impacts and associated management actions required to avoid, minimise or mitigate the negative impacts; or to enhance the benefits of the proposed project.

The environmental assessment process has not identified significant social and environmental impacts resulting from the proposed exploration activities. Further analysis has identified social and environmental impacts which includes, but are not limited to employment creation; increase in economic growth, minor waste management, minimal fugitive sand and fine dust emission, disturbance to the biodiversity and the surrounding community. However, by using the best practice and mitigation measures as identified to avoid and reduce the impact as far as reasonably practical, the effects on the social and environment were deemed not significant, localised and of short duration.

On this basis, it is the opinion of Green Team Consultants that an Environmental Clearance Certificate could be issued, with conditions attached that the management and mitigation measures as set out in the EIA and EMP are implemented and enforced at all times.

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## APPENDIX A: CV'S OF TITUS SHUUYA & SAKARIA HIVULWA NALUSHA

## 1. Personal information

Name: Titus Surname: Shuuya

Postal Address: P O Box 931, Oshakati

Residential address: erf 32, Jan Jonker, Klein Windhoek

Nationality: Namibian
Gender: Male
Marital Status: Single
Health: Good
Date of Birth: 14/04/1983
Identity number: 83041410117

Driving License code: B

Mobile Number: 0853013777

Email Address: <u>titus.shuuya@gmail.com</u>

Career objective: To develop effectual processes of gathering

disseminating and implementing the understanding of forest resources, to ensure sustainable forest

management.

## 2. Education background

Master of Science in Natural Resources Management Feb 2014 - Oct 2016

Namibia University of Science and Technology

Major subjects: Natural Resources Management and Plant physiology

Bachelor of Science in Environmental Science Feb 2008 – Apr 2013

University of Namibia

Major subjects: Agroforestry, Conservation Biology, Plant physiology, Natural

Resources Policy, Laws and Conventions, Research Methods I&II, Environmental science, Population and community ecology, Ecology, Natural Resource Economics, Eco-physiology, Environmental Assessment, Geo-informatics, Impact Climatology and Hydrology, Wildlife ecology, Community Based Resources Management, Environment Natural Development, Watershed management, Rangeland

management, Environmental Pollution and Control

National Diploma in Agriculture

Feb 2002 - Apr 2005

Ogongo Agricultural College

Major subjects:

Field crop production, Vegetable and fruit production, Ecology, Land Use Planning, Soil and water management, Sustainable resource management, Irrigation and drainage, Communications and information systems, Animal production and breeding,

Animal health.

## 3. Work experience

## **Senior Environmental Practitioner & Consultant**

Aug 2019 - current

**Environmental Compliancy Consultancy** 

- Conduct environmental impact assessment (EIA);
- Compliance auditing;
- Collect, record and interpret data and report writing;
- Participate in the environmental requirements of projects, including licences, permits, approvals, environmental monitoring and reporting;
- Participate in environmental components of projects including environmental management plans, scoping reports, public participation processes water quality monitoring and reporting, rehabilitation and landform management plans for progressive rehabilitation, air quality and noise data;
- Ensure compliance with relevant legislation.

## Senior Researcher

Apr 2012 - Jul 2019

Gobabeb Research and Training Centre

- Managing all planning and logistical implementation of field projects, particularly with reference to the Biodiversity Research and Monitoring Program;
  - Collection of data for specific projects;
  - Develop long-term monitoring program for the mine as stipulated within their environmental management plan;
  - Maintenance of all field equipment, including vehicles and electronic or other measuring instruments;
  - Develop and implement the field safety program;
  - Use the database to design projects;
  - Interact with industry and government and influence science and conservation policy and practice.

## **Ecologist consultant**

Dec 2015 – Apr 2016

Cheetah Conservation Fund of Namibia (CCF)

- Assist in all aspects of CCF's ecology research;
- Coordinate the de-bushing project (BUSHBLOK) harvest activities and horticulture activities;
- Assist CCF staff and interns with project planning and data analysis;
- Assist in writing scientific publications, research proposals, and grant applications.

Intern Feb 2012 – Jun 2012

Gobabeb Training and Research Centre

 Independently planned a scientific research, collected, managed and analysed data plus scientific report writing and results presentation.

Intern Nov 2011 – Jan 2012

Desert Research Centre of Namibia/Gobabeb Research and Training Centre

- Vegetation monitoring: The baseline study for the riparian vegetation monitoring programme for the Strategic Environmental Management Plan (SEMP) in the Swakop and Kuiseb Rivers (2013), unpublished.
- Auala, H., Cloete, C., Gottlieb, T., Haimbili, E., Hembapu, N., Kabajani, M., Ndjamba, J., Shekunyenge, A., Shipani, H. & Shuuya, T. 2012. An analysis of the environmental and socioeconomic impacts of Prosopis in the Auob and Nossob Basins, Namibia (Summer Land Care Programme II). Desert Research Foundation of Namibia & Gobabeb Research & Training Centre, Windhoek & Gobabeb.

## 5. Other professional skills & experience

- Familiar with the FSC Forest Management Standard, the requirements of the standard and the associated auditing processes, The FSC National Forest Stewardship Standard for the Republic of Namibia.
- Presented at five international (South Africa & Israel, 2014-2016) and two in two national conferences.
- Off-road driving training with more than 8 years driving experience.

Computer applications: I am proficient in using: Windows (all versions), Microsoft office, Internet Explorer, ArcGIS 12 and Quantum GIS (QGIS) for geospatial analysis and mapping tools, SPSS, Statistica and SigmaPlot for statistical analysis.

Spoken languages:EnglishOshindongaOtjihereroAfrikaansSpeaking level:ExcellentExcellentgoodpoorWriting level:ExcellentExcellentpoorpoor

## 6. Hobbies and Interest

Learning and exploring new research skills. Travelling and viewing the nature. Playing volleyball.

## 7. References

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- 615 Chief Mandume Street, Okuryangava, Windhoek

## **BACKGROUND & OBJECTIVES**

Co-founded Green Team Consultants, a consulting firm based in Windhoek which specializes in "Groundwater Investigations, Sustainable Water Treatment technologies, Urban & Rural Planning (Land-Use Planning), Water & Energy efficiency management, Climate Change Advisory services and Marine Specialized Studies". Under his leadership as Managing Partner (Technical Services and Strategic Development), his places Green Team Consultants to compete at a national level for businesses and deliver beyond client exceptions with speed, agility and integrity. I am looking for intellectual stimulation in today's world driven by knowledgebased economy, continuous learning, visioning and innovations. The realities of globalization compel me to think beyond regional boundaries and be aware of the role of businesses as a solution to social and economic challenges. I take cognizance of the fact that businesses and organizations compel us to be creative in order to sustain humanity welfare.

## **EXPERIENCE**



## **Managing Partner**

Green Team Consultants 2015 – to date

Managing Partner - To position the firm to compete and participate in business on a competitive level and develop strategic partnership that will enhance the footprint and the growth of the company. To ensure that all works and projects are delivered with high standards, on time and within the projected budget.

## Selected Projects

Project Management-Water

- Borehole siting, drilling, pump testing and water solar pump systems for Mangetti National Park-MET.
- Borehole siting, drilling, pump testing and water solar pump systems for Omauni Public Health Clinic-Ministry of Health and Social Services.
- Geohydrological surveys , drilling supervision of boreholes in //Karas region for the Division of Water Supply and Sanitation-MAWF.
- Environmental Impact Assessment and Management Plan for Water Extraction Permit-Jonkheer Boerdery (Pty) Ltd.
- Geotechnical Investigations for the Township development - Orangemund Town Council.

Project Management-Marine

 Baseline Benthic Study Specialist Study for the National Oil Storage Facilities in Walvis Bay-Ministry of Mines and Energy/Om'kumoh AlJ Consulting Engineers.

Project Management-Land Use Planning

 Integrated Regional Land Use Plan(IRLUP) for Omusati Region-Ministry of Land Reform.

## **Data Analyst**

Puma Energy International B.V (Namibia) 2014 – 2015

- Data Capturing, Data Analysis
- Mathematical Modelling
- · Gain and Loss Calculation of Transported Fuel
- Report Writing

### Founder

Integral Communications CC 2014 – to date

 Develop Concepts and Ideas for that are patented for the development of Integral Communications products.

## Intern Geologist

Otjozondu Mining (Pty) Ltd 2009 - 2010

- Geological Mapping and Report Writing,
- Core logging and Maps Interpretation,
- Core Drilling Supervision.

## **EDUCATION**



**Bachelor Of Science** (Geology, Mathematics, Physics) 1st class degree

Osmania University - Hyderabad, India

Certificate: Micro, Small And Medium Enterprises Development Finance

Frankfurt School Of Finance & Management Germany

## **SKILLS**



- QGIS
- ArcGIS
- AQTESOLV
- Project Management
- Express Accounts Accounting

## **LEADERSHIP**



## **Founding President**

Namibia Students Association In India (NSAI)

## **LANGUAGES**



- English (fluent)
- Oshiwambo (native)
- French (beginner)

## **PUBLICATIONS**



Laird MC, Hutchings K, Nalusha SH and Clark BM. 2018. Baseline Study of the Benthic and Rocky shore Biodiversity for the New Oil Receiving Jetty in the SADC Gateway Port Area in Walvis Bay

## **PATENTS**



**Silent Security Guard (Patent No.17 of 1923)**: Social initiative invention that reports Gender Based-Violence in silence by pressing a panic-button on a USB-sized device.

Registered with Ministry of Trade and Industry

## **MEMBERSHIPS**



Namibia Water Partnership (NWP), No. INST013

## **AWARDS**



### **Business**

Namibia Business Innovation Institute (NBII) Business Plan Award -2014

### **Business**

Namibia Business Innovation Centre (NBIC) Business Idea Award -2013

## Scholarship

Indian Council for Cultural Relations (ICCR) Scholarship Award-2010

## REFERENCES



## Mr. Henry A Beukes

Chief Hydrologist

Water Supply and Sanitation: Ministry of Agriculture,

Water and Land Reform

Government Office Park, Luther Street

Tel: +264 61 2087316 Cell: +264 811 599157

Email: beukes.henry@mawf.gov.na

## Mr. Kondwanie Frank Chirembo (Pr.Eng)

Senior Structural Engineer

Om'kumoh Consulting Engineers

44 Hebernstreit Street, Ludwigsdorf, Widhoek

Tel: +264 61 308106

Email: kondwanie@omkumohaij.com.na

## Dr Barry Clark (Pr.Sci.Nat)

Director

Anchor Environmental Consultants (Pty) Ltd 8 Steenberg House, Silverwood Close, Tokai Cape Town

Tel: +27 21 701 3420

Email: barry@anchorenvironmental.co.za

## Mr. Born-Bright Muleke

Chief Land Use Planner& Project Manager Ministry of Agriculture, Water and Land Reform 55 Robert Mugabe Avenue, Windhoek

Tel:+264 61 2965000 Cell: +264 811 250696

Email: Born.Muleke@mlr.gov.na

## APPENDIX B: PERMISSION TO ACCESS THE FARMS



## MINISTRY OF DEFENCE AND VETERANS AFFAIRS

Tel: 061) 296 3000 Fax: (061) 305937 Enq: Ms. G.Malwa Private Bag 13407, Hoanib Building, Independence Ave.

Ref: 13/1/1/6

Mr. N. Elias Sipunga Managing Partner Calculus Commodities (Pty) Ltd P.O. Box 1504, Tsumeb 24 August 2021

SUBJECT: APPLICATION FOR CONSENT TO ACCESS FARM GELBINGEN 630, REGISTRATION DIVISION "A", KUNENE REGION

- 1. Your letter dated 19th August 2021 bears reference.
- 2. Ministry of Defence and Veterans Affairs (MODVA) hereby informs you that your request for consent to access Farm Gelbingen 631, Kunene Region, Reg. Div. "A" for the purpose of conducting environmental, social and mineral exploration studies has been granted and approved with the following conditions:
  - a) The project is operated in accordance with the Minerals (Prospecting and Mining) Act No 33 of 1992;
  - b) The project is operated in a ecological manner and in case of overlap, compliance with Sec 69 (EPLs) should be highly considered;
  - c) A valid environmental clearance certificate should be obtained from the Ministry of Environment and Tourism.

The Ministry wishes you the best with your project operations.

Yours Sincerely,

Dr. Wilhelmine Shivute

EXECUTIVE DIRECTOR

2021 -08- 2 4 THE

Environmental Scoping Assessment

## CALCULUS COMMODITIES (PTY) LTD

## APPENDIX C: LIST OF INTERESTED AND AFFECTED PARTIES

Date	Stakeholder Type	Farm Name	Title	Surname	First Name	Address	Interest/Ho w stakeholder is affected by Project	Potential Influence on Project	Level of Engagemen t (Inform, Consult, Involve, Collaborate, Empower)	Methods of Engagemen t	Engagemen t Schedule
09/11/2021	Directly Affected	FARM GELBINGEN	Dr	Wilhelmine	Shivute	Oanib building, Indipenden ce Ave, Windhoek	Land Owner	Land Access	Inform/Con sult	Newsletter, meetings, door knock, letter drop, open day, observation area, newspaper	As often as required / requested by landowner
27/11/2021	Directly Affected	REMAINING PORTION OF KAROSS(KN OWN AS HAZLDENE) NOW CALLED EKONGO	MR	KREINER	HUBERFUS	149 Kamanjab	Land Owner	Land Access	Inform/Con sult	Public Meeting	As often as required / requested by landowner
27/11/2021	Directly Affected	LOUWSVILLE	Mr	ALBIE	THOMAS		Land Manager	Land Access	Inform/Con sult	Public Meeting	As often as required / requested by landowner
27/11/2021	Indirectly Interested or Affected	FARM BENLAH	Mr	ВАСН	von H		Land Owner	Opportunity to provide local support for project	Inform/Con sult	Public Meeting	As often as required / requested by landowner
20/11/2021	Directly Affected	FARM GELBINGEN (A)	Mr	IPINGE	HOPELONG		Land Owner	Land Access	Inform/Con sult	Newsletter, meetings, door knock, letter drop, open day, observation area, newspaper	As often as required / requested by landowner
20/11/2021	Directly Affected	FARM GELBINGEN( B)	Mr	KENNE			Land Owner	Land Access	Inform/Con sult	Newsletter, meetings, door knock, letter drop, open day, observation area, newspaper	As often as required / requested by landowner
20/11/2021	Directly Affected	WEISSBRUN N	Mr		Detlef		Land Manager	Land Access	Inform/Con sult	Public Meeting	As often as required / requested by landowner

## **ENVIRONMENTAL & SOCIAL IMPACT** ASSESSMENT(ESIA)

**Background Information Document (BID)** 

**ENVIRONMENTAL & SOCIAL IMPACT** ASSESSMENT FOR THE EXPLORATION **ACTIVITIES OF BASE AND RARE METALS.** DIMENSION STONE AND PRECIOUS METALS ON EXCLUSIVE PROSPECTING LICENSE(EPL) 7125, OUTJO, KUNENE REGION

November 2021



## PURPOSE OF THIS DOCUMENT

This Background Information Document (BID) is to provide the Interested and Affected Parties (I&APs), with background information regarding the application for Environmental Authorisation for the exploration activities of base and rare metals, dimension stone and precious metals on EPL 7125, Outjo, Kunene Region (Figure 2). This also includes the required environmental studies to be undertaken as per the Environmental Management Act of 2007 and its regulations of 2012.

As information-sharing platforms, the basis of the public participation process offers I&APs the opportunity to become actively involved, to ensure that all potential environmental issues are considered within the context of the proposed development.

This document indicates how I&APs can get involved in the project, receive information or raise issues of concern and or interest. Any person, company, authority or other entities that might be directly or indirectly affected by the proposed activity can register as an I&APs to:

Green Team Consultants Physical Address: Pasteur Street, No: 59 Windhoek West, Ground Floor Unit 2, Office 1 Email: geo@grncons.com Tel: +264 81 4654842/ +264 85 2225600

### PROJECT DESCRIPTION

Green Team Consultants have been appointed by Calculus Commodities (Pty)
Ltd (the proponent) to conduct an Environmental Impact Assessment (EIA) for the exploration activities of base and rare metals, dimension stones and precious metals on EPL 7125, Outjo, Kunene Region.

Calculus Commodities (Pty) Ltd is a private research and development firm dedicated to researching and investing in commodity markets. Calculus Commodities (Pty) Ltd has identified an opportunity to explore activities of base and rare metals, dimension stone and precious metals on EPL 7125, Outjo, Kunene region. The proposed project shall act as a source of . . . . . local employment creation as well as contribute to regional, national and international economic growth.

## **BIO-PHYSICAL ENVIRONMENT**

Outjo is located 157 km south-east of Kamanjab in the Kunene Region, with a population of about 8445 inhabitants.

Outjo and Kamanjab are situated on a cluster of low hills at an elevation of 1260 meters. It also lies in an arid region that has accessible underground water supplies and has the character of a front tire outpost. Temperature ranges from 20-22 Degree Celsius with a dominant wind from the south-east.

The nature of the landscape across the EPL 7125 is characterized by a combination of topography, geological processes and drainage network, crosscutting the Kamanjab Plateau and Karstveld ecoregions. Soils within the area differ within each ecoregion, which can be characterized as litholithic, sandy loams, deep, red, sandy with some calcareous and silty in some areas with low-to-medium soil fertility

## POTENTIAL ENVIRONMENTAL IMPACTS

Potential environmental impacts associated with the proposed development have been preliminary studied and will be assessed in the EIA, these are as follows:

- Employment creation;
- Minor waste management;
- Minimal fugitive sand and fine dust;
- Minimal vegetation clearing or thinning;

- Potential to unearth, damage or destroy undiscovered heritage remains;
- Minor disruption to the surrounding community,
   e.g., some increase in noise levels.

## ESIA PROCESS

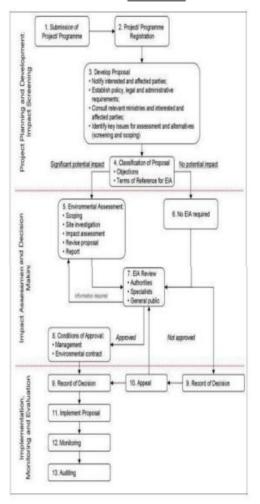
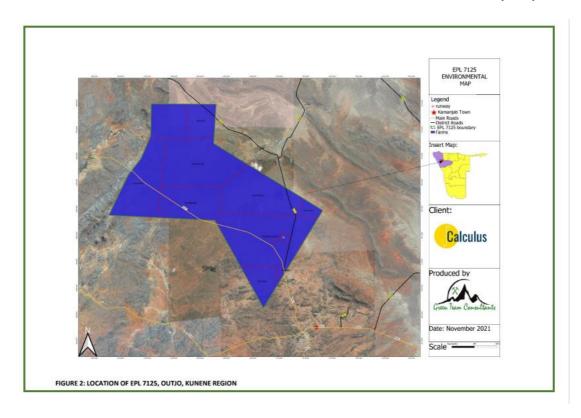


Figure 1. ESIA Process

## **CALCULUS COMMODITIES (PTY) LTD**





Office No.2 Ground Floor, Erf 3128 No.59 Pasteur Street Windhoek WestTel: +264 852225600 Cell: +264 81 465 4842 Email: geo@grncops.com

Email: geo@grncons.com P.O.BOX 997039 Maeura Mall Windhoek

## REGISTRATION AND COMMENTS SHEET

ESIA PROCESS FOR THE FOR THE EXPLORATION ACTIVITIES OF BASE AND RARE METALS, DIMENSION STONE AND PRECIOUS METALS ON EPL 7125, OUTJO, KUNENE REGION.

KINDLY COMPLETE THIS FORM AND RETURN IT TO THE ABOVE ADDRESS:

Title:	
Name of Respondent:	
Organisation/ Company (if applicable):	
Postal Address:	
Telephone Number:	
Mobile Number:	
Email address:	
Nature of interest:	
Any other comments/ concerns:	



## Vatungimo moOpuwo kavagwene nonzapo devhu

OPUWO – Konyara vatungimo wokusika ko 270 korukanda vana kutumbura asi VIP moOpuwo momukunda horowero gwaKunene momapeu gana puko kavagwene umbangi wonzapo zina kulikida asi awo venya mavango ogo, bnzapo kagaverere mukurona godoropa, Rosa Mbinge-Tigundo.

Rosa Mbinge-Tjeundo. Mosiruwo nye oso sokugava nonzapo, mukurona godoropa kadiworoklesere vatungimo asi vahepa kutakamesa evango eli likare lina zere ntani likare nompora, omu navakara asi egwanekero lyawo nekuliko doropa

lyahepa kukara lina kwata moyitji monomvhura odo dina kuwiza, nokuvahundira asi nampili

lyahepa kukara lina kwata moyitji monomvhura odo dina kuwiza, nokuvahundira asi nampili nakauke vaharandesa evhu lyawo eli.

Age katente asi navenye owo vana gwana nonzapo dawo vahepa kutameka kufuta evhu olyo, yipo ekuliko likare moomu lyawapera. Ose tuna lituramo mokuwapukurura evhu nononzira ntani simpe kuna kutundindira tufute evhu eli. Evhu eli ngesi lyeni, ngesi mwahepa nye kutameka kudika mambo geni nye pomuhowo twahepa kulifutira evhu eli, yimo ana kugwedako ngoso.

Apakahuyungireposilikasooso, munasipundi gondango zodoropa zaOpuwo, Licius Kaare Mupya nage simpe kadiworokesere vatungimo asi evhu vahalihakana, morwa kuna kara ngesi megendeso lyovakansela vagave evhu yipo nye vantu vahepa kukara nomukaro gokundindira.

Mupya simpe kahundilire vatungimo asi vahepa kuzogera momunene, omu navaliyonga yipo vagwane uzera yipo asi vahaligusira veta pwavene, omu nayikaninkisa vakaligusira evhu pwavene. Gumwe govagwanenimo uwa, ifenzikani Tixinda.

evhu pwavene. Gumwe govagwanenimo uwa, Tjazukauni Tjivinda, katanterere Nampa asi awo vana tambura ekuliko lyangesi, eyi yakara asi nare twagusa kuyindindira. -Nampa

# Munangereka kagusirepo ehundiro lyendi lyongenderera

**▼** UMWE gadivikwa muhudisi Jackson Babi nkera kagusirepo ehundiro lyendi lyopangenderera eli gatuliremo muhahende gwendi Kadhila Amoomo kompanguro zekeguru sivike esi sina puko omu gahundilire asi ngano

puko omu gahundilire asi ngano

puko omu gahundilire asi ngano vahamukwata ntani vahaza vakakona kone embo lyendi nalinye morwa tayikara ngwendi kapisi paveta.
Siruwo tupu sooso ana kugava muhahende Harald Geier ndi ana kuza asi apurakene koumbangi, Amoomo yige katuliremo ehundiro olyo, lyokutanta asi mukaro ntani yokugava komupanguli ntoni, vaporosi vaNamibia ntani mupanguli sonotambo ozo ntani mupanguli gopontambo ozo zomukunda gwaGobabis, ava kavatente asi kapi tavatambura noureru ehundiro lyangoso. Mkululi Khupe ntani Nixon Marcus ava kavakere asi awo kuna

karerepo malimburuli mokukwama ntumwaraka zomupanguli ntoni. Babi kahere asi makonakono aga vatuliremo kanere asi makonakono aga vatuiremo ndi varugene vakarerapo makona kono momazuva 28 Kudumonkuru vagatarurure nokugatulira ntere. Age simpe kahere asi ngendeseso ezi kavaruganesere vapanguli womoGobabis vazitulire ntere ntani

womoGobabis vazitulire ntere ntani womoGobabis vazitulire ntere ntani omu kavagendere vamukwate nayo vahepa kuyigusapo morwa kapi yina kuliza nediveta Iyosirongo. Age simpe kahere asi ngendeseso omu vana kumugusa mononkwate ntani veta ezi zina kuyapulisira vamukwate unene moVenduka kukwama omu mupanguli Samuzala Samuzala kapi kayiwepe. Mokiukwama mwendi, ekwato bendi ntani makonakona kayarusene

lyendi ntani makonakono kavarugene membo lyendi kapi yina kutanta Yuma, morwa kapi kayisikiremo asi pontambo zokugazara asi age mulingilingi noveta zoukorkotji kapi kavazikweme.

Babi nomugazarera mukwawo Friza Naululu Dumeni, ava kava kere asi nawo vamwe mowo ntantatu kavakwete mokwedi kwaKudumonkuru morwa mokwedi kwaKudumonkuru morwa kavakere nonombinga dasimpanda, awo kuna batamba eseso kupira kusikisamo kukeverera veta zokutakamesa yikorama ntani kukara noyikutji mositata saVenduka, moGobabis Babi kuna

saVenduka, moGobabis Babi kuna

saVenduka, moGobabis Babi kuna mutamba yokusana yikorama eyi vasilika ntani evango nalyo kwalisilika. Vvaliavasimpekunakaramononkwate apa nye kava kamonekere rokuhova kompanguro. Vaporosi kavatente asi nombinga edi kuna kumoneka asi kavakadigwene kosimpanda sakara monofarama domoGobabis. Siruwo oso Babi kakamonekere

kompanguro moGobabis makura epanguro lyendi kavalirundwilire dogoro mo 15 Sitarara yipo simpe makonakono gatwikire. – rrouth@nepc.com.na

## Vatano vana kurumbasana mahoroworo gokukwateramo moNcamagoro

■ Iohn Muvamba

RUNDU - Vakandidate vatatu anakukarumbasana momukunda

waNcamagoro momahoroworo

gwaNcamagoro momahoroworo gokukwateramo gana kukakarako mo 17 December mvhura zeezi, mbunga zokugendesa mahoroworo moNamibia kavayinkondopekere.

Mahoroworo aga gokukwateramo kwawizirapo morwa nomfa dakansela ogu gakeremo Johannes Sikondo gadogorokere mo 19 September mvhura zeezi. Ano veta kwakara asi evango lyahepa kukara mnuporongwa ure tupu womazuva 90 makura mahoroworo gahepa kuhoroka.

Mbunga politika zaSWAPO simpe nazo kuna kukahamena mo

momahoroworo omu vana ka Thomas Kavau gwaSWAPO, Chimbango Frans gwaPDM.

IPC kuna kara Tijwawa Kambinda ano

ava vavali kuna kara nye vakandindate

ava vavali kuna kara nye vakandindate wokulikarera Nyundu Moses ntani Shindimba Ladislaus Poroto nawo vamwe vana kurumbasana.

Mazuva gokuturamo vakandindate kuna kagakere 3 November; ano ezuva lyokuhulilira lyonombunga politika vaturemo vakandindate kalikere 5 November; yimo ana kutata mugawi. November; yimo ana kutanta mugavi mbudi gwaECN Lina Ndengu. Mokukwama mwaNdengu, ECN

mbunga zomahoroworo zamana nare malikwamo gokulitjangesa gokukwateramoagegakerekomomazuva 12 dogoro mo 14 October. "

Ezuva lina kara lyomulyo ngesi kuna kara lyokudeura varugani ava ngavakarugana mezuvalyomahoroworo, edeuro ngalikarako mo 8-9 December,

ano ezuva lyokukarako mahoroworo

ano ezuva lyokukarako mahoroworo kun a litura nye mo 17 December, yimo ngoso ana kutanta.
Ose kwayigeve eyi nsene asi kweli ogu ana kara norunyegenyo momazuva 9 October, dogoro ngesi kwato eyi twagwana. Kapi twagwanekera nomaudigu nkenye dogoro mo 19 October, kwato eyi twagwana dogoro ngesi. Kwato nawanawaeyitwagwanakera nwa ejirunge asilitungese, kwatonawanawaeyitwagwanekera

nayo siruwo selitjangeso kwateromo.

Mokukwama ECN, Ncamagoro
kwakara novantu valitjangesa wokusika ko 3806 ava ngava kahorowo
–jmuyamba@nepc.com.na





# **Oniipa CEO disputes legality of suspension**

## ... says he is not going anywhere

### Obrein Simasiku

The CEO of Oniipa Town Council, Junias Jakob, has refused to budge despite being suspended by council late Tuesday afternoon, arguing that the meeting at which he was relieved of duties was illegal and

unprocedural.

Jakob said he will not go anywhere and as it stands, according to him, he still remains account to min, he star retrains the legitimate CEO, further saying his alleged removal is just a plot. His suspension was confirmed by mayor David Kambonde as well as management committee (MC) chairperson Jafet August, who Jakob has accused of a witch-hunt. Jakob, who has been the CEO of

Oniipa since 2016, was suspended Onipa since 2016, was suspended indefinitely with all benefits to pave way for an investigation into allegations of corruption relating to an electrical servicing tender that was awarded in 2020.

"Council through its special meeting resolved to suspend the CEO because the allegations levelled against him are very serious. Even though he was refusing the suspension claiming that it is being done unprocedurally. But we informed him that when he signed and agreed to enter into the electrical tender agreement, it was done unprocedural, as council was not aware. The same applies when he breached the agreement to which he committed himself," said MC chairperson August. "So, he is suspended with all

so, he is suspended with an benefits pending the finalisation of the investigations. Once we are done, the suspension will be lifted but we have informed the minister accordingly in this regard," he added.

However, the CEO hit back "The mayor indicated that the council was indeed bulldozed by the management committee and he

could not do anything about it. The mayor and his present councillors were questioned on the legality of their meeting and whether the MC has legitimate power to suspend



Oniipa CEO Junias Jakob.

the CEO but could not answer The mayor could also not answer apparently the question whether the suspension was consented by the minister," Jakob countered.

The tender to provide electrical services was awarded to West Trading CC, which sought financial assistance from Namibia Procurement Fund (NamPro

However, NamPro Fund had a cessation agreement with West Trading relating to a financing scheme, which was awarded to the contractor as start-up capital.
This deal has since gone sour after
Onlipa Town Council, under the
stewardship of Jakob, breached
such a contract and paid monies directly to the contractor, in contrast to NamPro Fund as

initially agreed.

Part of the condition was that Oniipa Town Council pays all dues to NamPro Fund's account,

which will then advance whatever

which will then advance whatever remains to West Trading. It is alleged that it is the breach of that specific clause that landed Jakob in hot water as he approved

funds to be paid to West Trading NamPro Fund is now suing West Trading and its director, while

Oniipa Town Council is listed as a defendant. The breach amounted to N\$448 149,24 on 18 November 2020, as well as another amount of N\$200 000 advanced into West Trading account on 28 November. While the initial tender was for over N\$1

In his defence, through a 1800word letter provided to the media, Jakob said allegations levelled against him are baseless. Instead, he accused August of

spearheading a witch-hunt and trying to taint his professional

image.
"This is an internal administrative issue that through administrative issue that through his political immaturity went to the extent of politicising and publicising it in the public domain – a conduct which is in contravention with the Code of Conduct of Members of Local

Authority Councils of April 2015.
"The council was advised to
wait until the legal route of the
case is exhausted by the court, but the MC chairperson decided to bulldoze other councillors to peruse an investigation in the project of West Trading CC. I will leave council when it's the right time. I was appointed by council with prior approval of the minister and not by the MC chairperson," he stressed.

Jakob revealed their long

standing difference stems from clashes when he refused to allow councillors to use council vehicles to attend Swapo meetings, also for refusing to concede to directives of employing people from outside before according the opportunities

internally.

Others, include the extension
of an internship programme, as well as matters related to

procurement, including issues of land compensation and the interference into administrative operations.

osimasiku@nepc.com.na

## Ithete calls for speedy realisation of SEZs

### Staff Reporter

vapo parliamentarian Natangw Ithete has called for speedy on of special ec

He said once implemented, Namibia will become independent from other economies and achieve

its aspirations of industrialisation, e c o n o m i c diversification, and

development. Ithetemadethiscallin parliament on Tuesday while contributing mid-tern budget review tabled by finance minister Iipumbu Shiimi earlier this month where he announced N\$2.2

available for reallocation.

Ithete said the medium-termbudgetary medium-termbudgetary review does not only facilitate the

review does not only facilitate the monitoring byprovidingabenchmark against budgetary developments over time but it also helps ensure fiscal discipline by making more apparent the impact of policies on the government balance in the coming

years.
"I welcome the review because although the country has experienced its worst economic downturn, we continue to thrive and grow with

continue to thrive and grow with limited revenue," he said.

He said the reallocations of funds to the health ministry to boost the country's Covid response and to the anti-poaching activities as well as support the operations of Namibia Wildlife Resorts (NWR) is crucial.

He said these reallocations are crucial to the recovery of the economy

and ensure that Namibia is ready in case another wave of Covid-19 is to come. He said during the first and second quarters of 2021, Namibia's economic environment was confronted by numerous macroeconomic shocks as well as the Covid-19 pandemic that inflicted the entire global economy.

Besides the loss of lives, Ithete said the pandemic destabilised the

economy through disruptions in trade, tourism, production productivity, supply chains, and other various integration

Additionally, he said the real GDP has also contracted in the first and second quarters of 2021.

Withregardstothe domestic economy, Ithete said the impact of the pandemic has transmitted through

trade and tourism restrictions, low commodity demand, and

international commodity prices.

He said the contraction in the economy was observed across all economy was observed across all sectors. Furthermore, he said, Covid-19 did not only affect the domestic economy but also the trade balance, as the country continues to experience a trade deficit although the total trade has improved over the

"It is imperative that even during these trying times, we remain resilient and continue with the implementation of development policies and strategies to ensure that not only the GDP of the country improves but also increase the productivity and government earnings," he said.



CHINA CIVIL ENGINEERING CONSTRUCTION (NAMIBIA) (PTY LTD)

## Position: Building Inspector

Qualifications and Experience: building inspection technology or any related

- 3-5 years of proven work experience
- vledge of construction design techniques Knowledge of construction mate
- Advanced mathematical skills Ability to read and understand blueprints and
- construction designs
- A good eye for detail Code B driving license

**Duty Station: Windhoek** 

Contact: Ms White-Love J.T Kadhila Tel: 061 254911 Hand delivery ERF no: 6971 Harvey Street, Windhoek North

Due Date: 23 November 2021



PROJECT DESCRIPTION: New Proposed Landfill Site

Time: 15:00

Environmental Assessment Practitioner (EAP): SM Dyn Environmental Consultants

REGISTRATION OF I&APs AND SUBMISSION OF COMMENTS: All Interested & Affected Parties are hereby invited to registe submit their comments, concerns or questions in writing or re



Notice is hereby served to inform all potentially interested and/or Affected Parties that an application will be made to the Environmental Commissioner in terms of Environmental Management Act (No. 7 of 2007) and the Environmental Assessment Regulations (2012) for the following intended activity:

Proponent: Calculus Commodities (Ptv) Ltd

Project Name: Exploration activities of base and rare metals, dimension stone and precious metals on EPL 7125, Outjo, Kunene

Project Location: EPL 7125. Outlo. Kunene region

Environmental Consultant: Green Team Consultar appointed by Calculus Commodities (Pty) Ltd as an environmental practitioner to conduct an Environmental practitioner to conduct an Environmental Assessment for the exploration activities of base and dimension stone and precious metals on EPL 7125, O region. Schedule of public meeting is as follow:

All Interested and Affected Parties (I&APs) are en to register with this study. Submit all issues, comn opinions before 30th November 2021.

Contact person: Sakaria H Nalusha Tel: +264 85 2225600 Email: geo@grncons.com

## NOTICE

### OKONGO VILLAGE COUNCIL

CLOSURE OF ERF 345, OKONGO PROPER AS A PUBLIC OPEN SPACE (± 86 884m²) IN EXTENT AND WILL BE SOLD FOR THE DEVELOPMENT OF A MIXED-USE RESIDENTIAL DEVELOPMENT:

Notice is hereby given in terms of Section No.127 of the Urban and Regional Planning Act, 2018 (Act No. 5 of 2018), as amended that the Okongo Village Council propose to permanently close the under-mentioned portion as indicated our set locality plan, which less for inspection during office and set the Collage of the Council The purpose of the closure is to allow the proposed new owner to develop a mixed-use Residential development on Erf 345, Okongo Proper.

Objections to the proposed closure are to be served on the Secretary-Urban and Fuzua Planning Board, Private Bag 15289, and the Chief Executive Officer, Private Bag 68003, Okongo, within 14 days of the appearance of this notice in accordance Section No.127 of the Urban and Regional Planning Act, 2018 (Act No. 5 of 2018), as amended.

V. NATHILE ACTING CHIEF EXECUTIVE OFFICER

## **ADVERTISE** YOUR

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NOTICES. **DEATH & FUNERAL** 

**NOTICES** 

CONFIDENTE

## **NOTICE**

Take notice that HARMONIC TOWN PLANNING CONSULTANTS CC, TOWN AND REGIONAL PLANNERS, on behalf of the owner of the respective Erf, intends to apply to the **Divundu Village Council and the** Urban and Regional Planning Board for the:

Amendment of Title Conditions of Erf 509 from "Industrial" to "Business".

Erf No. 509 Extension 2. Divundu measures approximately ± 4 631 m<sup>2</sup> in extent. The owners of Erf No. 509 Extension 2, Divundu intend to change the title conditions of their Erf for the purposes of a shopping mall development. Additionally, parking to the development will be provided in accordance with the requirements of the Divundu Village Council.

Further take notice that the plan of the Erf lies for inspection on the town planning notice board at the Divundu Village Council and at Harmonic Town Planning Offices, 76B Pasteur Street, Windhoek West.

Further take notice that any person objecting to the proposed use of the land as set out above may lodge such objection together with the grounds thereof, with the **Divundu Village Council** and with the Applicant in writing within 14 days of the last publication of this notice (final date for objections is Friday, 03 December 2021).



Contact: Harold Kisting Harmonic Town Planning Consultants CC Town and Regional Planners P.O. Box 32:16 Windhoek Cell 081 127 5879 Fax 088646401 Email: hkisting@namibnet.com

### **PUBLIC NOTICE**

## ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

Notice is hereby given that an application for Environmental Clearance Certificate (ECC) will be made to the Ministry of Environmental Foresty & Tourism (MEFT) in terms of the Environmental Management Act (Act 7 of 2007) and applicable Regulations with respect to the following listed

The Borrow Pit is located adjacent C35 about 6 km South of the Omakange Settlement. The Quarry is located West of C35 about 4 km from the Omakange Settlement in the Kunene Region. LOCATION

PROPONENT: Kunene Building Supplies CC

A <u>PUBLIC INFORMATION SHARING MEETING</u> will be held at the Quarry sile on Saturday, 20 November 2021 from 12/h00. Further announcement will be made through the local NIBC Radio via the Office of the Constituency Councilor. A Background Information Document (BID) is available upon inqu

CLOSING DATE: 30 November 2021

EIA CONSULTANT: et. Ongwediya





### NOTICE TO ALL INTERESTED AND AFFECTED PARTIES

ENVIRONMENTAL & SOCIAL IMPACT ASSESSMENT FOR THE EXPLORATION ACTIVITIES OF BASE AND RARE METALS, DIMENSION STONE AND PRECIOUS METALS ON EXCLUSIVE PROSPECTING LICENSE(EPL) 7125, OUTJO, KUNENE REGION.

otice is hereby served to inform all potentially Interested and/or Affected arties that an application will be made to the Environmental Commissioner terms of Environmental Management Act (No. 7 of 2007) and the nvironmental Assessment Regulations (2012) for the following intended

Proponent: Calculus Commodities (Pty) Ltd

Project Name: Exploration activities of base and rare metals, dimension stone and precious metals on EPL 7125, Outjo, Kunene region.

sone and precious metals on EPL 7125, Outjo, Kunene region.

Project Location: EPL 7125, Outjo, Kunene region.

Environmental Consultant: Geora Team Consultants has been appointed by Calculus Commodities (Pty) Ltd as an independent environmental practication of conduct an Environmental Impact Assessment for the metals on EPL 7125, Outjo, Kunene region. Schedule of public meeting is as follow:

Date: 27th November 2021

Venue: Gelbingen Lodge, Kamanjab

All Interested and Affected Parties (I&APs) are encouraged to register with this study. Submit all issues, comments and opinions before 30th November 2021.

Contact person: Sakaria H Nalusha Tel: +264 85 2225600 Email: geo@grncons.com

### **PUBLIC NOTICE**

ENVIRONMENTAL IMPACT ASSESSMENT FOR THE PROPOSED DRYLAND TRUCKPORT PROJECT DEVELOPMENT AT LISELO COMMUNAL AREA IN ZAMBEZI REGION

Notice is hereby given to all Interested and Affected Parties (I & APs) that an application will be made to the Environmental Commissioner in terms of Environmental Management Act (No. 7 of 2007) and its Regulation (2012) for the following intended activity

> Project Name: DRYLAND TRUCK PORT Project Location: Liselo Communal Area, Zambezi region Proponent: TRANS ZAMBEZI TRUCKPORT & INVESTMENT CC

Project Description: The Proposed project entails the proposed development and establishment of a truck port (Long distance truck resting place) in Liselo Communal Area on a 9.8 Hectare.

Consultant: NYFPF7 Consultancy co.

All Interested and Affected Parties (I & APs) are encouraged to register and raise concerns or provide comments and opinions on or before 20 December 2021. Background Information Document (BID) document will be provided upon indication as an I&AP. A public meeting will be held only if there is sufficient public interest

Public Consultation meeting date: 16 December 2021 Venue: Liselo area (Sub-khuta) @ 10h00-12h00

Should you wish to register as I & AP, please contact the NYEPEZ CC CONSULTANT. Cell: +264814554221 /+264812317252

Email: gsinyepe@yahoo.co.uk



## CONFIDENTE lifting the lid





Environam Consultants Trading or (ECT) hereby gives notice to all potentially in Parties (AAPs) that an application will be made to the Environmental Commiss Environmental Management Act (No 7 of 2007) and the Environmental Impact Assess 30 of February 2012; for the following: PROJECT NAME: Proposed Establishment of Agricultural and Hospitality Activities

PROJECT LOCATION: Portion 59 (a Portion of Portion 8) of the Consolidated Farm Okahandja Tr No. 277, Okahandja, Otjozondjupa Region

PROJECT DESCRIPTION: The project will comprise the following:

• An Organic Fertiliser Factory, Cattle and Poultry Farming; and a Guest Hi

PROPONENT: Hafa Peak Investments CC

REGISTRATION OF I&APs AND SUBMISSION OF COMMENTS: All Interested and Affected Par (I&Aps) are hereby invited to register and submit their comments, concerns or questions in writing, kin

k public consultation meeting will be held on site at Portion 59 (a Portion of Portion 8) of the Conso farm Okahandja Townlands No. 277, Okahandja, Otjozondjupa Region on Wednesday, 24 Novem

## NOTICE

Take notice that HARMONIC TOWN PLANNING CONSULTANTS CC, TOWN AND REGIONAL PLANNERS, on behalf of the owner of the respective Eri, inlends to apply to the Divundu Village Council and the Urban and Regional Planning Board for the:

Amendment of Title Conditions of Erf 509 from "Ind "Business".

Erf No. 509 Extension 2, Divundu measures approximately ± 4 631 m<sup>2</sup> in extent. The owners of Erf No. 509 Extension 2, Divundu intend to change the title conditions of their Erf for the purposes of a shopping mail development. Additionally, parking to the development will be provided in accordance with the requirements of the Divundu Village Council.

rither take notice that any person objecting to the proposed use of the d as set out above may lodge such objection together with the grounds reof, with the Divundu Village Council and with the Applicant in tiling within 14 days of the last publication of this notice (final date for jections is Friday, 03 December 2021).





NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT AND PUBLIC PARTICIPATION PROCESS: THE PROPOSED CONSTRUCTION AND OPERATION OF A TELECOMMUNICATION BASE TRANSCEIVER STATION (8TS) TOWER IN MONDESA EXTENSION 4, SWAKOPMUNO-ERONGO REGION.

ental Assessment Practitioner: D&P Engineers and Environmental Cor

Public participation process: Interested and affected parties are hereby notified that participation meeting will be held on Saturday 04 December 2021 at Meduletu Mal. Tir AM. The participation and commenting period is effective until 30 December 2021.







D & P Engineers and Environmental Consultants hereby gives notice to all poter and Affected Parties (B&APL), that an application for Environmental Clearance cer made to the Environmental Commissioner in terms of the Environmental Manage 7 of 2007) as follows;

Project Location: The proposed telecommunication tower is to be erected on Ext 3 in Swakopmund, Erongo Region-Namibia (22°39'18.43"S, 14°33'2.65"E)

Public participation process: Interested and affected parties are hereby notified that a pub participation meeting will be held on Saturday 04 December 2021 at Meduletu Hall. Time: 09: AM. The participation and commenting period is effective until 30 December 2021.

NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT AND PUBLIC PARTICIPATION PROCESS:
THE PROPOSED CONSTRUCTION AND OPERATION OF A TELECOMMUNICATION BASE
TRANSCUPER STATION (BTS) TOWER IN MONDESS PROPER, SWARDPHAND-SHOWED
REGION.

do

D & P Engineers and Environmental Consultants hereby gives notice to all potent and Affected Parties (B&AP), that an application for Environmental Cleanance certifunded to the Environmental Commissioner in terms of the Environmental Manager 7 of 2007) as follows;

ental Assessment Practitioner: D&P Engineers and Enviro

Project Description: The proponent intends to construct and operate Base Tran (BTS) Tower.

Public participation process: Interested and affected parties are hereby notified that a public participation meeting will be held on Saturday 04 December 2021 at Meduletu Hall. Time: 09:3 AM. The participation and commenting period is effective until 30 December 2021.



NVIRONMENTAL & SOCIAL IMPACT ASSESSMENT FOR THE EXPLORATION ACTIVITIES OF BASE AND RARE METALS, MIRMSION STONE AND PRECIOUS METALS ON EXCLUSIVE PROSPECTING LICENSE(EPL) 7125, OUTJO, KUNENE REGION.

Project Name: Exploration activities of base and rare metals, stone and precious metals on EPL 7125, Outjo, Kunene region.

Project Location: EPL 7125, Outjo, Kunene region

D&P Engineers and environmental Consultant: Tendal E. Kasinganeti Phone: +264.81.363.4904 Fax: +264.61.255.207 Email: tkasinganeti@doe.com.na



D&P Engineers and environmental Consultant: Tendal E. Kasinganeti Phone: +264813634904 Fax: +26461255207 Email: tkasinganeti@dpe.com.na







Tel: +264 81 653 4437 Email: info@twahafagroup.com Web: www.twahafagroup.com













Contact person: Sakaria H Nalusha Tel: +264 85 2225600

Email: geo@grncons.com

## APPENDIX E: PUBLIC MEETING MINUTES AND ATTENDANCE REGISTER



Attendance Register: Public Participation Meeting Place: Kamanjab, Anns Lodge Date:27 Nov 2021 Time:10h30 AM

Environmental & Social Impact Assessment for the Exploration Activities of Base and Rare Metals, Dimension Stone and Precious Metals on Exclusive Prospecting License (EPL) 7125, Outjo District, Kunene Region

400	Name	Organization/Company	Email	Phone
1.	Mr Kreiner Huberfus	Ekongo Farm	ekongo@iway.na	067 330000
2.	Mr. Albie Thomas	TOUST SWARTS	N/A	0817272837
3.	Mr BACH von H	Farmer Owner	Svonbach@iway.na	©811280929
4.	Heimstadt Detlef	Farmer Dwher Manage		08/20189870
5		/		100
6.			1 2	
7.				
8.				

## Mr Kreiner Huberfus, farm owner (149 Kamanjab)

**Comment 1:** I am aware of the exploration and in the past, there has been a lot of geologists exploring in the area. They used to take soil samples and the impact on the environment was very low. If the same technique is used then I believe the impact on the environment will be low. If heavy machinery is to be deployed, I am worried because it will disturb the ground and hunting will be difficult and hunters may get the trophy they do not want. I believe crime will increase because a lot of people will be in the area.

**Response 1:** Vehicles that will be used for exploration activities are the drill rig truck, excavator, light delivery vehicles (LDVs). Where it is required, Calculus Commodities Pty Ltd shall main the road conditions on regular basis. Calculus Commodities (Pty) Ltd will ensure compliance with the mitigation measures regarding soil and wildlife disturbance as summarised by the EMP, which provides good practice measures.

Mr Heimstadt Detlef, farm owner (Weissbrunn)

Comment 2: I want to know about the project and why on these farms?

Environmental Scoping Assessment

**49** | Page

## **CALCULUS COMMODITIES (PTY) LTD**

Response 2: This is an exploration project by Calculus Commodities, a private company that was granted permission to explore for minerals and commodities by the Ministry of Mines and Energy under its license No.7125. The exploration activities involve geological mapping, ground-truthing, sample collection, where is needed. This might have a negative and positive impact on the environment and our report needs to highlight these impacts. The licence granted looks mostly underground and it covers all these farms. The decision to allocate an EPL on more than one farm was made by the Government of Namibia. These farms show the potential of the minerals that Calculus Commodities has an interest in.

## Mr Bach von H, farm owner (Farm Benlah)

**Comment 3:** I am not against any development; however, all activities have to be done according to the laws of the owner of the farm. Should be in my farm these activities were going on, I will allow it only if they are accompanied by one of my workers who then have to be paid by them. There be no fire made in the farm, no camping, no car servicing and roads in the farm has to pay for to be used. After excavation of the topsoil or cutting down of trees, the consultant or the owner of the EPL has to cover and replant the trees.

## CALCULUS COMMODITIES (PTY) LTD



## **ENVIRONMENTAL MANAGEMENT PLAN (EMP)**

# Exploration of Base and Rare Metals, Dimension Stones and Precious Metals on EPL 7125 in Outjo, Kunene Region



## Prepared by:



Pasteur Street 59, Windhoek, Ground Floor, Unit 2, Office 1 Tel: +264 852225600 geo@grncons.com

## For:

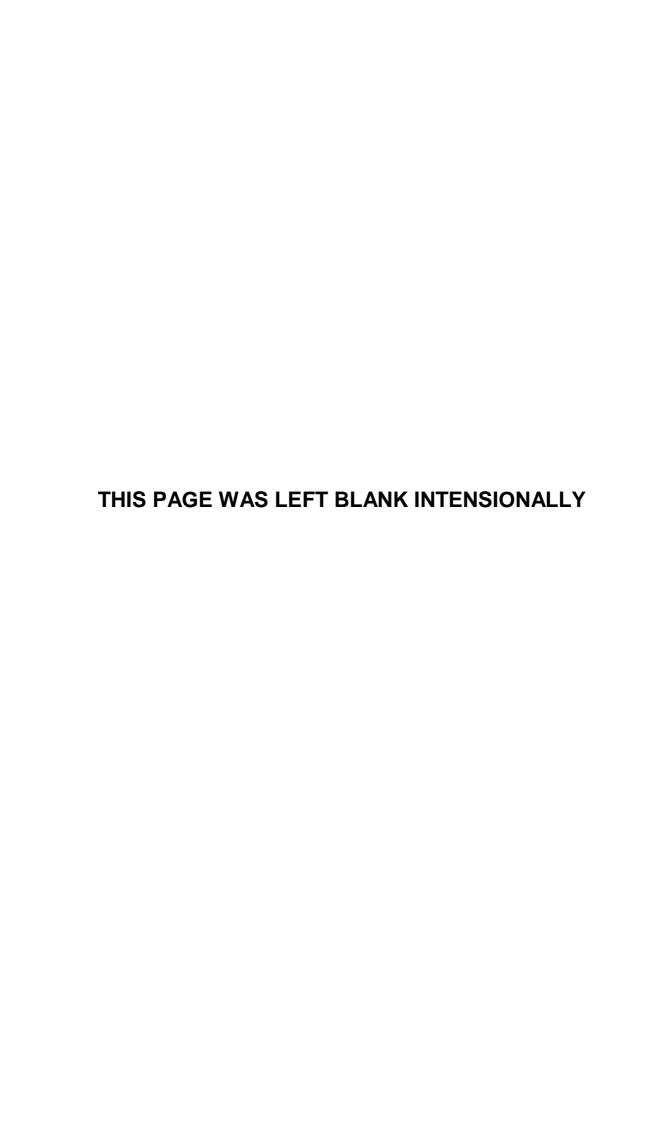


Calculus Commodities (Pty) LTD

973 Kupfer Street, P/Bag 1504, Tsumeb

Title	Environmental Management Plan for Exploration of Base and Rare Metals, Dimension Stones and Precious Metals on EPL 7125 in Outjo District, Kunene Region
Project Manager	Sakaria H Nalusha ( <b>Pr. Sci. Nat) (BSc 1</b> <sup>st</sup> <b>Class) Geology</b>
Project Manager e-	geo@grncons.com
mail	
Author	Titus Shuuya ( <b>Pr. Sci. Nat) MSc Natural Resources Management</b>
Reviewer	Titus Shuuya ( <b>Pr. Sci. Nat) MSc Natural Resources Management</b> ,
Client	Calculus Commodities (Pty) Ltd
Date last printed	
Date last saved	February 2022
Comments	
Keywords	Environmental Assessment, Management Plan, Exclusive Prospecting License, exploration,
Project Number	2021-0203
Report Number	2021-D0023
Issue Date	February 2022

This report has been prepared by GTC with all reasonable skill, care, and diligence taking into account the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid. The interpretations and conclusions reached in this technical report are based on current scientific understanding and the best evidence available to the authors at the time of writing. It is the nature of all scientific conclusions that they are founded on an assessment of probabilities and, however high these probabilities might be, they make no claim for absolute certainty.



## **DOCUMENT CONTROL**

## **Statement of Purpose**

This document aims to produce an environmental management plan for Exploration of Base and Rare Metals, Dimensions Stone and Precious Metals on the Exclusive Prospecting License 7125. This report gives the plans in place to the competent authorities for considerations and to Calculus Commodities (Pty) Ltd, represented by Mr. Elias Sipunga, on the environmental management plans to be implemented during and after the exploration activities. This report is in the context of the provisions of EIAs, EMPs and exploration best practices offered by Green Team Consultants.

## Confidentiality

This report contains Confidential Information provided by Green Team Consultants and should not be disclosed to third parties or personnel not directly involved in this project.

## **All Rights Reserved**

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# **ABBRIVIATIONS AND DEFINITIONS**

Acronym	
CC	Closed Corporation
CTD	Current, Temperature, Depth
DO	Dissolved Oxygen
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EIS	Environmental Information Service
EMP	Environmental Management Plan
EPL	Exclusive Prospecting License
ESIA	Environmental and Social Impact Assessment
FDI	Foreign Direct Investments
GHG	Greenhouse Gas
HPP	Harambee Prosperity Plan
IAP	Interested and Affected Party
IBA	Important Bird Area
IFC	International Finance Corporation
IUCN	International Union f or the Conservation of Nature
MME	Ministry of Mines and Energy
MEFT	Ministry of Environment, Forestry and Tourism
MODVA	Ministry of Defense and Veteran Affairs
MOL	Ministry of Labour
N/A	Not applicable
NDP	National Development Plan
(PTY) Ltd	Proprietary Limited
RC	Reverse Circulation
SADC	Southern African Development Community
SADC	Southern African Development Community
SASSCAL	Southern African Science Service Centre for Climate Change and Adaptive Land Management

#### 1. INTRODUCTION

### 1.2. Project Overview

Green Team Consultants have been appointed by Calculus Commodities (Pty) Ltd (the Proponent) to undertake an Environmental Impact Assessment (EIA) and an Environmental Management Plan (EMP) in terms of the Environmental Management Act No.7 of 2007.

Calculus Commodities (Pty) Ltd is a private research and development firm dedicated to researching and investing in commodity markets, and has identified the opportunity to explore activities of base and rare metals, dimension stones and precious metals on Exclusive Prospective Licence (EPL) 7125. The EPL 7125 is situated approximately 5 km north of Kamanjab town (Figure 1), crosscutting the C35 and D2763 roads in Kunene Region in the Outjo magisterial district.

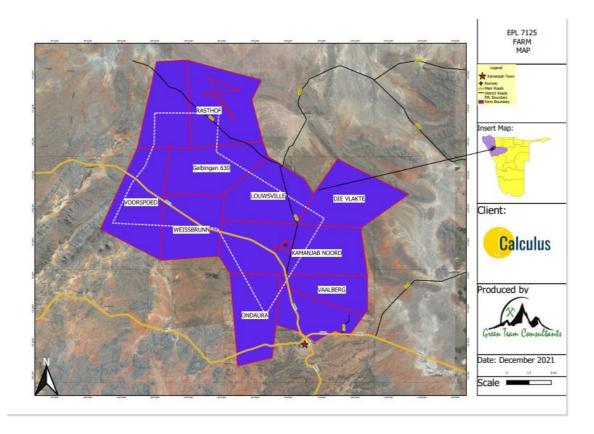


Figure 1 Location of EPL 7125 near Kamanjab, Kunene Region, Namibia

### 1.3. Purpose and Scope of this Project

This EMP serves as a tool which provides a log frame, management strategies and alleviation measures for the proposed project's exploration activities. This ensures that the potential social and environmental impacts are minimised as practically as possible and that legal obligations are adhered to and fulfilled. The procedures, roles and responsibilities as well as protocols are outlined in the EMP to ensure management strategies will be effectual and appropriately implemented.

The EMP will be attached to the environmental scoping report and will be based on the results of the assessments carried out as conducted in terms of the Environmental Management Act No.7 of 2007. Therefore, the environmental scoping report should be used as a reference for more information on the proposed project.

The scope of this EMP includes all activities that will be conducted during the exploration stage in search of base and rare metals, dimension stones and precious stones on EPL 7125.

#### 2. ENVIRONMENTAL REGULATORY REQUIREMENTS

According to the Environmental Management Act, No.7 of 2007 regulations and Environmental Impact Assessment Regulation, No. 30 of 2012, the proposed project is considered a listed activity. As such an application to obtain the Environmental Clearance Certificate is required, and the scoping report and EMP will be submitted to the competent authority for review and decision making.

### 2.2. Required Permits and Licenses

As part of the environmental compliance and authorization, Calculus Commodities (Pty) Ltd shall ensure that the permits and licenses should be obtained before the proposed project operation commence (Figure 1).

Table 1 Required permits and license

License/Permit	Competent Authority	Validity	Status
Exclusive Prospecting License	Ministry of Mines and	3 Years	Acquired, but
(EPL)	Energy		expiring 5 <sup>th</sup>
			November 2022
Environmental Clearance	Ministry of	3 Years	In progress
Certificate (ECC)	Environment, Forest		
	and Tourism		

#### 3. MANAGEMENT AND IMPLEMENTATION

Calculus Commodities (Pty) Ltd will be responsible for the management and implementation of this EMP and will hold the Environmental Clearance Certificate for the proposed project. The EMP will be subjected reviewed, amended and approved for implementation as the exploration activities progress or when it is necessary required. The implementation and management of the EMP compliance monitoring will be undertaken through daily, weekly, quarterly, monthly and annual inspections depending on the monitoring as indicated in this EMP or specialist.

#### 4. LIMITATIONS AND UNCERTAINTIES

Occupational Health and Safety requirements will be provided in the safety management plans that will be developed by Calculus Commodities (Pty) Ltd, therefore, it is not covered under this EMP.

#### 5. ENVIRONMENTAL CONSULTANCY

Green Team Consultants has prepared the EMP on behalf of the Calculus Commodities (Pty) Ltd. Green Team Consultants is a Namibian based consulting service provider engaged in the business of carrying out environmental assessments, geohydrological assessments, water system network modeling, marine studies and geological exploration drilling.

	<b>C</b> ALCULUS COMMODITII	s (PTY) LTD
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All comments and clarification regarding the EMP should be forwarded to:

## **Green Team Consultants**

3128, no. 59 Pasteur street Windhoek West

Tell: +264852225600

Email: geo@grncons.com

## 5.2. Structure of this EMP

**Table 2 Environmental Scoping Report Sections** 

Section	Title	Content
1	Introduction	This section introduces the EMP and provides the overview of the proposed project, purpose and scope of the report
2	Environmental Regulatory Requirement	This is the section that describe the requirement for the environmental regulation
3	Management and implementation	This sets the roles of the team responsible for implementing this EMP
4	Limitations and Uncertainty	This section summarises the limitations and uncertainty of the proposed project
5	Environmental Consultancy	Sets the contact details of the appointed environmental consultancy
6	Management of the project personnel	This is chapter outline the roles and responsibility of project personnel, including the organismal structure
7	Compliance Monitoring and Audit	Sets out how compliance is monitored, reporting and actions to prevent reoccurrence as per the audit schedule

#### 6. MANAGEMENT OF THE PROJECT PERSONNEL

A project team that will undertake the exploration activities and preparation will be provided by Calculus Commodities (Pty) Ltd, team will consist of contractors and personnel. The project team describes the roles and responsibilities for implementing the various environmental management plans. Calculus Commodities (Pty) Ltd shall oversee the overall accountability for environmental management on the EPL 7125 and ensuring the fully implementation of the EMP.

### 6.2. Organizational Structure Roles and Responsibilities

Calculus Commodities (Pty) Ltd will be responsible for ensuring that:

- ➤ Ensure the protect the environment and rehabilitate the site as practical as possible.
- Make sure that a copy of the EMP is readily available on-site and that all site staff are aware of its content.
- > Persons appointed in writing for a specific environmental responsibility are informed beforehand and to make sure duties are clearly understood.
- ➤ All personnel are well trained and supervised.
- > The project team members and contractors comply with the procedures as stipulated in the EMP.
- > Should delegate suitably qualified person (s) with the responsibility to ensure implementation of the EMP.

The table below represents personnel and environmental responsibilities of each role throughout the project existence.

# **Table 3 Roles and Responsibilities**

Role	Responsibilities and Duties
Project manager	<ul> <li>Regular communicate with the relevant IAPs and authorities concerning the preparation and implementation of the EMP.</li> <li>Allow the overall responsibility for managing all the project personnel and ensuring that the environmental management requirements are met.</li> <li>Inform the project team about the EMP and Environmental Clearance Certificate conditions and obligations.</li> <li>Approve all decisions regarding environmental procedures and protocols that must be followed.</li> <li>Attend regular site meetings and inspections where required.</li> </ul>
Site manager/supervisor	<ul> <li>Ensure that all visitors, contractors and employees are informed on safety measures.</li> <li>To ensure that all employees, contractors and visitors are aware of the environmental policies and adhere to the EMP.</li> <li>Report all accidents, incidents, near-mises and non-compliance to the to the project manager, who will report to the regulatory authority.</li> <li>Responsible for maintenance, management and revision of this EMP and applicable environmental authorisation.</li> <li>Keep and maintain complainant register.</li> <li>Responsible for overseeing all daily activities across the project.</li> <li>Conduct or ensure that all employees participate in site induction before they commence with the work.</li> </ul>

Role	Responsibilities and Duties
Employees (including contractors and visitors)	<ul> <li>Reporting all accidents, incidents or near-misses to the site manager.</li> <li>Ensure compliant with EMP as well as relevant policies, procedures, management plans, statutory requirements and contract requirements</li> </ul>
External specialists	<ul> <li>It is highly advisable that an external environmental specialists should be appointed, to assist with the implementation of certain commitments, if required.</li> <li>If required, an independent auditor should be appointed to assess compliance against the EMP and other applicable legislations.</li> </ul>

#### 7. COMPLIANCE MONITORING AND AUDIT

It is crucial that a management tool comprising a systematic, documented, periodic and objective evaluation of how well environmental organization, management and equipment are performing with the aim of helping to safeguard the environment is developed, monitored and compliant to. Detailed monitoring procedures including the relevant monitoring commitments spelled out in this EMP and Scoping report.

A general monitoring objective target should be adopted, which includes, but not limited to:

- Minimize disturbance within one (1 km) from the farmhouse or homestead.
- Minimal vegetation clearing/thinning and biodiversity disturbance.
- Ensure that all exploration equipment, including vehicles are well maintained, without any mechanical fault and leakage.
- Exploration materials, including soil samples that will require analysis should be stored and managed as per laboratory specifications and/or other specifications approved by a competent person/authority.

Aspects of the potential environmental impacts and their management or mitigation measures as well as monitoring requirements have been summarised in Table 4.

Table 4 Aspects of potential environmental impacts and management/mitigation measures

Aspect		Management/mitigation measures	Monitoring .	Responsibility
	impacts		requirement	
Employment creation, foreign income	Socio- economic improvement through employment creation and capacity building  Serves as an important source of fiscal revenue and source of foreign exchange, hence	<ul> <li>Goods and services should be sourced locally as practical as possible</li> <li>Promote the use of small and medium enterprises</li> <li>Capacity-building strategies and programmes should be in place before exploration activities to maximise the use of the local labour force</li> <li>The local community should be considered first for the available employment opportunity, especially for the unskilled workers</li> <li>Assist and promote local authorities to diversify their economic activities</li> <li>Establish and maintain a complainant register, to document all complaints and make efforts to address the area of concern</li> </ul>		Project manager/Site manager

	improved economic growth	Plant and equipment should be well- maintained and fitted with the correct and appropriate noise reduction measures	
Health and safety	Construction workers will be exposed to mineral exploration machinery	<ul> <li>The site should be equipped with a security control gate, once in operation. This is to limit restrict access to authorised personnel only</li> <li>As part of their induction, the workers should be provided with awareness training of the risks of mishandling equipment and materials</li> </ul>	Project manager/Site manager/Employees/Contractor
	Environment, health and safety risks Improper handling of materials and equipment may cause injuries	<ul> <li>When working on-site, employees should be properly equipped with personal protective equipment relevant to the type of work they are doing on-site</li> <li>No employee should be allowed to drink alcohol before and during working hours as this may lead to mishandling of equipment which may lead to injuries and other health and safety risks</li> </ul>	

Incorrect use or lack of appropriate personnel protective equipment	Employees should not be allowed on-site if under the influence of alcohol	
(PPE)		
Fugitive sand and fine dust emission during exploration		
Disruption to the surrounding community, e.g., some increase in noise levels		

	resulting from exploration activities			
Waste management	Mineral exploration usually generates wastes that lead to environmental pollution, if not properly handled  Discharged exploration general waste, effluent	<ul> <li>Workers should be sensitized to dispose of waste responsibly and not to litter</li> <li>All domestic and general operations waste produced daily should be contained until such that time it will be transported to the approved designated waste facilities</li> <li>If applicable, hazardous waste should be properly handled, stored and disposed of at the nearest authorized waste sites</li> <li>No waste should be buried or burned on-site or anywhere else throughout the project lifecycle</li> <li>Appropriate waste bins shall be placed at designated places</li> </ul>	Daily/Weekly/Monthly	Employees, Contractors, Site manager

	Soil, groundwater and surface water pollution		
Loss of Biodiversity/land- use/site access	Extensive areas of land and vegetation are cleared or thinned, if required, thus resulting in animal habitat loss/disruption Wildlife and livestock disturbance and change disturbance or	<ul> <li>Stakeholder engagement should be implemented throughout the exploration program, especially with the surrounding landowners and other relevant stakeholders</li> <li>A written agreement to access the property for the landowner should be in place before the work commences in their area</li> <li>All complaints, including verbal, should be recorded into the complainant register and resolved within a reasonable time frame</li> <li>All the project personnel should attend the site induction before they start working, and they should have their identification card</li> <li>Develop a policy that limits independent movements of all workers into the veld that</li> </ul>	ly/Monthly Employees, Contractors, Site manager, Project manager

	land-use	could create suspicion of poaching. Strictly	
	change, illegal	prevent poaching, harvesting and making	
	hunting and	fire, including the collection of firewood, or	
	grievance	possession of any such natural materials	
		Project vehicles should not park by the	
		roadside, but on designated sites within the	
		farm where they cannot interfere or pose	
		danger to other road users	
		The designated site access roads provided	
		shall be used as practical as possible	
		No heavy trucks or project related vehicles	
		should be parked outside the project footprint	
		Control traffic movement on site, deliveries	
		and collection of goods and waste to and	
		from the site, e.g., movement restricted	
		during weekdays between the hours of 08h00	
		and 17h00	
Heritage sites	Potential	In case heritage sites or items of significance	y Employees, Contractors, Site
	damage to the	are found in the course of the exploration	manager, Project manager
	undiscovered	activities, a chance finds procedure should	
		be followed	

heritage	Work should stop immediately, and the
resource	National Heritage Council should be informed
	as soon as possible