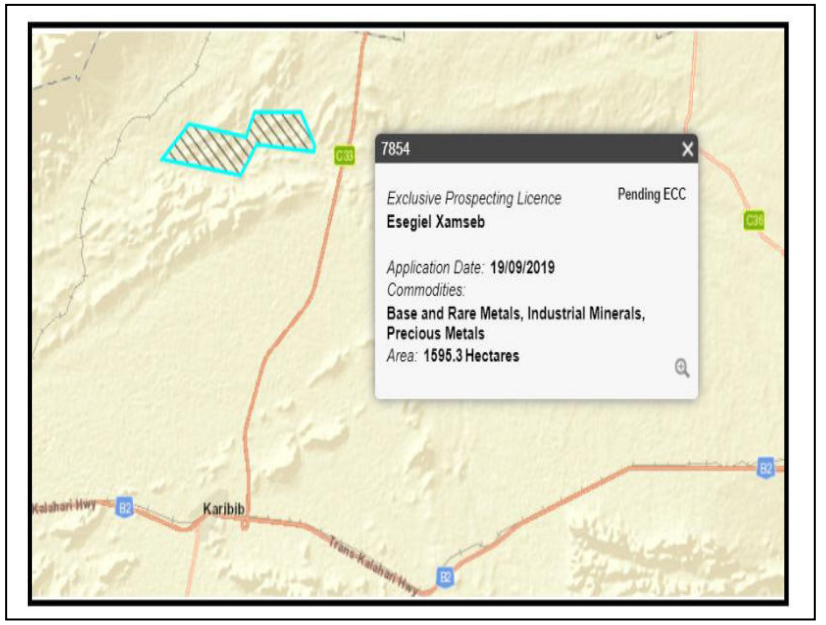
Background Information Document (BID) for the Environmental Impact Assessment for the proposed Base, Rare Metals, Industrial Minerals and Precious Metals in the Exclusive Prospecting Licenses (EPL) 7854.

The purpose of this document is to:

- Introduce **Esegiel Xamseb** proposal for the exploration of Base, Rare Metals, Industrial Minerals and Precious Metals in the Erongo Region near Karibib.
- Provide the objectives of the project and approach to the EIA to be undertaken; and
- Invite Interested and Affected Parties (I & APs) to register and provide input throughout the EIA process.

1. Introduction

Esegiel Xamseb is proposing to carryout an exploration study for exploration of Base, Rare Metals, Industrial Minerals and Precious Metals in EPL 7854.



(Figure 1) Esegiel Xamseb EPL 7854 in Erongo Region located in the Karibib District.

The exploration activities are targeted on the farm land comprising mainly of Etiro 50 1: Locality map of EPL 7854.

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2. Background

Esegiel Xamseb holds provisional rights over EPL 7854 in the Erongo region. Esegiel Xamseb is a Namibian citizen exploring for Base, Rare Metals, Industrial Minerals and Precious Metals. This rationale for the exploration is based upon the increasing demand for Base, Rare Metals, Industrial Minerals and Precious Metals in Namibia, SADC and the rest of the world. Base, Rare Metals, Industrial Minerals and Precious Metals mining is not well appreciated due the scale of the mines and in Namibia there exist a mine on base and precious metals in the Karibibarea.

With this short background, it further reiterated that Esegiel Xamseb propose to carry out an exploration study in an area where there are already existing exploration activities had taken place. As stipulated in the Government gazette announcing the commencement of the Environmental Management Act 2007 that an Environmental Impact Assessment be conducted for every prospecting and mining undertaking. Esegiel Xamseb appointed **CENTRE FOR GEOSCIENCES RESEARCH** to carry out the said assessment for EPL 7854.

3. Site Description

The EPL 7854 is located in the Erongo region in west – central Namibia. The deposit is located in the Karibib District of the Erongo region **(Figure 2).** The license hosts potential for Base, Rare Metals, Industrial Minerals and Precious Metals. The license is located on the farm land comprising mainly of Etiro farm 50. The area is accessed by driving about 20km towards Omaruru North of Karibib along the C33 road.

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Figure 2: Project Location (Maps of Namibia, 2012)

Geology of the site

Regionally the license is stratigraphically situated within the north-east trending intracontinental arm of the Damara Orogen. The area is geologically mapped under the Walvis Bay sheet which largely falls into the central (Swakop) Zone, which is characterised by high temperature- low pressuremetamorphism, numerous granitic intrusive and intense deformation typified by D3 domes (Schreiber, 2011).

The rocks of the Abbabis Metamorphic Complex form the oldest stratigraphic units in the area **(Figure 3)** and outcrop in domes and anticlines within the southern Central Swakop Zone.

The general geology of the license area consists mainly of crystalline marble, dolostone, limestone as well as mica schist, amphibolites and calc-silicate rocks of the Karibib Formation in Swakop Group which formed within the prominent Damara orogen within the license area. In the northern portion of the license on the farm Etiro 50 fine to medium grained white marble which have been found to be bedded and laminated, with 10 to 50cm thick lenses of marble breccias in thelower part.

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Quarternary sediments such as sand, gravel and calcrete prevail in the central parts of the license with outcrops of diorites (foliated) and diorite gneisses.

The eastern and southern portion of the license on the farm Etiro 50 hosts whitish-grey, coarse grained slightly porphyritic syntectonic Salem granite which has in the past been sporadically quarried and processed into tiles. The granite has a fairly uniform texture and is composed of quartz, plagioclase, orthoclase, microcline-perthite, biotite partly replaced by slightly greenish chlorite, magnetite and zircon.

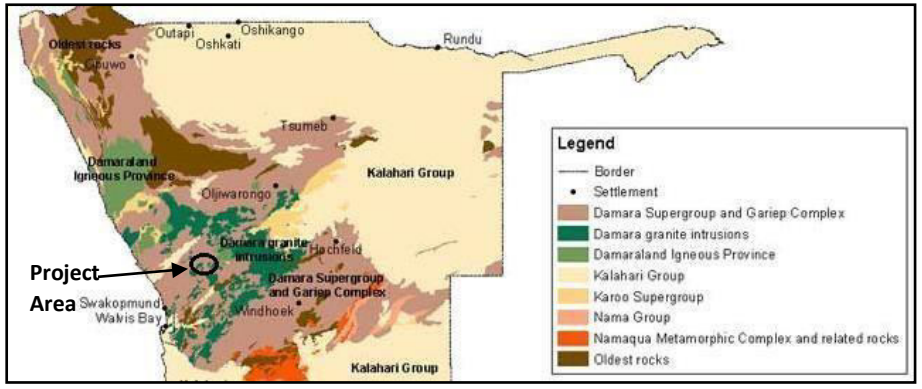

Figure 3: Geology of the EPL 7854 according to the major geological divisions in Namibia (Source: Atlas of Namibia, 2003)

Climate

Annual precipitation in the project area ranges from 150mm to 300mm. The average temperature for EPL 7854 site is above 22°C. The area receives very little rainfall during wet seasonl. The relative humidity of the area range from 16% to 39% and the wind direction is predominantly dominated by southwest wind.

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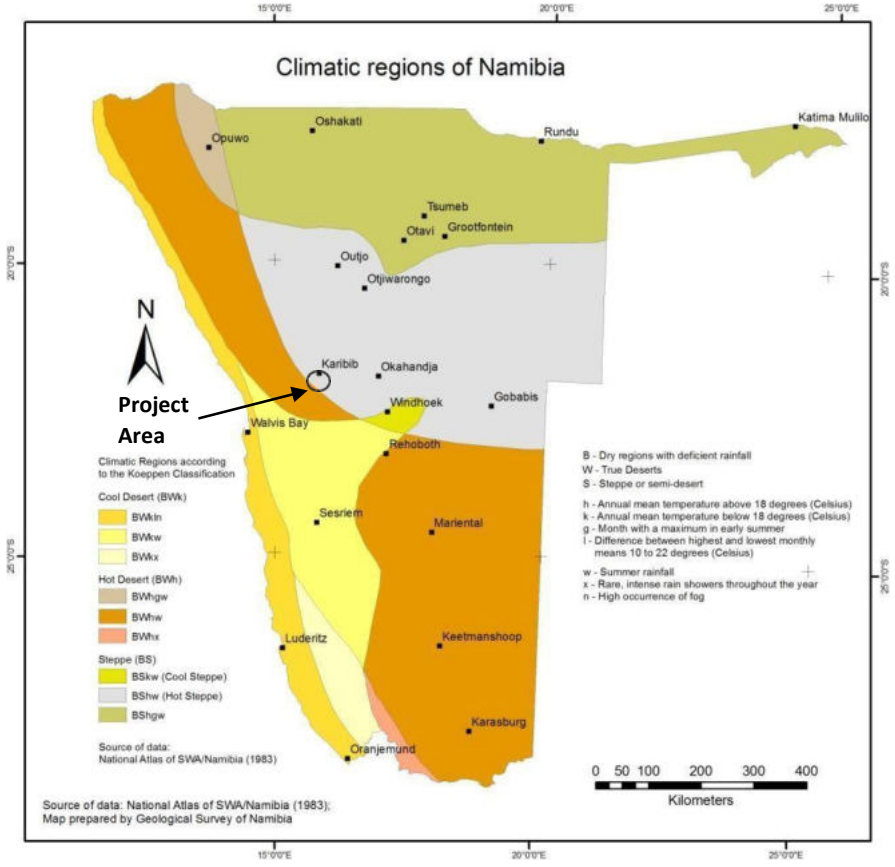

Figure 4: Climatic regions of Namibia indicating the climate in the project area (Geological Survey of Namibia).

4. Exploration methods

During the exploration process, compressed air powered Jack Hummers will be used to drill 5 mm diameter holes to a depth of 200cm. In order to create weak points for bulk sampling, the holes will be drilled in rectangle pattern. The collected bulk samples will shipped to The Republic of South Africa (RSA) for geotechnical and construction material tests. Besides drilling induced shallow cracks into the rocks no blasting will be conducted.

5. Exploration Equipments

The list of machines/equipment that will be used in the exploration process is given in **(Table 1)** below

Table 1: List of equipment that will be used during exploration

Item	Quantity
Jack Hummer	2
Perforater	1
Diamond Wire Saw	1
Compressor	2
Front End Loader	1
Generator	1

Item	Quantity
Water tank	1
4X4 vehicles	2
Diesel tank	1

6. Infrastructure Requirements

- **Waste disposal infrastructure**

Bins will be provided, and all litter will be disposed of at the nearest municipal dumping site (i.e. Karibib Town Council Dumping site). Industrial waste will be mainly wire, cable, drill bits, these items will be collected and removed from the sites. No unused machines, part will remain on site. Chemical Toilets (Mobi Loo) will be erected on sites for the use of the workers.

- **Proposed Roads**

The B2 will be used for transportation of equipments to and from the site and also the bulk samples collected for testing. The area is accessed by driving about 50km south west of Karibib along the D1952 road.

- **Water and Electricity Requirements**

A portable water tank will be available on site with a capacity of 10000 litres. Temporal showers will be availableon site.

7. Receiving Environment

Socio economic environment

The closest town to the exploration sites is Karibib. The economy of Karibib and the surrounding community relies heavily on mining activities for minerals and dimensions stone quarries within the vicinity. With regard to employment, about five to ten people will be recruited on this project during the exploration period and more during mining periods.

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Biodiversity

The EPL area falls within the semi-desert and savanna transition **(Figure 5)** which is characterised by a mix of savanna and desert species. While *Acacia* species are dominant in many parts, various stem-succulents such as *Commiphora* and *Cyphostemma* species occur. Various *Stipagrostis* species form the most important grass component.

The study area in general is regarded as "relatively low to moderate" in overall (all terrestrial species) diversity (Mendelsohn *et al.* 2002). Overall terrestrial endemism in the area on the other hand is "moderate to high"(Mendelsohn *et al.* 2002). The overall diversity and abundance of large herbivorous mammals (big game) is viewed as "moderate" with 3-4 species while overall diversity and density of large carnivorous mammals (large predators) is determined as "moderate" with 4 species expected – e.g. leopard, cheetah, spotted & brown hyena (Mendelsohn *et al.* 2002).

It is estimated that at least 81 species of reptile, 9 amphibian, 74 mammal and 183 bird species occur in the general/immediate Karibib area of which a high proportion are endemics.

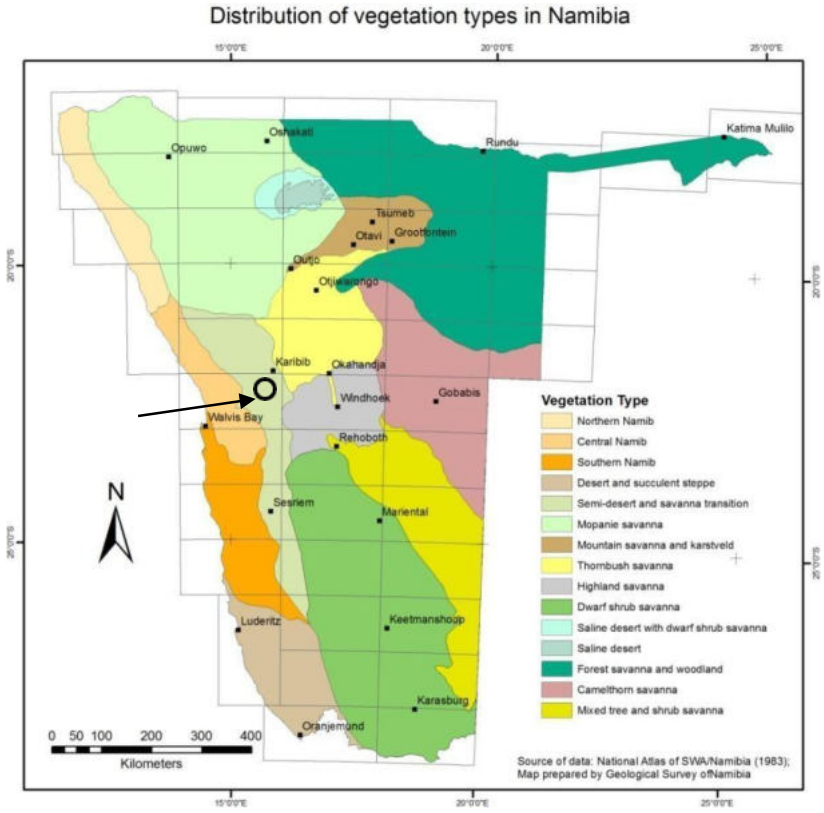

Figure 5: Distribution of vegetation types in Namibia indicating the project area in a semi-desert and savanna transition setting (Geological Survey of Namibia)

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Groundwater and surface water

The fact that most towns in the western Central Region are situated on or near rivers is a reflection of ground water availability in the area. Sufficient water for larger settlements can only be obtained by surface water storage in dams or from alluvial aquifers, while the potential of bedrock aquifers is very limited. This is partly due to the lowrainfall and lack of recharge, and partly to the generally unfavourable aquifer properties of Damara Sequence rocks (Christelis and Struchmier, 2001).

The Exclusive Prospecting Licence (EPL) 7854 is geologically situated on rocks of the Swakop Group in the Damara Spergroup and the area is hydrogeologically situated in the Central Namib-Windhoek Strip **(Figure 6).** These basins were demarcated based mainly on geological structures and groundwater flow.

Main targets for geological site selection are steeply dipping north-south trending fractures and joint zones, if possible in competent rocks, although feldspathic quartzites should be avoided. Moderate yields are also encountered in the marble and schist aquifers around Karibib.

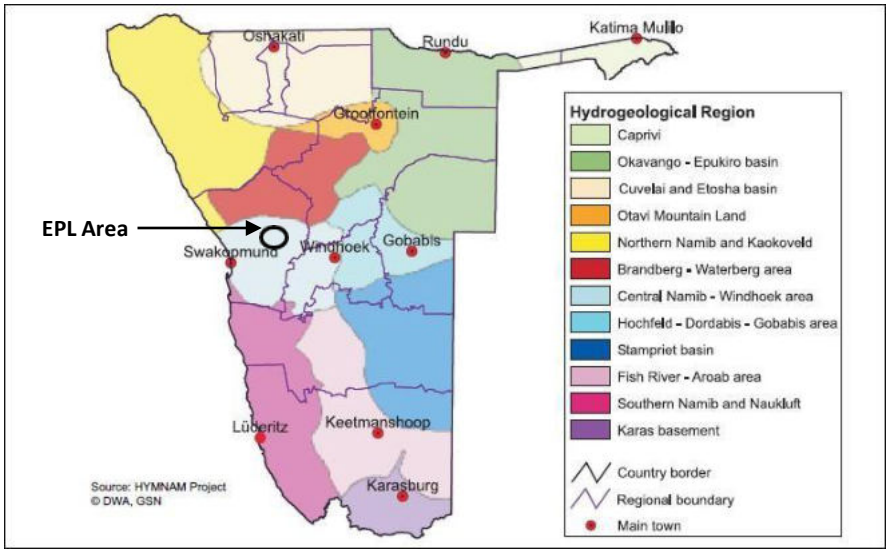

Figure 7: Hydrogeological Regions of Namibia (Christelis and Struchmier, 2001).

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Archaeology

There are various archaeological sites within and outside the boundary of the EPL. The archaeological sites are mainly rock arts. An assessment will be conducted to identify more sites thus recommendation of mitigation measures to ensure that these sites are not disturbed during the exploration process.

8. Potential Impact Identified

The key potential risks and opportunities of this exploration project:

a. Increase in employment opportunities

b. Pollution potential due to risks of oil spills

c. Loss of biodiversity and ecosystem services

d. Surface drainage related potential impacts, with associated erosion

e. Air, water and noise pollution

f. Landscape disturbances

This list only presents potential impacts. During full investigation phase the identified potential impacts will be assessed in detail to determine their relevance and significance of potential impacts.

More potential impacts may be identified during scoping when stakeholders provide their comments and these will be incorporated into the list and used to determine the final scope of the full investigation.

9. Scope of the Assessment

The scope of the assessment is envisaged to end in the scoping phase. The approach of the Scoping EIA and EMP is based on the Namibian Environmental Management Act (2007) and its regulations (2012).

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10. Public Consultation

Public consultation is a crucial part of the EIA process. This provides an opportunity for stakeholders or interested members of the public to find out more about what is being proposed, and to raise any issues or concerns.

For any question please contact **CENTRE FOR GEOSCIENCES RESEARCH** at the following contact details:

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Mineral Exploration

Registration and comments

I request to be registered as an Interested and Affected Party in respect of the proposed project. Please ensure that I receive all updates of information and that I am invited to the meetings, as well as kept fully informed of the EIA process.	
Name:	Telephone:
Organization:	Fax:
Designation:	Email:
Postal address/City:	
My interest in this project:	
Comments and matters of concern	
Signature:	Date:

Please return this completed document (with all requested details)

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