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BACKGROUND INFORMATION DOCUMENT

PREPARED FOR

UIS TIN MINING COMPANY (PTY) LTD

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BACKGROUND INFORMATION DOCUMENT

PROPOSED STAGE 2 EXPANSION OF THE PILOT TIN PROCESSING PLANT ON ML 134, ERONGO REGION, NAMIBIA.

1 PURPOSE OF THIS DOCUMENT

The purpose of this Background Information Document (BID) is to provide Interested and Affected Parties (I&APs) background to the proposed project and to invite I&APs to register as part of the Environmental and Social Impact Assessment (ESIA) process.

The proposed project involves the stage 2 expansion of the pilot tin processing plant on Mining Licence (ML) 134, held by Uis Tin Mining Company (Pty) Ltd, hereafter referred to as "the proponent or Uis Tin Mining".

Through registering for the project, all I&APs will be kept informed throughout the ESIA process, and a platform for participation will be provided to submit comments/ recommendations pertaining to the project.

This BID includes the following information:

- The proposed expansion of the pilot plant and increased production activities and location;
- The necessity of the project, potential benefits or adverse impacts anticipated;
- The alternatives to the project that will be considered and assessed;
- How the ESIA process works;
- The public participation process and how to become involved; and
- Next steps and the way forward.

2 DESCRIPTION OF PROPOSED PROJECT

2.1 Brief Introduction

Environmental Compliance Consultancy (ECC) has been engaged by the proponent to undertake an ESIA and an Environmental Management Plan (EMP) in terms of the Environmental Management Act, 2007 and its regulations. An environmental clearance application will be submitted to the relevant competent authorities, the Ministry of Mines and Energy (MME) and the Ministry of Environment, Forestry and Tourism (MEFT). The ESIA will also be conducted following the IFC standards.

2.2 Location

The proponent proposes the increase of production activities in stage 2 by expanding the pilot tin processing plant on ML 134 located near Uis in the Erongo Region, Namibia. Uis can be accessed by the C36 road from Omaruru, the C35 from Hentiesbaai or the C35 from Khorixas. The location of ML 134 (where the expansion is proposed) can be seen in Figure 1.

2.3 What is Proposed

The proponent is a mining company with a portfolio of tin assets in Namibia and South Africa. The Namibian registered company proposes several mechanical and process flow upgrades to components of the current pilot plant's processing and supporting infrastructure (i.e., upgrades to the Dense Medium Separation (DMS) 1 cyclone feed, inlet pressure system rates and constant moisture control within feed material, etc.) and therefore, an expected increase in the production rate from the current 80 Tons Per Hour (TPH) in stage 1 to 120 TPH in stage 2.

To implement the proposed upgrades, various other supporting infrastructure on-site require an upgrade to be able to sustain and support the planned expansion project. The additional changes and upgrades include the following:

- Upgrading the existing rudimentary sewerage effluent water collection and treatment system;
- The need for a new Clean Water Channel (CWC) (stormwater channel) and berm around the pilot plant;
- An upgrade of the existing settling and evaporation ponds; and
- A need for an increased supply of water (water demand of 150 000 cubic litres per year).

These upgrades equate to a life of operations of 20 years and will transform the pilot plant into an ore processing plant with a targeted tin recovery of 64% during operations.

2.4 Why is the Project Needed

Namibia is rich in natural resources and the minerals sector is a key contributor to the nations Gross Domestic Product in Namibia. The proposed expansion will create additional job opportunities and economic benefits. There are various important uses for tin, some of which include various uses within the food packaging, automotive, medical, electronics, and textiles industries.

2.5 Operation Phase

The proponent will have a water demand of 150 000 cubic litres per year for the proposed expansion and production rate increase on ML 134. This is required to operate stage 2 and covers a production output of 120 Tons Per Hour (TPH), which is predicted to be achieved through this stage. Water will be obtained from underground sources and an existing surface water body that was artificially created from historical mining. This water body is called the northern pit.

A rudimentary (Clarus Fusion Waste Water Treatment Plant (WWTP)) sewerage effluent water collection and treatment system exists on-site and there is the need to upgrade this system to operate comfortably with an enlarged capacity of personnel on-site. The system is maintained by an external service provider and must be upgraded as part of the expansion scope to accommodate additional volumes. Sewage waste is collected monthly by a local contractor and disposed of at the local sewage plant.

The expansion will also entail the installation of a new CWC stormwater channel and berm around the pilot plant as well as an upgrade of the existing settling and evaporation ponds.

Ore (cassiterite) will continue to be extracted from the open pit areas, which will supply the proposed stage 2 expansion within the ML 134 area with adequate volumes of ore. Open-pit 1 will continue to be mined and opened in a southerly direction and will eventually flow into pit 2.

All plant discard streams are dewatered before disposal, maximising water conservation and negating the need for tailings storage facilities. Coarse and fine plant discard material are dewatered on vibrating screens, while slimes are dewatered through thickener and filter press combination. The recovered water is ponded and reused in the process. Dewatered residue are co-disposed with mining waste rock.

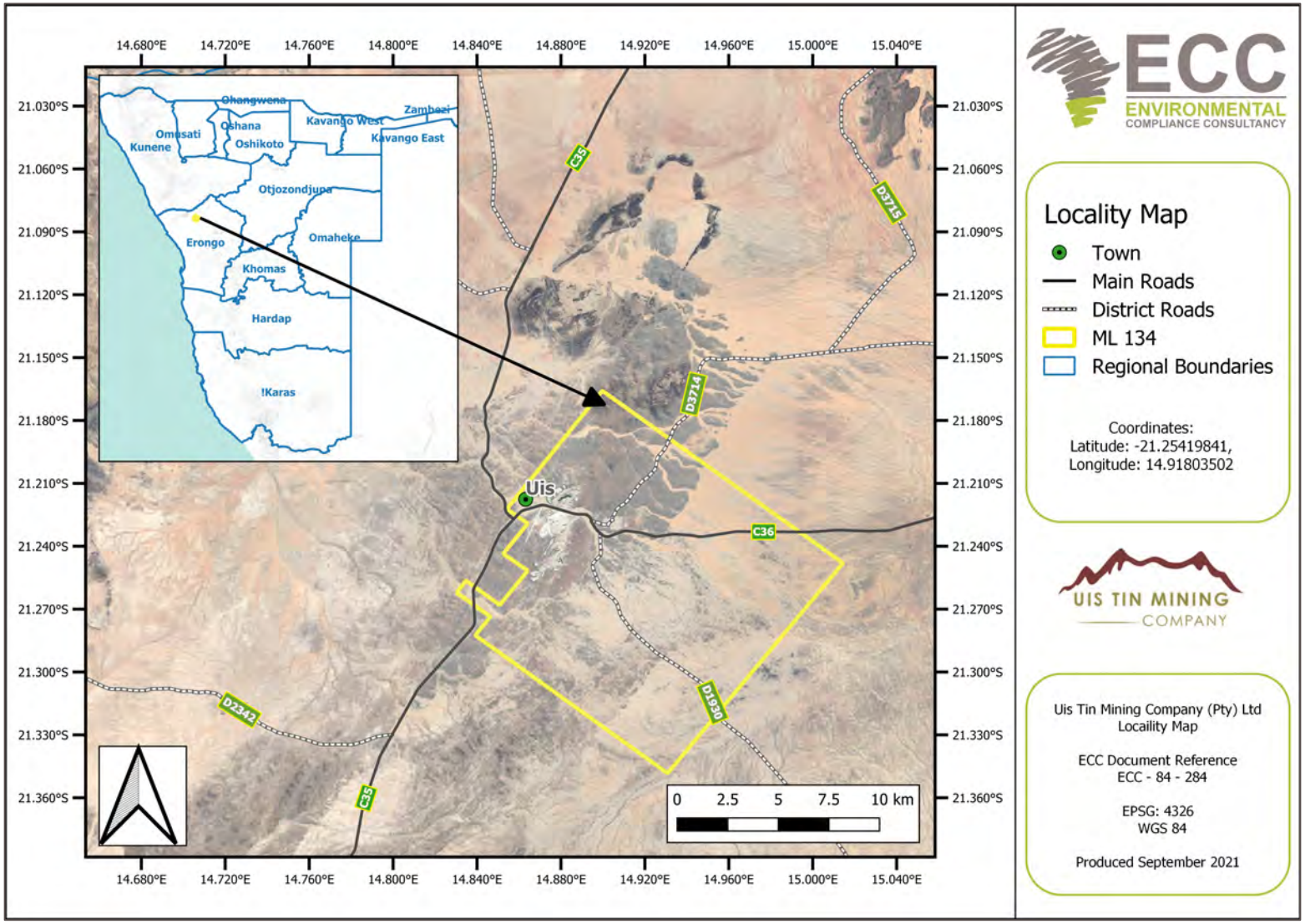

FIGURE 1 – LOCALITY MAP OF THE PROPOSED PROJECT

2.6 Potential Impacts of the Project

2.6.1 Socio-economic

The potential social impacts are anticipated to be of minor significance, these potential impacts may include the following:

- Potential to unearth, damage or destroy undiscovered heritage remains;
- Some jobs will be created as a result of the expansion project;
- Potential traffic issues during the construction and operational phases;
- There will be economic benefits due to increased investment and investor confidence in the Namibian minerals sector;
- Minor disruption to the neighbouring residents and sensitive receptors, including some potential increase in noise and dust levels especially during the construction, blasting and decommissioning phases of the project; and
- Potential poaching/ livestock theft impacts due to the increased movement of people in the area.

2.6.2 Environmental

Some of the potential environmental impacts are anticipated to be of minor significance, and those that may occur shall be contained within the ML site, these potential impacts may include the following:

- Clearing of vegetation during the expansion of the pilot plant;
- Potential Impacts on biodiversity and migratory patterns of fauna;
- Use of resources, including groundwater;
- Potential ground and surface water pollution; and
- Risk of spillage of hydrocarbons, chemicals or other dangerous goods/materials.

There may also be impacts of a more significant nature that will require further investigation during the ESIA process. The impacts proposed at this stage include, but are not limited to:

- Potential mine drainage and contaminant leaching: Potential changes to groundwater and surface water quality as a result of mine drainage, chemical spillages and contamination;
- Potential groundwater drawdown both locally and over a wider area due to pit dewatering, and groundwater abstraction for water supply;
- Erosion of soils and mine wastes into surface water streams or sediment-laden surface run-off that collects in natural channels;
- Potential impacts on air quality, key indicator sources include mobile, stationary and fugitive sources within mine and processing operations;
- Noise and vibration impacts; and
- Project potential impact towards climate change due to the contribution of carbon emissions.

3 CONSIDERATION OF ALTERNATIVES

Best practice environmental assessment methodology calls for consideration and assessment of alternatives to a proposed project.

No alternative site has been considered due to this being an existing mine: however, by using process innovation and available new technologies, the proponent aims to turn a mine that was once deemed non-feasible into a feasible state with a larger production output. Mechanical and processing upgrades to existing infrastructure shall form the core of the expansion process.

4 THE ENVIRONMENTAL ASSESSMENT PROCESS

This ESIA, conducted by ECC, is undertaken in terms of the Environmental Management Act, 2007 and its regulations. The process followed in this ESIA is set out in the flowchart in Figure 2.

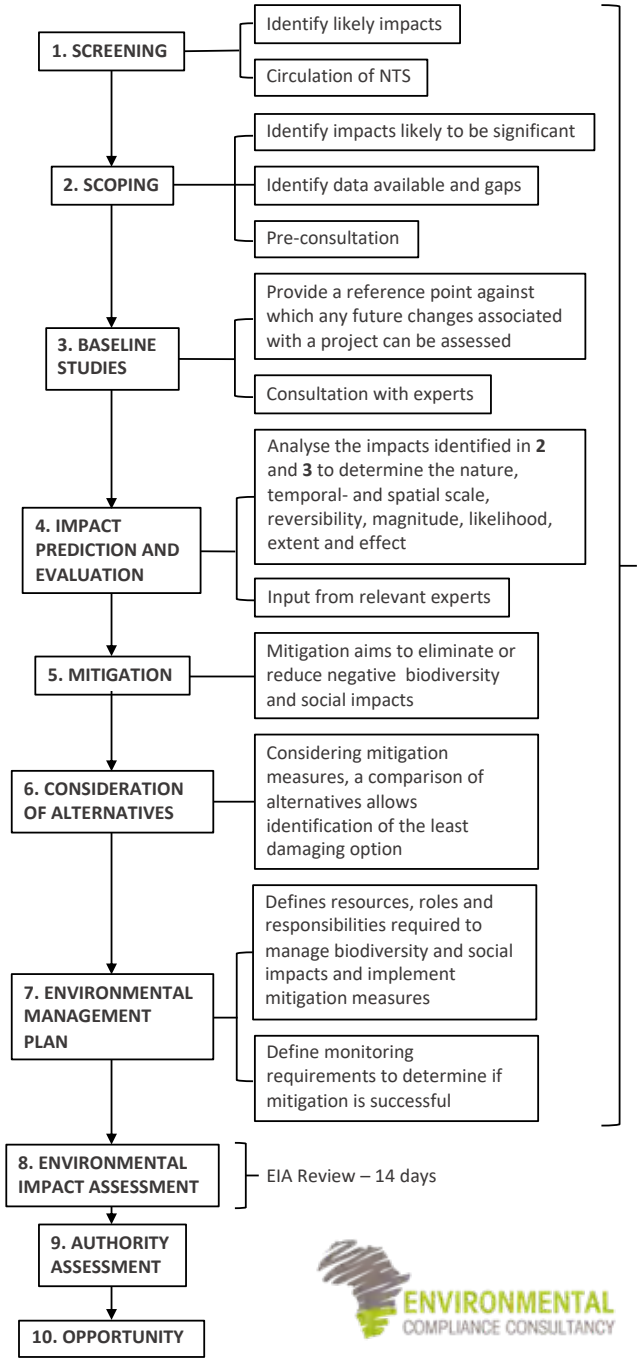

FIGURE 2 - FLOWCHART OF THE ENVIRONMENTAL ASSESSMENT PROCESS

4.1 SCREENING

A review of the proposed project screening findings against the listed activities was conducted; the findings of which are summarised below.

The potential environmental and social effects are anticipated to be of minor to medium significance (with mitigation), and those that may occur shall be contained within the ML 134 site and the town of Uis.

ENERGY GENERATION, TRANSMISSION AND STORAGE ACTIVITIES

(1.a) The construction of facilities for the generation of electricity;

- External diesel generators are in use on-site as an emergency backup power supply source to skeleton operations only in the event of a power failure.

(1.b) The construction of facilities for the transmission and supply of electricity;

- An existing 66-kilovolt powerline and associated infrastructure located within the Accessory Work Permit area of the ML will continue to be used. No upgrades are needed for the time being.

WASTE MANAGEMENT, TREATMENT, HANDLING AND DISPOSAL ACTIVITIES

(2.2) Any activity entailing a scheduled process referred to in the Atmospheric Pollution Prevention ordinance, 1976.

- Mining activities generate dust fallout which is being monitored on a monthly basis.
- Potential for noxious gas generation and emission.

(2.3) The import, processing, use and recycling, temporary storage, transit or export of waste.

- A rudimentary (Clarus Fusion WWTP) sewerage effluent water collection and treatment system exists on-site and is maintained by an external service provider and must be upgraded as part of the expansion scope to accommodate additional volumes. Sewage waste is collected on a monthly basis by a local contractor and disposed of at the local sewage plant.
- An industrial waste collection facility is in use within the processing plant physical boundaries.
- Overburden and plant discard material are transported and disposed of on the WRD site located within the mining licence footprint.
- Solid and Hazardous waste collection points are in use on the site.

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.

- The current operations are permitted under an approved mining licence (ML 134).
- The resource in this case Tin is extracted, then manipulated within the processing plant and refined to tin metal sheets.

(3.2) Other forms of mining or extraction of any natural resources whether regulated by law or not.

(3.3) Resource extraction, manipulation, conservation and related activities.

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.

- There is the possibility of vegetation that may be cleared for the possible creation of new roads or new laydown areas.

WATER RESOURCE DEVELOPMENT

(8.1) The abstraction of ground or surface water for industrial or commercial purposes.

- Mining operations will continue to utilize groundwater and surface water sources for their processing requirements, dust suppression and human consumption.

(8.2) The abstraction of groundwater at a volume exceeding the threshold authorised in terms of a law relating to water resources.

- Currently, there is an abstraction permit that allows for a 75 000 cubic meters abstraction threshold per year valid for two years. An amendment application will be submitted to increase abstraction to 150 000 cubic meters per year to supply production needs.

(8.5) Construction of dams, reservoirs, levees and weirs.

- The expansion of the pilot plant project will entail the installation of a new (CWC) / stormwater channel and

berm around the pilot plant as well as an upgrade of the existing settling and evaporation ponds.

(8.6) Construction of industrial and domestic wastewater treatment plants and related pipeline systems.

- The pilot plant has an operational sewage effluent collection, treatment and disposal system in place. However, the need to upgrade this system exists to operate comfortably at an enlarged capacity of personnel on-site.

(8.8) Construction and other activities in watercourses within flood lines.

(8.9) Construction and other activities within a catchment area.

- The project falls within the Ugab catchment area.

HAZARDOUS SUBSTANCE TREATMENT, HANDLING AND STORAGE

9.1 The manufacturing, storage, handling or processing of a hazardous substance defined in the Hazardous Substances Ordinance, 1974.

- Petrol, diesel, liquid petroleum gas or paraffin will be stored for the vehicles and plants to function
- A diesel storage tank is installed on-site.
- Explosives are used for blasting purposes and may be stored on-site.

9.2 Any process or activity which requires a permit, licence or another form of authorisation, or the modification of or changes to existing facilities for any process or activity which requires an amendment of an existing permit, licence or authorisation or which requires a new permit, licence or authorisation in terms of a law governing the generation or release of emissions, pollution, effluent or waste.

- Licences will be obtained for all hazardous substances that will need to be stored on the site and will be used in the mining process. Licences will need to be obtained for facilities that will be storing these substances.

(9.4) The storage and handling of dangerous goods, including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of more than 30 cubic meters at any one location.

4.2 SCOPING

Due to the nature of the proposed project, and the implementation of industry best practice mitigation measures during the expansion of phase 2 of the project, the effects on the environment and society are expected to be minimal and localised, with mitigation. The main concerns are the impacts associated with ground and surface water pollution and air quality.

4.3 BASELINE STUDIES

For the proposed project, baseline information was obtained through a desk-based study, Specialists studies and site verification processes through focusing on the environmental receptors that could be affected by the proposed project. ECC will also engage with stakeholders, I&APs and the proponents to seek input into the assessment.

4.4 IMPACT ASSESSMENT

Impacts will be assessed using the ECC ESIA methodology. The ESIA will be conducted in terms of the Environmental Management Act, 2007 and its regulations. ECC's methodology for impact assessments was developed using IFC standards in particular Performance Standard 1 'Assessment and management of environmental and social risks and impacts' (IFC 2012, 2017) and Namibian Draft Procedures and Guidance for ESIA and EMP (GRN, 2008) including international and national best practice with over 25 years of combined ESIA experience.

4.5 Environmental Management Plan

An EMP shall be developed for the proposed project setting out auditable management actions for Uis Tin Mining to ensure careful and sustainable management measures are implemented for their activities in respect of the surrounding environment and community.

4.6 Public Participation and Advertising

Public participation is an important part of the ESIA process; it allows the public and other stakeholders to raise concerns or provide valuable local environmental knowledge that can benefit the assessment, in addition, it can aid the design process. This project is currently at the scoping phase and public participation phase.

At this phase ECC will perform the following:

- Identify key stakeholders, authorities, municipalities, environmental groups and interested or affected members of the public, hereafter referred to as I&APs;
- Distribute the BID for the proposed project (this document);
- Advertise the environmental application in two national newspapers;
- Place notices on-site at or near the boundary;
- If required host a public meeting to encourage stakeholder participation and engagement, and provide details of issues identified by the environmental practitioner, stakeholders and I&APs;
- Record all comments of I&APs and present such comments, as well as responses provided by ECC, in the comments and responses report, which will be included in the scoping report that shall be submitted with the application, and
- Circulate I&AP comments to the project team for consideration of project design.

Comments must be submitted in writing and can be emailed using the details in the contact us section below.

CONTACT US

We welcome any enquiries regarding this document and its content. Please contact:

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