SUMMARY OF THE PROPOSED MINING OPERATION.

1. **List of activities applied for**

   All prospecting related activities for the exploration of base metals by means of drilling:

• Geological investigations	-	NEMA GNR 983 Listed 1 Activity 20
• Geo-physical surveys	-	NEMA GNR 983 Listed 1 Activity 20
• Drilling	-	NEMA GNR 983 Listed 1 Activity 20
• Drilling sludge	-	NEMA GNR 983 Listed 1 Activity 20
• Sampling	-	NEMA GNR 983 Listed 1 Activity 20
• Drill traverses	-	NEMA GNR 983 Listed 1 Activity 20
• Rehabilitation	-	NEMA GNR 983 Listed 1 Activity 20
• Ablution facility	-	NEMA GNR 983 Listed 1 Activity 20
• Vehicle storage	-	NEMA GNR 983 Listed 1 Activity 20
• Site camp/Equipment storage	-	NEMA GNR 983 Listed 1 Activity 20
• Hydrocarbon storage	-	NEMA GNR 983 Listed 1 Activity 20
• Domestic waste facility	-	NEMA GNR 983 Listed 1 Activity 20
• Access road	-	NEMA GNR 983 Listed 1 Activity 20

2. **Scale and extent of activities**

• Geological investigations	-	72 150.4587 ha
• Geo-physical surveys	-	
• Drilling	-	0.32 ha
• Drilling sludge	-	> 5 m³
• Sampling	-	0.016 ha
• Drill traverses	-	0.26 ha
• Rehabilitation	-	0.606 ha
• Ablution facility	-	0.0008 ha
• Vehicle storage	-	
• Site camp/Equipment storage	-	> 1 ha
• Hydrocarbon storage	-	> 30 m³
• Domestic waste facility	-	0.0008 ha
• Access road	-	

3. **Typical impacts of activities**
   - Vegetation loss – a total area of 6 060 m² will be cleared for prospecting related structures (Drill sites, drill sludge facility, sampling, traverses) and 1 0046 m² for camp site and other related structures (camp, storage and domestic and waste facilities), establishment. The impact can be regarded as low to medium, with no long term effects. If rehabilitation of these areas is done correctly full recovery of the environment is possible.

- Noise disturbance – during drilling is noise generated by the machinery. Again the noise will be much localized and should have no impact on the surrounding environment.

- Air quality loss – dust will be generated during the drilling activities. The dust generated may have an impact on the air quality, but with localized effects and should not have an effect on the surrounding environment. For this the impact can be regarded as low.

- Soil pollution – chemical soil pollution is always a possibility during mechanical prospecting operations. Working machinery and storage facilities bears a risk for chemical spillage and the impact thereof may be very severe.

- Soil compaction – vehicles driving off-road bears a great risk to the trampling of vegetation and the compaction of the soil. The camp site area will also become compacted during the duration of the project. If not rehabilitated vegetation re-growth is unforeseen and poses a medium risk to the environment.

- Littering pollution – littering during the prospecting activities can happen and may have a low to medium impact on the environment depending on the type of littering and the remediation thereof.

- Water pollution – chemical contaminated water from the drilling operations and storage facilities bears a risk to the environment. This impact should always be regarded as high and proper mitigation and/or remediation measures should be in place.

4. Duration of each activity

All of the listed activities will be occurring concurrently and the time frame applied for at the Department of Mineral Resources is 5 years which is the duration of the permit.

5. Details regarding intended operation

The major issues to be addressed during the prospecting phase will include:

- Definition of surface distribution and sub-surface thickness of the ore horizon
- Obtaining information on ore minerals and grades
- Definition of reserves and resources
- Information for future mining and processing activities
- Delineation of suitable localities for plant, tailings and other infrastructure
- Evaluation of capital and operational requirements and cost of the project
- Environmental and impact assessment
- Financial aspects of the projects and the property

In short, the programme will provide a complete survey and understanding of the economic geology of the prospecting area. It would also define the key technical and financial factors and allow a professional evaluation of the property.

There are several other known mineral deposits in the general area, most importantly for pegmatite minerals but all of this fall outside the proposed license area. Due to the size and number of unknown factors on the property, this application employs a phased approach, where the work programme is divided into several sequential sections. At the end of each section there will be a brief period of compiling and evaluating results. These results not only determine whether the project proceeds, but also the manner in which it will go forward. Essentially, the Company will only action the next stage once satisfied with the results obtained. In addition, smaller, non-core parts of the work programme will only be undertaken if warranted.

Initial prospecting will be carried out by the company itself, utilizing its own in-house geologist and engineers to conduct and oversee the work. The activities detailed below are set out according to phases that would be applied sequentially:-

- Phase 1 – Geological investigations (24 months)
    - Aerial surveys / Imagery
      Imagery is one of the fields that has shown vast improvements in recent years. Today this is a powerful geological tool capable of providing a range of pertinent information. Newer methods may also show large scale features such a lineaments and fault/fracture patterns not discernable at ground level. Different image methods and suppliers will be evaluated and an appropriate package secured in order to delineate the extension of the palaeo-drainage and other macro-features which may have influenced deposition and occurrence.

    - Geological mapping
      The geological surface mapping exercise will be conducted over the property and will include the mapping of the soil/sand overburden and where accessible, particular attention will be paid to basement lithologies. All geological features will be recorded and all result compiled for correlation purposes. This also applies to any occurrence of the tungsten-bearing wolfram schists.

- Geophysical & Radiometric surveys

  As a secondary phase to the airborne work, ground surveys would give better definition to possible mineralized area. A preliminary hand-held magnetometer survey followed by either electro-magnetics (EM) or gravity could accurately determine the bedrock profile (and hence limits of mineralization) and yield the best results. It will only be possible to be more specific about methods to be employed after the aerial work.

  At a further detailed stage, radiometric e from of T-cup surveys maybe employed prior to the drilling programme and a valuable tool to locate mineralization.

- Data compilation

  All geological, geochemical, geophysical and topographic information will be captured in electronic format. This will allow for the superimposition of the various layers of information (geology, geophysics and topography) and will form the basis for the interpretation of the information generated, resulting in the further definition of the potential 3D spatial distribution of any mineralization. It will further enable the creation of a GIS database. Upon completion of the data capture, a model will be generated defining the spatial distribution of the bedrock, the ore and the surrounding country rock.

- Phase 2 – Drilling and metallurgical test work

  Although two different types of drilling maybe applied on the concession, they both have similar operations. In all instances drilling would be:
  - Under close supervision of a geologist
  - Conducted along best practice guidelines
  - Minimize environmental disturbance

  In this area, most of the target horizons are relatively close to surface and hence drill holes should be quite short, probably in the range of 20 to 30 m maximum

  - Air Core and Sonic drilling

    Air Core or Sonic drilling are probably the most definitive and powerful exploration tools in this soft, unconsolidated sediment environment. Under the direct supervision of a resident geologist, fairly wide spaced holes (probably 200 m apart) would be sited over interesting areas and hot spots located from earlier aerial and ground surveys. Both methods usually create entire cores with outstanding overall recovery. Cores are then dried, split for assay and process test work. All cores would be photographed, logged and a sample taken for analysis on a 1 m interval from all target horizons

Both these methods have the twin advantages of speed and very low costs compared to conventional hard rock drills. It is aimed to use drilling to accurately define mineralized zones or horizons. Drill spacing's would be initially be around 200 m and then closed down to 50 m for resource generation. The target lithology is usually quite shallow and maximum depths drilled are not expected to exceed 30 m. Mineralized core or core from the target zone (even if it does not show visible ore) after logging and photographing, would be halved using a core splitter. One half being put aside for sample testing which included both assay and metallurgical work (if selected on a proportional basis.) The remaining half forms part of the permanent record which is loaded in a core tray in the core shed.

Geologically selected hole maybe picked for down-hole surveying using portable geophysics for magnetic and radiometric expression. This is the last geophysics to be carried out. Since it generated a larger and more precise sample it is also key for preparing any metallurgical samples. Collars would be marked with a numbered and dated steel peg and exact positions recorded on a GPS. All sites are rehabilitated and photographed as results became available.

- Metallurgical sampling
  This would be scheduled to coincide with the mid-section of the programme as it requires the commencement of drilling to generate most of the sample. This sample must be carefully prepared to cover all different ore types and a proportional composite for test work and grade determination. Such sample would be made up from split cores from the drilling. The samples would undergo bench and pilot scale investigation to determine optimal crushing, screening and solubility characteristics. In particular it would be tested by the uranium ores. This work would be carried out of site, probably at a metallurgical laboratory in Johannesburg. Grade information will be generated to verify the earlier sampling results by treating samples through the smaller scale recovery circuit utilizing the same method as would be considered for commercial operations.

- Rehabilitation and Environmental aspects
  Early phases of prospecting will have minimal impact on the environment and hence little rehabilitation should be necessary. Fortuitously, this area is duplicated by large tracts of land on all sides which offer the same habitat to fauna and flora. It is also partly covered by sand and the prospecting is of such a nature that for the initial work there will be minimal change to the original land surface. Consequently there are no foreseen major environmental issues and no expectation of longer term impacts.

Phase 2 would be more invasive but will only to a relatively small extent and the impact would be minimized through proper supervision. Drill rigs would utilize existing roads and strong control exercise over oil usage and sump pools. Impervious sheeting would be laid underneath the rig and sump area to catch any spills and the contaminated ground removed to an approved dump site. Original soils would finally be spread over each drill location. Overall the disturbance to the land surface would be minimal and the drilling itself only remove a very small amount of ground for sampling and assay.

In any event, a detailed environmental management programme will be carried out by independent EAP along the guidelines required by the relevant authorities. The rehabilitation will be guided by and comply with the recommendations of the EMPr as per Prospecting Regulations.

- Completion and Pre-feasibility / Feasibility studies
  Any programme such as this culminates with an overall completion study and in this caste the objective would be to provide at least a pre-feasibility study at a suitably detailed level for planning and to enable the commencement of financing and development.

  During the fifth and final year all data will be compiled, interpreted, summarized and evaluated in a final report. Several additional studies will need to be completed in order for an informed decision to be made on whether or not to proceed with development. Aside from all the information already discussed, expert input is frequently required in geohydrology, rock mechanics, statistical grade distribution, hydro-metallurgy and other specialized fields. In addition, extra specialized studies have been allowed for the cover provision of services (power, water, labour), logistics, consumables and all other items necessary in a pre-feasibility study. Consequently while others costs decline in the final year, the cost of consultants is increased as much of the work is traditionally outsources – both as an independent verification and because few companies can keep so man specialist talents on their books.

  A direct follow-on from the report is the ability to start looking at various funding alternatives, be they private, public or listed. In mine development this is a normal sequence because of the amounts of money involved that the latter two sources of finance predominate. These venues often require separate reporting and the creation of relationships with key financial advisors, stockbrokers and fund managers.

The final feasibility report will form the backbone of the mining license application, along with the Social and Labour plan and detailed environmental studies (including specialists studies) and any other requirements as laid down in the regulations or by the DMR.