

ANNEXURE A

SUMMARY OF THE PROPOSED PROSPECTING OPERATION.

1. List of activities applied for

All prospecting and prospecting related activities including:

• Bulk sampling	–	NEMA GNR 983, Listed 1, Activity 20
• Topsoil dump	–	NEMA GNR 984, Listed 2, Activity 19
• Overburden dump	–	NEMA GNR 984, Listed 2, Activity 19
• Stock piles	–	NEMA GNR 984, Listed 2, Activity 19
• Waste dumps	–	NEMA GNR 984, Listed 2, Activity 19
• Settling dams	–	NEMA GNR 984, Listed 2, Activity 19
• Office site	–	NEMA GNR 983, Listed 1, Activity 20
• Plant site	–	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
• Chemical storage	–	NEMA GNR 983, Listed 1, Activity 20
• Diesel 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
• Mine roads	–	NEMA GNR 983, Listed 1, Activity 20

2. Scale and extent of activities

• Bulk sampling	–	± 0.18 ha
• Topsoil dumps	–	± 0.02 ha
• Overburden dumps	–	± 0.02 ha
• Stock piles	–	± 0.02ha
• Waste dumps	–	± 0.02 ha
• Settling dams	–	± 1 ha
• Berms	-	± 0.056 ha
• Office site	–	± 0.0025 ha
• Plant site	–	± 0.04 ha
• Ablution facility	–	± 0.0008 ha
• Vehicle storage	–	± 0.0025 ha
• Chemical storage	–	± 0.0025 ha
• Diesel storage	–	± 0.0008 ha
• Domestic waste facility	–	± 0.0008 ha
• Access road	–	-
• Mine roads	–	-

3. Typical impacts of activities

- Vegetation loss – a total area of 2 000 m² will be cleared for mining related structures (excavations, topsoil dumps, overburden dumps, stock piles, and waste dumps) and 499 m² for plant, and office site 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 excavation, hauling and mineral processing activities 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 excavating and hauling 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 – heavy vehicles driving off-road bears a great risk to the trampling of vegetation and the compaction of the soil. The plant site area will also become compacted during the duration of the mine. If not rehabilitated vegetation re-growth is unforeseen and poses a medium risk to the environment.
- Littering pollution – littering during the mining 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 mineral processing plant 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 2 years where after it can be renewed for another year.

5. Details regarding intended operation

Geological surveying:

The geological investigations comprises of collecting various geological literature relating to the area of interest. The literature may be obtained from relevant books and journals. Information can also be acquired from surrounding mining companies. Satellite imagery and maps can be useful to target possible mining area

Geological Mapping

Field mapping the map the surface of the application area will be done to delineate the location of possible gravel beds. Satellite imagery and geological maps helps to determine certain mining areas.

Geological modelling and geological report

A written report including all information regarding the ground formations, diamond recovery locations, the grade and value thereof. It also suggests future planning for the project.

Excavations

A Minimum of 9 bulk samples with an extent of 20 m X 10 m X 5 m will be taken. The aim of the bulk sample is to determine the depth of gravel, the diamond distribution, as well as the diamond grade and value.

Bulk sampling is done by means of machinery and labour. Excavators are used to remove the topsoil as well as possible diamondiferous gravel deposits. The gravels go through a scrubber and into a rotating pan, where it is mixed with water to obtain a puddle.

As a result of the mixing and rotating in the pan, the heavier minerals are pushed towards and extraction point and tapped, called concentrate. The lighter material remain in suspension and overflows out of the centre of the pan. The concentrate undergoes a final recovery by grease table and hand sort.

Rehabilitation

Rehabilitation will be an integral part of the operation, where only one excavation will be open at a time. For cost effective mining, no dumpers will run empty and the remnants from the recovery plant will be transported back to the excavation for backfilling purposes. Each excavation will be filled and covered with the overburden and topsoil for final rehabilitation.

The aim is to leave the area after closure to be as close to the surrounding environment as possible with as less possible impacts on the environment as can be.