# REHABILITATION AND CLOSURE PLAN

The Mining Right of Diamonds, Diamonds General, Diamonds Alluvial and Kimberlite near Prieska on Remainder of Portion 1 of the farm Uitdraai 33, Registration Division Prieska RD, Northern Cape Province.

Reference No. : NC30/5/1/2/2/10099MR

Prepared by



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# 1. Introduction

Milnex 189 CC was contracted by Prieska Diamond Mining (Pty) Ltd as the independent environmental consultant to undertake the Rehabilitation & Closure Plan for the Environmental Assessment process for Mining Right for the removal of Diamonds, Diamonds General, Diamonds Alluvial and Kimberlite near Prieska on Remainder of Portion 1 of the farm Uitdraai 33, Registration Division Prieska RD, Northern Cape Province.

Milnex 189 CC is a specialist environmental consultancy with extensive experience in the mining industry which provides a holistic environmental management service, including environmental assessment and planning to ensure compliance with relevant environmental legislation. Milnex 189 CC benefits from the pooled resources, diverse skills and experience in the environmental and mining field held by its team that has been actively involved in undertaking environmental studies for a wide variety of mining related projects throughout South Africa. The Milnex 189 CC team has considerable experience in environmental impact assessment and environmental management, especially in the mining industry.

The EAP, Danie Labuschagne, which conducted the desktop study has experience in consulting in the environmental field. His key focuses are on environmental assessment, advice and management and ensuring compliance to legislation and guidelines, GIS and Water Use Licenses. He is currently involved in undertaking EIAs for several projects across the country. He's key qualifications include:

- Masters Degree in Environmental Management and Geography, North West University, SA.
- Honors in Environmental Management (Hons.Env.Man) (Cum Laude), North West University (NWU), SA.
- B. Sc in Geology and Geography, North West University (NWU), SA.
- Implementing Environmental Management Systems (ISO 14001) course from the CEM (Centre for Environmental Management).
- Environmental Law for Environmental Managers course from the CEM (Centre for Environmental Management).
- Environmental Management Systems ISO 14001 Audit: A Lead Auditor Course based on ISO 19011 and ISO 17021(SAATCA Registered) course at the CEM (Centre for Environmental Management).

# 2. Rehabilitation and Closure Plan

In order to obtain a self-sustainable and stable closure plan, the following will be done where natural grassland had been disturbed during the prospecting process.

## (a) Rehabilitation and Closure

The clearing of soil surface areas would be restricted to what is really necessary for prospecting or the construction of infrastructure. During the closure of these sites, or where vegetation is lacking or compacted, the areas would be ripped or ploughed and levelled in order to re-establish

a growth medium and if necessary appropriately fertilised to ensure the regrowth of vegetation and the soil ameliorated based on a fertilizer recommendation (soil sample analysed).

#### (i) <u>Rehabilitation of access roads</u>

- Whenever a prospecting right is suspended, cancelled or abandoned or if it lapses and the holder does not wish to renew the right, any access road or portions thereof, constructed by the holder and which will no longer be required by the landowner/tenant, shall be removed and/or rehabilitated to the satisfaction of the Regional Manager.
- Any gate or fence erected by the holder which is not required by the landowner / tenant, shall be removed and the situation restored to the pre prospecting situation.
- Roads shall be ripped or ploughed, and if necessary, appropriately fertilised (based on a soil analysis) to ensure the regrowth of vegetation. Imported road construction materials which may hamper regrowth of vegetation must be removed and disposed of in an approved manner prior to rehabilitation.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analysed and any deleterious effects on the soil arising from the prospecting operation, be corrected and the area be seeded with a seed mix to the Regional Manager's specification.

## (ii) <u>Rehabilitation of the surface trench/pitting site</u>

On completion of operations, all buildings, structures or objects on the camp/office site shall be dealt with in accordance with section 44 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002), which states:

(1) When a prospecting right, mining right, retention permit or mining permit lapses, is cancelled or is abandoned or when any prospecting or mining operation comes to an end, the holder of any such right or permit may not demolish or remove any building, structure, object -

(A & B) which may not be demolished in terms of any other law;

- (C) which has been identified in writing by the Minister for purposes of this section; or
- (D) which is to be retained in terms of an agreement between the holder and the owner or occupier of the land, which agreement has been approved by the Minister in writing.
- (2) The provision of subsection (1) does not apply to bona fide mining equipment which may be removed

After all the foreign matter has been removed from the sites, the excavations shall be backfilled with subsoil, compacted and levelled with previously stored topsoil. No foreign matter such as cement or other rubble shall be introduced into such backfilling.

On completion of the prospecting operation, the above areas shall be cleared of any contaminated soil. The surface shall then be ripped or ploughed to a depth of at least 300mm and the topsoil previously stored adjacent the site, shall be spread evenly to its original depth over the whole area. The area shall then be fertilised if necessary (based on a soil analysis). The site shall be seeded with a vegetation seed mix adapted to reflect the local indigenous flora. Where the site has been rendered devoid of vegetation/grass or where soils have been compacted owing to traffic, the surface shall be scarified or ripped.

Photographs of the camp and office sites, before and during the prospecting operation and after rehabilitation and closure, shall be taken at selected fixed points and kept on record for the information of the Regional Manager.

Photographs of the different trench sites, before and during the prospecting, after rehabilitation and closure, shall be taken at selected fixed points and kept on record for the regional manager's information.

Rehabilitation of the new topographical landscape in such a way that it would blend in with the surrounding landscape and allow normal (controlled) surface drainage to continue.

Implement water control systems in order to prevent erosion. Seed the area (see C. (below) for recommended seed mixture).

Visual impact would be addressed by means of;

- Re-vegetation (grasses);
- Removal of any building, scrap, domestic waste, etc. that would
- otherwise contribute to a negative visual impact.

#### (iii) Fertilising of Areas to be rehabilitated

If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analysed and any deleterious effects on the soil arising from the prospecting operation be corrected and the area be seeded with a seed mix to his or her specification.

#### (iv) Seeding of Grass Seed Mixture and planting of Woody Species

The eventual seed mixture takes into account the availability of seed, different soil situations and the prevailing climatic conditions of the area. The following mixture will be applicable to the borehole on prospecting site:

Cenchrus ciliaris

Cynodon dactylon

Digitaria eriantha

Heteropogon contortus

Panicum maximum

#### (b) Demolition of infrastructure/buildings

On completion of operations, all buildings, structures or other on the prospecting terrain shall be dealt with in accordance with section 44 of the Mineral and Petroleum Resources Development Act,2002 (Act No. 28 of 2002).

#### (c) Invasive and alien control programme

Develop and implement an invasive and alien control programme to control the spread of weeds and other invasive species. Eradicate exotic weeds and invader species if it invades the terrain. All illegal invader plants and weeds shall be eradicated as required in terms of Regulation 15 & 16 of the Act on Conservation of Agricultural Resources, 1983 (Act no. 43 of 1983) which list the plants.

## 3. Closure objectives and their extent

The main closure objective of for the prospecting site is to rehabilitate the whole prospecting site in such a way to ensure that the new man-made topographical landscape would blend in with the surrounding landscape, not pose a safety hazard to humans and animals, while at the same time allow for alternative land uses. Establish a self-sustaining and stable vegetation cover in order to mitigate the visual impact, to control erosion and to create some habitat for animals. The rehabilitated environment also needs to be aesthetically acceptable according to the principle of BPEO. Another main objective is to manage the surface water in such way that an acceptable water standard is achieved when a closure certificate is issued.

Prieska Diamond Mining (Pty) Ltd will ensure that the prospecting Operation/Sites are:

- Neither a danger to public health and safety nor to animal health and safety;
- Not a source of any pollution;
- Stable (ecological and geophysical);
- Rehabilitated to the state that is suitable for the predetermined and agreed land use;
- · Compatible with the surrounding biophysical environment;
- A sustainable environment;
- · Aesthetically acceptable;
- Not an economic, social or environmental liability to the local community or the state now or in the future.

Prieska Diamond Mining (Pty) Ltd will furthermore:

- ensure that the physical and chemical stability of the rehabilitated and closed prospecting site will be such that risk to the environment is not increased by naturally occurring forces to the extent that such increased risk cannot be contended with by the installed measures;
- subscribe to the optimal exploitation and utilization of South Africa's mineral resources (Diamonds);
- ensure that the prospecting site is closed efficiently and cost effectively.
- ensure that the operation is not abandoned but closed in accordance with the relevant requirements;
- ensure that the interest of all interested and affected parties will be considered;
- ensure that the all-relevant legislation regarding prospecting closure will be adhered to, and all relevant application procedures followed.