mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

NAME OF APPLICANT: **MGCIBELO MINERALS AND RESOURCES (PTY) LTD**

REFERENCE NUMBER: **NC 30/5/1/1/2/ (10976) PR**

ENVIRONMENTAL MANAGEMENT PLAN

SUBMITTED
IN TERMS OF SECTION 39 AND OF REGULATION 52 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002, (ACT NO. 28 OF 2002) (the Act)

Date: **11 December 2013**

STANDARD DIRECTIVE

Applicants for prospecting rights or mining permits, are herewith, in terms of the provisions of Section 29 (a) and in terms of section 39 (5) of the Mineral and Petroleum Resources Development Act, directed to submit an Environmental Management Plan strictly in accordance with the subject headings herein, and to compile the content according to all the sub items to the said subject headings referred to in the guideline published on the Departments website, within 60 days of notification by the Regional Manager of the acceptance of such application. This document comprises the standard format provided by the Department in terms of Regulation 52 (2), and the standard environmental management plan which was in use prior to the year 2011, will no longer be accepted.

IDENTIFICATION OF THE APPLICATION IN RESPECT OF WHICH THE ENVIRONMENTAL MANAGEMENT PLAN IS SUBMITTED.

ITEM	COMPANY CONTACT DETAILS
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ITEM	CONSULTATION CONTACT DETAILS
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1 REGULATION 52 (2): Description of the environment likely to be affected by the proposed prospecting or mining operation

1.1 The environment on site relative to the environment in the surrounding area.

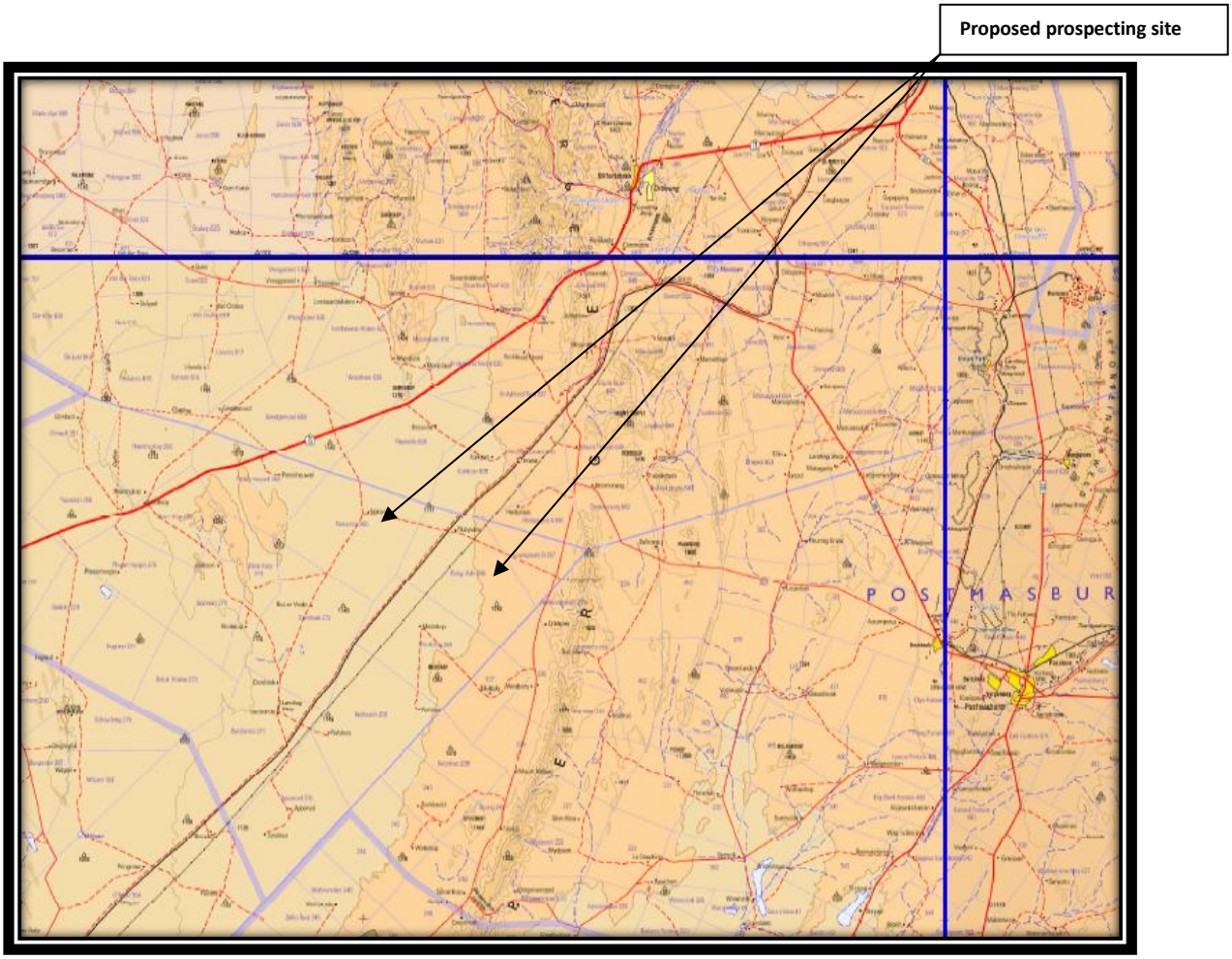

Figure 1: Locality map

The proposed prospecting area is situated on the south east of N14 from Upington to Olifantshoek about 15km south west of vrolik station. The farm Nokanna 265 has some small peaks on the western side which are on the farm Paleis Heuvel 264. There is a Oumeidekop hill on the far north when jumping N14 national road. Meidehop, Benede Oranje hill is on the far south of the prospecting area.

1.2 The specific environmental features on the site applied for which may require protection, remediation, management or avoidance.

- Vegetation

The vegetation occurring there is a grassy shrubland vegetation type on tge Upper Karoo Plateau, with its northern extent in the vicinity. There are five endemic plant species in the Northern Upper Karoo vegetation (from Mucina *et al.* 2006). These species are *Lithops hookeri, Stomatium pluridens, Atriplex spongiosa, Galenia exigua* and *Manulea deserticola*. The vegetation of the Northern Upper Karoo is regarded as least threatened species.

Status
Some vegetation on the proposed prospecting area is disturbed by agricultural activities. There are no major activities which affect the vegetation diversity, natural growth of flora.

Action
Construction of access roads and traces and site establishment are likely to cause vegetation disturbance.

Mitigation measures
Prospecting boreholes sites will be located on already disturbed areas to avoid the disruption of important habitat sites, Removed topsoil must be placed on the stockpile area.

The topsoil stockpile will not exceed the height of 3m, and that the soil will be used as soon as possible. Replacement of the topsoil will be conducted in accordance with the soil horizons of the area applied for.

- Animals

Status

The existence of fauna in the area has largely been altered due to human activities. However, the area is generally characterized by the following main species: Apart from the usual livestock such as cattle, naturally, the area supports reptiles (lizards), birds and smaller mammals. More than 200 species of bird can be found.

Action
Construction of access roads and traces are likely to cause vegetation disturbance. Noise can also frighten the said species.

Mitigation measures
Prospecting boreholes sites will be located on already disturbed areas to avoid the disruption of important habitat sites, existing farm roads will be used to avoid disturbing the vegetation and Drill rigs will be fitted with silencers to minimise noise pollution.

- Soil

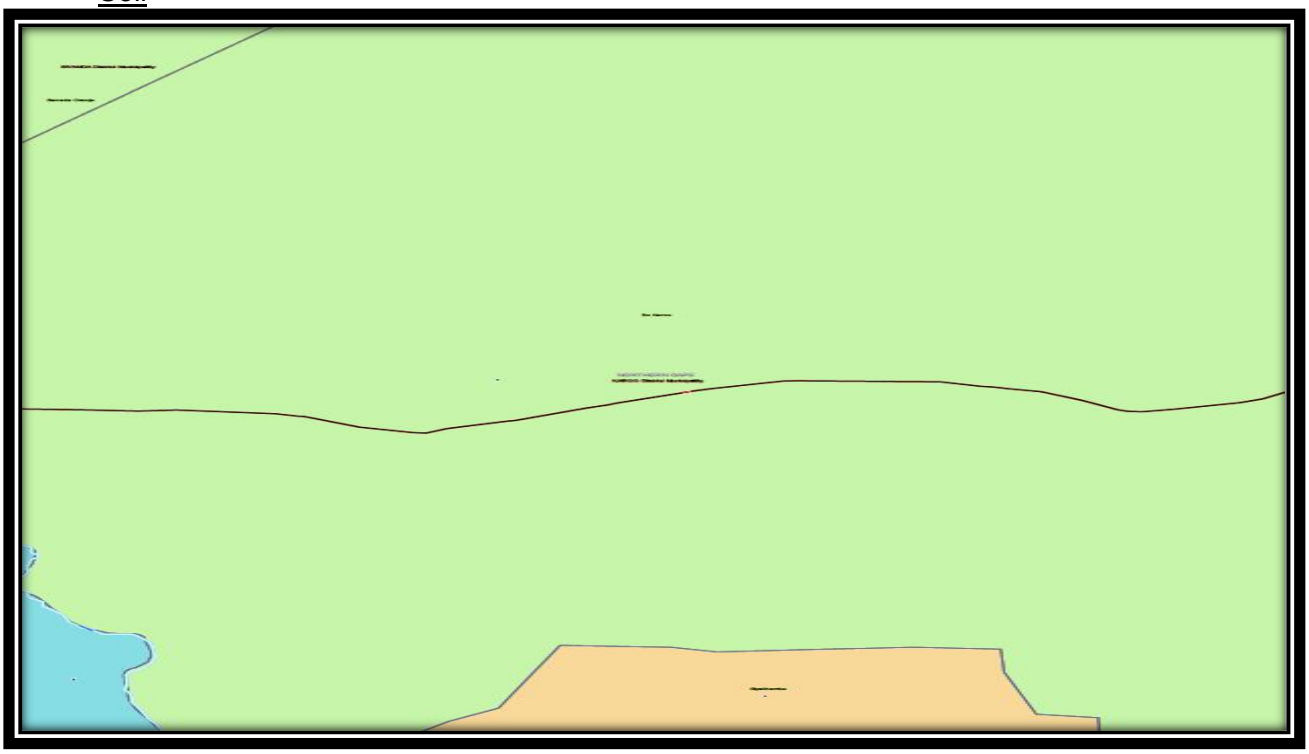

Figure 2: Soil Type

Status

The landscape of the prospecting area comprises sandy plains, dunes and pans. Sandy valleys occur between the hills (Van Rooyen *et al.,* 1999). During the rainy season streams may flow through the mountain valleys, however, these terminate in the plains below the mountain and do not form a major river. The terrain section of the area consist of plains which lowland occurring dunes and scattered parallels. On the far north is an Oumeidekop, Benede Oranje hill and Meidekop, Benede Oranje is on the far south. A series of Lang Berg mountain runs form the north of Witsand Nature Reserve up to the south of Olifantshoek town. These series of mountain is on the far west of the prospecting area.

Action

The excavation of sump and associated activities during site establishment will result in the removal of the topsoil layer, which will disrupt the soil profile.

Mitigation measures

Removed topsoil must be placed on the stockpile area.
The topsoil stockpile will not exceed the height of 3m, and that the soil will be used as soon as possible.
Replacement of the topsoil will be conducted in accordance with the soil horizons of the area applied for.

- Surface water

Status
The area consist of a small pan on the remaining extend of Nokanna-Wes 265 which is seasonal. There is no sign of wet land and the area comprises of no formal stream. The only perennial stream is situated on the far south called *Bergenaarspadpas* which is far from the prospecting area.

Action
There will be site establishment and the contractor will work during the day only. No access road as the area is accessible.

Mitigation measures
Minimise the potential ingress of water into the sump. No prospecting activities will be conducted from any dam, perennial pan, river etc, therefore there will be a 100m buffer zone from any water courses.

- Groundwater

Status
The geology of the area can be divided into main types namely: Matsap formation of mountain range and Kalahari group of the Gordonia formation of the plains. The Matsap Formation consists of quartzite and conglomerate with lenses of hamatite whilst the Kalahari Group comprises predominanantly of aelian surface sand dune with limited amount of alluvium, gravel, limestone and silcrete.Three groundwater systems are recognised in the proposed area. These are represented by (a) perched groundwater; (b) Karoo sediments porosity associated with weathering and (c) fractured rock.

Action
Geological borehole drilling will result in contamination of the groundwater.

Mitigation measures
All prospecting boreholes will be backfilled and a concrete plug will be installed at a depth of 500mm below surface elevation. Subsoil and a minimum 300mm layer of topsoil will be placed over the concrete plug.

- Public Roads

Status

The area applied for constitutes small farm access roads which are available. The proposed area is approximately 20km south east of N14.

Action

Drilling of prospecting boreholes on these structures will contravene the provision of Mine Health and Safety Act

Mitigation measures

No prospecting activities will be conducted within 100m (buffered Zone) of any structures including public roads.

- Graves, heritage, archaeological and cultural resources.

The area of concern consists of stone flakes, the local lithic sources of chalcedony, meta-quartzite and banded ironstone from Griekwastad Layer. Below find some of the pictures taken on the site.

Figure 3:Heavily soldered tin food can dating from Anlgo-Boer War.

Figure 4: Scatter of calcrete fractions on the surface.

Figure 5: Quarsite core material on the surface of the farm.

Figure 6: Red sand with Driedoring shrubs and grass.

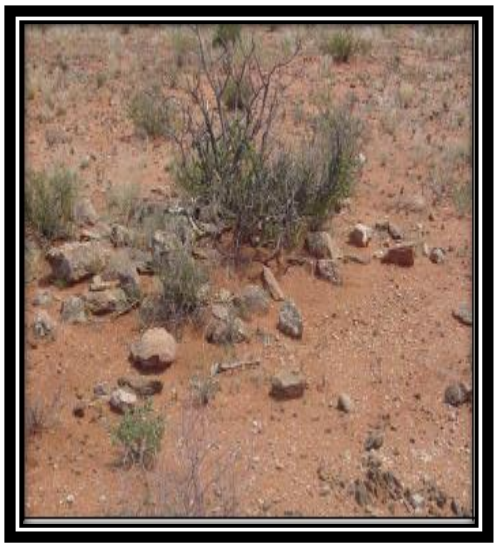

Figure 7: A stone cluster of unknown origin.

Figure 8: Water washed core material amongst calcrete in the farm.

Figure 9: Concentration of quartzite pebbles.

Figure 10: Core flake from the site and a pocket knife (83mm).

The soldered tin food can, characteristic of the Anglo-Boer War dated (1899-1902) was found at the site. No other historical material from this period occurred and the context of this isolated find could not be determined.

I recommend that the planned prospecting will have an insignificant effect on the cultural and historical heritage of the area. Further planning of the proposed prospecting could continue on any three farms mentioned above.

No other cultural, historical or palaeontological components were found during the investigation, nor were there any buildings, graves or burial grounds in the area.

Mitigation Measures and avoidance.

No mitigation measures will be required on any of the sites. Regulation 17(7)- there will be no erection or construction of any building, roads railways, or any structures which is been regarded as of historical or cultural important within a horizontal distance of 100

meters from the working of prospecting/mining activities, or such lesser distance and at such position and subjected to such restrictions and conditions, determined by Regulation 17(7)(a) risk assessment; or 17(7)(b) the Chief Inspectors of Mines.

- Railway Line

During site investigation and consultation Mgcibelo Minerals found a railway line which passes through the farm Ruby Vale 266. The first railway station is situated when moving north from Roby Vale which is called Vrolik.

Mitigation Measures and avoidance.

No mitigation measures will be required on any of the sites. Regulation 17(7)- there will be no erection or construction of any building, roads railways, or any structures which is been regarded as of historical or cultural important within a horizontal distance of 100 meters from the working of prospecting/mining activities, or such lesser distance and at such position and subjected to such restrictions and conditions, determined by Regulation 17(7)(a) risk assessment; or 17(7)(b) the Chief Inspectors of Mines.

- Power line

During site investigation and consultation Mgcibelo Minerals found a power line which passes through the farm Ruby Vale 266.

Mitigation Measures and avoidance.

No mitigation measures will be required on any of the sites. Regulation 17(7)- there will be no erection or construction of any building, roads railways, or any structures which is been regarded as of historical or cultural important within a horizontal distance of 100 meters from the working of prospecting/mining activities, or such lesser distance and at such position and subjected to such restrictions and conditions, determined by Regulation 17(7)(a) risk assessment; or 17(7)(b) the Chief Inspectors of Mines.

1.3 Map showing the spatial locality of all environmental, cultural/heritage and current land use features identified on site.

See Annexures.

1.4 Confirmation that the description of the environment has been compiled with the participation of the community, the landowner and interested and affected parties, (**See Consultation Report**).

During site visit and consultation process no concerns/objection and or comments from interested and affected party were received, however no prospecting activity will be conducted on highly significant area. There are no perennial watercourses on the area of interest.

- Specific environmental features on the site applied for which may require protection, remediation, management or avoidance.

Environmental features	Type of mitigation
Vegetation	Management
Soil	Management
Pans and other significant tributaries including some sought of wetland.	Avoidance(100m distance away)
Groundwater	Management
Public road (N14) which is very far from the proposed prospecting area and other gravel roads.	Avoidance(100m distance away)
Stratigraphic ground layers	Management
Railway line	Avoidance(100m distance away)
Power lines	Avoidance(100m distance way)

2 REGULATION 52 (2) (b): Assessment of the potential impacts of the proposed prospecting or mining operation on the environment, socio-economic conditions and cultural heritage.

2.1 Description of the proposed prospecting or mining operation.

2.1.1 The main prospecting activities (e.g. access roads, topsoil storage sites and any other basic prospecting design features)

Activities	The description of the Activity
- Site Establishment: • Camps	-There would be camping in the field the contractor and employees will rest inside the site. The caravans/tents will be used as an accommodation.
• Sumps	-little sumps will be constructed to allow the flow of water from the drilling rod.
• Core storage areas	-The nearby land owner or farm owners will be consultant on all time if the is any help we need such as the storage of core drilling rods.
• Equipment	-The nearby accommodation will be established in consultation with land owners. The established accommodation area will be used to accommodate equipments.
• Accommodation	-The site establishment will also include accommodation.
• Demarcate and/or prepare the drill site	-Small amount of soil and vegetation will be clear to allow the clear drilling of boreholes.
- Construction of Access roads/traces.	-No construction of access road will be conducted. Existing access road will be used.

Drilling: the drilling of 20 boreholes and additional 10 on the later phases depending on the result of initial drilling phases.	-The drilling of surface ground.
Hydrocarbon storages	-The storage of petrol and diesel for drilling truck. These hazard substances will also be stored on the established site of camp.
Waste disposal	-disposal of food parcels.
Ablution	-removable toilets will be used.
Water storage	-storage will be done using cans and plastic storages of about 25 litres capacity.

2.1.2 Plan of the main activities with dimensions

All the drilling point has no camps and no plan is established for them, all the equipments and activities such as storages will be conducted off site.

2.1.3 Description of construction, operational, and decommissioning phases.

PHASE	Activity	Expertise required	Duration
1	Data collecting Data modelling Borehole surveying & staking	Mine Surveyor Geologist	6 months
2	**Construction Phase** Site preparation • Access roads • Core stores area • Sumps **Operational Phase** Drilling of 20 boreholes and additional 10 on the later phases depending on the result of initial drilling phases. **Closure Phase** Final rehabilitation • scraping the surface • re-vegetating the disturbed area • sealing of the boreholes Logging & assaying	Drill contractor & geologist	18 months
3	**Post Closure Phase** Pre-feasibility study EMP studies Mining right Application	Mining engineer Environmentalist Economist	12 months

2.1.4 Listed activities (in terms of the NEMA EIA regulations)

- There are no any activities identified in terms of NEMA that would commence as a result in the proposed prospecting site.

2.2 Identification of potential impacts
(Refer to the guideline)

2.2.1 Potential impacts per activity and listed activities.

Mining Activities	Impacts Identified
• Site Establishment (Camps, Sumps, Core storage areas, Demarcate and/or prepare and the drill site)	• Destruction of soil fertility, Generation of noise, Generation of dust, Destruction of vegetation and Soil erosion as the result of exposed surfaces.
Construction of Access roads/traces	• No impacts as there would not be any construction of access road on the site. The existing access road will be used.
Drilling: the drilling of 20 boreholes and additional 10 on the later phases depending on the result of initial drilling phases.	• Generation of noise. • Generation of dust.
Hydrocarbon Storage	• Soil pollution or contamination of soil by oil spillages and spillages of hydrocarbon substance.
Waste Disposal	• Nuisance or lettering of the area.
Ablution	• Air pollution but minimal due the odour. No disposal of waste from ablution will occur.
Water storage	• No impacts identified, as there will be no storage or uses of large amount of water. Only small containers will be used to store water.

2.2.2 Potential cumulative impacts.

There are no cumulative impacts identified as there are no known prospecting activities occurring on the same area.

2.2.3 Potential impact on heritage resources

During site visit and consultation with landowners there were no grave or heritage site identified on the site.

2.2.4 Potential impacts on communities, individuals or competing land uses in close proximity.

(If no such impacts are identified this must be specifically stated together with a clear explanation why this is not the case.):

The farms have activities which may not be affected by the prospecting activity. Many activities which may be affected by the prospecting activities are far away from the prospecting area. The entire borehole will be capped temporarily and rehabilitated on the prospecting closure and rehabilitating phase.

2.2.5 Confirmation that the list of potential impacts has been compiled with the participation of the landowner and interested and affected parties,

List of consulted bodies during Public Participation Process:

PUBLIC PARTICIPATION PROCESS				
Interested and affected parties	**Interest/ Capacity**	**How did consultation take place?**	**Issues raised**	**Mitigation Measures**
• According to the deeds office the farm Ruby Vale No.266 is owned by a private person called Michiel Jacobus Van Der Walt which stay on the farm Vaalkop in Postmasburg. The farm Nokanna No.265 is owned by Abraham Willem Adriaan Maritz which stays in P.Bus postmasburg. Mr Van Der Walt Address: PO BOX 236, POSTMASBURG, 8420 Tel:053 313 2367 Cell: 083 234 7930 Mr Maritz Address: PO BOX 1293, POSTMASBURG, 8420 Tel:053 313 2356 Cell: 073 300 3841			There were no issues or concern raised during the consultation.	-The propose area will be rehabilitated after prospecting activities to its original state, replacement of the top soil will be conducted in accordance with the soil horizons of the area applied for agricultural purposes and will ensure that regulatory requirements associated with the mining activities will adhered to at all times. -Removed topsoil will be placed on the stockpile area, however the topsoil stockpile will not exceed the height of 3m, and that the soil will be used as soon as possible. -No prospecting activities will be conducted within 100m radius of cemeteries, roads, railway lines and residential area. -The Archaeological Practitioner is been appointed to conduct the HIA and the company gave us the quotation of the said project of conducting the studies. (**See Annexure).**
Public as General and surrounding areas.	Interested and affected parties	Site notice where placed during consultation and site visit.	No comments from the public concerning the proposed prospecting.	
• Department of Environment and Nature Conservation (Kuruman Region); • Department of Co-operative Governance Human Settlement and Traditional Affairs (Northern Cape);	Local Authorities	Registered letters were sent to the authorities.	No comments up to so far.	

• Provincial Department of Agriculture; • The John Taolo Gaetsewe District Municipality; • Department of Agriculture, Land Reform and Rural Development; and • It has been noticed that the Department of Land Affairs is not available in the Northern Cape region only the Department of Land Reform.				-The contractor's workers are fully educated about Environmental Issues. They were given an Environmental Awareness tips and skills before each prospecting operation. -Removed topsoil will be placed on the stockpile area. The topsoil stockpile will not exceed the height of 3m, and that the soil will be used as soon as possible. -Replacement of the topsoil will be conducted in accordance with the soil horizons of the area applied for agricultural purposes. -No potential impacts will be conducted which will be damaging to the environment, water resources or wet-land etc. Therefore there will be a buffer zone of 100m radius from any prospecting activities. - The contractor's workers are fully educated about Environmental Issues. They were given an Environmental Awareness tips and skills before each prospecting operation. -The project is still in the prospecting phase drilling and determination of mining feasibility, economical viability is still need to be done to determine the if mining on the area is can be done economically, ecologically not damaging the environment and social responsibility to be done by our company for the area. -The contractor's workers are fully educated about Environmental
			Interested and Affected Parties were given 30 days to respond and raise their concern and or objection regarding the proposed prospecting activity. Mgcibelo Minerals and Resources is still waiting for concerns and issues that my affect interested and Affected Parties.	
			Mgcibelo is still waiting for concerns and issues that my affect interested and Affected Parties.	

				Issues. They were given an Environmental Awareness tips and skills before each prospecting operation. No prospecting activities will be conducted within 100m radius of cemeteries, roads, railway lines and residential area. Removed topsoil will be placed on the stockpile area. The topsoil stockpile will not exceed the height of 3m, and that the soil will be used as soon as possible. -Replacement of the topsoil will be conducted in accordance with the soil horizons of the area applied for agricultural purposes. -No potential impacts will be conducted which will be damaging to the environment, water resources or wet-land etc. Therefore there will be a buffer zone of 100m radius from any prospecting activities. - The contractor's workers are fully educated about Environmental Issues. They were given an Environmental Awareness tips and skills before each prospecting operation.

2.2.6 Confirmation of specialist report appended.
(Refer to guideline)

Due to the assessment conducted during EIA process and the compilation of EMP, the prospecting activities do not pose any environmental threat to surrounding environment and no requirement from specialist report.

3 REGULATION 52 (2) (c): Summary of the assessment of the significance of the potential impacts and the proposed mitigation measures to minimise adverse impacts.

3.1 Assessment of the significance of the potential impacts

3.1.1 Criteria of assigning significance to potential impacts

The criteria used for assessing the potential impacts of the proposed prospecting activities.

The rating and ranking of impacts is often a very controversial aspect because of the subjectivity involved in attaching values to impacts. The following descriptive-value added evaluation method will be used to determine the significant and of the impacts and to try mitigate a pure subjective approach.

Extent (spatial Scale)
Extent is an indication of the physical and spatial scale of the impact.

Table: extent

Low(1)	Low/medium(2)	Medium(3)	Medium/high(4)	High(5)
Impact is localized within the site boundary: Site only	Impact is beyond the site boundary: local	Impacts felt within adjacent biophysical and social environments: regional	Impact widespread far beyond site boundary: regional	Impact extent national or over international boundary

Consideration to be given to:

- Access to resources, amenity
- Threats to lifestyles, traditional and values;
- Cumulative impacts, including possible changes to land users around the site.

Duration
Duration refers to the time frame over which the impact is expected to occur, measured in relation to the lifetime of the proposed project.

Table: Duration

Low(1)	Low/medium (2)	Medium (3)	Medium/high (4)	High (5)
Immediate mitigating measures, immediate progress	Impact is quickly reversible, short term impacts (0-5 years)	Reversible over time; medium term of life of project (5-15 years)	Impact is long-term and will only cease with the operational life	Long term; beyond closure; permanent; irreplaceable or irretrievable commitment of resources

Consideration to be given to:

- Cost –benefit economical and socially (e.g. long or short term costs /benefits)

Intensity magnitude/severity

Intensity refers to the degree or magnitude to which the impact alters the functioning of an element of the environment. The magnitude of alteration can either be positive or negative as were also taken into consideration during the assessment of severity.

Table: intensity/magnitude

Type of criteria	Negative				
	H-(10)	M/H-(8)	M-(6)	M/L-(4)	L-(2)
Qualitative	Very high deterioration- high quantity of deaths, injury of illness/ total loss of habitat, total alteration of ecological progress, extinction of rare species	Substantial deterioration death, illness or injury, loss of habitat/ diversity or resource, severe alteration or disturbance of important processes	Moderate deterioration discomfort, partial loss of habitat/ biodiversity or resource, moderate alteration	Low deterioration, slight noticeable alteration in habitat and biodiversity. Little loss in species number	Minor deterioration, nuisance or irritation, minor change in species/ habitat/ diversity or resource, no or very little quality deterioration.
Quantitative	Level of deterioration is so high that the level thereof is not always measurable	Measurable deterioration. Recommended level will occasionally be violated	Measurable deterioration. Recommended level will occasionally be violated	Rare violation of recommended level. Very slight measurable deterioration.	No measurable change. Recommended level will never be violated

Positive					
Type of criteria	L+(2)	M/L+(4)	M+(6)	M/H+(8)	H+(10)
Qualitative	Minor improvement, restoration, improved management	Slight improvement is noticeable. Slight improvement in habitat and species numbers	Moderate improvement, restoration, improved management, substitution.	Substantial improvement substitution.	Very high improvement, high degree of habitat and species restoration. Fully functional system
Quantitative	No definite measurable change. within or better than recommended level	Very slight improvement is noticeable. slight improvement in habitat and species numbers	Measurable improvement.	Measurable improvement.	Improvement is measurably high

Consideration to be given to:

- Cost –benefit economically and socially (e.g. high nett cost =substantial deterioration);
- Impacts on future management (e.g. easy/ practical to manage with change or recommendation).

Profitability of occurrence
Probability describes the likelihood of the actually occurring. This determination is based on previous experience with similar projects and/or based on professional judgment.

Table: profitability of occurrence

Low(1)	Medium/low(2)	Medium(3)	Medium/ high(4)	High(5)
Improbable; low likelihood, seldom. No know risk or vulnerability to natural or induced hazards.	Likely to occur from time to time. low risk or vulnerability to natural or induced hazards.	Possible, distinct possibility, frequent. Low to medium risk or natural or induced hazards	Probable mitigating measures are not implemented. Medium risk of vulnerability or induced hazards	

Status of impact

This is an appraisal of the type of affect the proposed activity would have on the affected environmental component. Its description should include what is being affected and how it is being affected, and whether the impact will be positive or neutral for each parameter.

The ranking criteria as used above were described in negative terms. Where positive impacts are identified, the opposite was used, positive description criteria.

Consequence (duration x extent x intensity)

Based on the synthesis of the information, the significant of the potential impacts in terms of the following criteria was assessed:

- Positive impacts were ranked in the same way as negative impacts, but result in high, medium or low positive consequences.

Significance

Significance is determined through a synthesis of the above impact characteristics, and is an indication of the overall importance of the impact. The significance of the impact "without mitigation" is the prime determinant of the nature and degree of mitigation required. For this assessment, the significance of the impact with prescribed mitigation action was measured. the significance identifies impacts on components of the affected environment were determined as SP=(magnitude + duration + spatial scale) x probability.

The maximum value per aspect is 100 significance points (SP). Environmental effects were rated as either high, moderate or low significance, based on the following:

- More than 60 significance points indicated high (H) environmental significance, and
- Between 30 and 60 significance points indicted moderate (M) environmental significance, and
- Less than significance points indicated low (L) environmental significance.

Description of impacts and mitigating measures
The description of the impacts before mitigating measures must please be as comprehensive as possible in the assessment matrix. The recommended mitigating measures must also be comprehensive as possible.

In line of the available literature pertaining to the area in which the study area occurs a number of possible impacts in the line with the project activities were identified. Identified impacts were quantified according to:

- Extent
- Duration
- Intensity or magnitude and
- Probability of occurrence.

3.1.2 Potential impact of each main activity in each phase, and corresponding significance assessment

Key word used and explanation of color coding for the result of risk assessment

Low Impacts (L)	Medium Impacts (M)	High Impacts (H)
L	M	H

ACTIVITY	POTENTIAL ENVIRONMENTAL IMPACTS	ENVIRONMENTAL SIGNIFICANCE ASSESSMENT.					
		M	D	S	P	TOTAL	SP
Site Establishment • Camps • Sumps • Core storage areas • Demarcate and/or prepare the drill site	Destruction of soil fertility. Generation of noise. Generation of dust. Destruction of vegetation. Soil erosion as the result of exposed surfaces.	1	2	4	2	14	L
Construction of Access roads/traces	No impacts as there would not be any construction of access road on the site.	0	0	0	0	0	L
Drilling	Generation of noise. Generation of dust.	1	2	4	2	14	L
Hydrocarbon Storage	Soil pollution or contamination of soil	1	2	4	2	14	L
Waste Disposal	Nuisance/Littering pollution	1	2	4	2	14	L
Ablution	Pollution of ground surface/ seepage of water.	2	2	4	2	16	L
Water storage	No impacts identified	0	0	0	0	0	L

3.1.3 Assessment of potential cumulative impacts.

There are no cumulative impacts identified as the is no known prospecting activities occurring on the same area.

3.2 Proposed mitigation measures to minimise adverse impacts.

List of action, activities, or processes that have sufficiently significant impacts to require mitigation.

Mining Activities	Impacts Identified	Mitigation Measures
Site Establishment • Camps • Sumps • Core storage areas • Demarcate and/or prepare the drill site	• Destruction of soil fertility. • Generation of noise. • Generation of dust. • Destruction of vegetation. • Soil erosion as the result of exposed surfaces.	• Topsoil will be removed from all area where physical disturbance of the surface will occur. • The topsoil stockpiles will be stored, shaped and sited in such a way that they do not interfere with the flow of water to cause damming or erosion, or itself eroded by the action of water • All equipments will be fitted with silencers to eliminate noise • Water Cart will be utilised to surpass dust generated during site establishment to avoid the atmospheric pollution • Install dust bucket on mining area and the surrounding to determine the influence of the proposed mining operation. These will act as a monitoring procedure to determine the effectiveness of the proposed dust suppression measures and where possible provide the most appropriate mitigation measures.
Construction of Access roads/traces	Possible impacts are the following: • Destruction of soil fertility. • Generation of noise. • Generation of dust • Exposing the area to soil erosion However, there will be no construction of access roads/ traces on the site.	• During the construction of drilling roads, the topsoil will be removed and stored separately, in which at the latter stage the said topsoil will be used for backfilling. • All equipments will be fitted with silencers to eliminate noise • Water Cart will be utilised to surpass dust generated during this phase and also to surpass dust from vehicular movement. • Ensure that the exposed areas are concurrently rehabilitated to avoid erosion.
Drilling : the drilling of 20 boreholes and additional 10 on the later phases depending on the result of initial drilling phases.	• Generation of noise. • Generation of dust	• However, all vehicles, diesel generators, compressors and other machinery will be fitted with silencers or mufflers to minimise the noise generation. • This process/drilling utilises water in that no dust is expected from the drilling
Hydrocarbon Storage	• Soil pollution due to oil spillages	• Tarpaulins will be utilised when handling any oil, grease and hydraulic fluids by placing it on the ground to prevent the chemicals coming in contact with the soil.
Waste Disposal	• Nuisance and littering of the surrounding area.	• Suitable covered 210 litre drums for various types of waste (e.g. glass, plastic and paper) will be available at all times on site and conveniently placed for the disposal of waste and

		these drums will be removed from site on weekly basis for recycling or disposal at a licensed disposal facility.
Ablution	• Air pollution and possible odour generation by smell. The will be no waste disposal of toilets on the site.	• Chemical toilets will be utilised as that may be the case no measure where identified
Water storage	• No impacts, there will be no storages of water on the site.	• No measures

3.2.1 List of actions, activities, or processes that have sufficiently significant impacts to require mitigation.

List of action, activities, or processes that have sufficiently significant impacts to require mitigation.

Mining Activities	Impacts Identified	Mitigation Measures
Site Establishment • Camps • Sumps • Core storage areas • Demarcate and/or prepare the drill site	• Destruction of soil fertility. • Generation of noise. • Generation of dust. • Destruction of vegetation. • Soil erosion as the result of exposed surfaces.	• Topsoil will be removed from all area where physical disturbance of the surface will occur. • The topsoil stockpiles will be stored, shaped and sited in such a way that they do not interfere with the flow of water to cause damming or erosion, or itself eroded by the action of water • All equipments will be fitted with silencers to eliminate noise • Water Cart will be utilised to surpass dust generated during site establishment to avoid the atmospheric pollution • Install dust bucket on mining area and the surrounding to determine the influence of the proposed mining operation. These will act as a monitoring procedure to determine the effectiveness of the proposed dust suppression measures and where possible provide the most appropriate mitigation measures.
Construction of Access roads/traces	Possible impacts are the following: • Destruction of soil fertility. • Generation of noise. • Generation of dust • Exposing the area to soil erosion However, there will be no construction of access roads/ traces on the site.	• During the construction of drilling roads, the topsoil will be removed and stored separately, in which at the latter stage the said topsoil will be used for backfilling. • All equipments will be fitted with silencers to eliminate noise • Water Cart will be utilised to surpass dust generated during this phase and also to surpass dust from vehicular movement. • Ensure that the exposed areas are concurrently rehabilitated to avoid erosion.
Drilling: the drilling of 20 boreholes and additional 10 on the later phases depending on the result of initial drilling phases.	• Generation of noise. • Generation of dust	• However, all vehicles, diesel generators, compressors and other machinery will be fitted with silencers or mufflers to minimise the noise generation. • This process/drilling utilises water in that no dust is expected from the drilling

Hydrocarbon Storage	• Soil pollution due to oil spillages	• Tarpaulins will be utilised when handling any oil, grease and hydraulic fluids by placing it on the ground to prevent the chemicals coming in contact with the soil.
Waste Disposal	• Nuisance and littering of the surrounding area.	• Suitable covered 210 litre drums for various types of waste (e.g. glass, plastic and paper) will be available at all times on site and conveniently placed for the disposal of waste and these drums will be removed from site on weekly basis for recycling or disposal at a licensed disposal facility.
Ablution	• Air pollution and possible odour generation by smell. The will be no waste disposal of toilets on the site.	• Chemical toilets will be utilised as that may be the case no measure where identified
Water storage	• No impacts, there will be no storages of water on the site.	• No measures

3.2.2 Concomitant list of appropriate technical or management options

(Chosen to modify, remedy, control or stop any action, activity, or process which will cause significant impacts on the environment, socio-economic conditions and historical and cultural aspects as identified. Attach detail of each technical or management option as appendices)

List of action, activities, or processes that have sufficiently significant impacts to require mitigation.

Mining Activities	Impacts Identified	Mitigation Measures	Management Cost	Final Rehabilitation Cost
Site Establishment • Camps • Sumps • Core storage areas • Demarcate and/or prepare the drill site	• Destruction of soil fertility. • Generation of noise. • Generation of dust. • Destruction of vegetation. • Soil erosion as the result of exposed surfaces.	• Topsoil will be removed from all area where physical disturbance of the surface will occur. • The topsoil stockpiles will be stored, shaped and sited in such a way that they do not interfere with the flow of water to cause damming or erosion, or itself eroded by the action of water • All equipments will be fitted with silencers to eliminate noise • Water Cart will be utilised to surpass dust generated during site establishment to avoid the atmospheric pollution • Install dust bucket on mining area and the surrounding to determine the influence of the proposed mining operation. These will act as a monitoring procedure to determine the effectiveness of the proposed dust suppression measures and where possible provide the most appropriate mitigation measures.	R3,750.00 / borehole	R17, 891.50
Construction of Access roads/traces	Possible impacts are the following:	• During the construction of drilling roads, the topsoil will be removed and stored separately, in which at the latter stage		

	• Destruction of soil fertility. • Generation of noise. • Generation of dust • Exposing the area to soil erosion However, there will be no construction of access roads/ traces on the site.	the said topsoil will be used for backfilling. • All equipments will be fitted with silencers to eliminate noise • Water Cart will be utilised to surpass dust generated during this phase and also to surpass dust from vehicular movement. • Ensure that the exposed areas are concurrently rehabilitated to avoid erosion.		
Drilling: the drilling of 20 boreholes and additional 10 on the later phases depending on the result of initial drilling phases.	• Generation of noise. • Generation of dust	• However, all vehicles, diesel generators, compressors and other machinery will be fitted with silencers or mufflers to minimise the noise generation. • This process/drilling utilises water in that no dust is expected from the drilling	R11, 560.00	R 17, 891.50
Hydrocarbon Storage	• Soil pollution due to oil spillages	• Tarpaulins will be utilised when handling any oil, grease and hydraulic fluids by placing it on the ground to prevent the chemicals coming in contact with the soil.	R6,700.00	
Waste Disposal	• Nuisance and littering of the surrounding area.	• Suitable covered 210 litre drums for various types of waste (e.g. glass, plastic and paper) will be available at all times on site and conveniently placed for the disposal of waste and these drums will be removed from site on weekly basis for recycling or disposal at a licensed disposal facility.	R2,520.00	
Ablution	• Air pollution and possible odour generation by smell. The will be no waste disposal of toilets on the site.	• Chemical toilets will be utilised as that may be the case no measure where identified	R2,494.00	
Water storage	• No impacts, there will be no storages of water on the site.	• No measures	No finance	
Total Concurrent Rehabilitation			R 27, 024.00	
Final Rehabilitation Cost				R 35, 783.00

3.2.3 Review the significance of the identified impacts

(After bringing the proposed mitigation measures into consideration).

Key word used and explanation of colour coding for the result of risk assessment

Low Impacts (L)	Medium Impacts (M)	High Impacts (H)
L	M	H

ASPECTS	POTENTIAL ENVIRONMENTAL IMPACTS	ENVIRONMENTAL SIGNIFICANCE BEFORE MITIGATION						RECOMMENDED MITIGATION MEASURES/MANAGEMENT CRITERIA TOGETHER WITH ACTION TAKEN	ENVIRONMENTAL SIGNIFICANCE AFTER MITIGATION					
		M	D	S	P	TOTAL	SP		M	D	S	P	TOTAL	SP
ISSUES RELATED TO AQUATIC ECOLOGY														
Site Establishment • Camps • Sumps • Core storage areas • Demar cate and/or prepar e the drill site	Destruction of soil fertility. Generation of noise. Generation of dust. Destruction of vegetation. Soil erosion as the result of exposed surfaces.	1	2	4	2	14	L	• Topsoil will be removed from all area where physical disturbance of the surface will occur. • The topsoil stockpiles will be stored, shaped and sited in such a way that they do not interfere with the flow of water to cause damming or erosion, or itself eroded by the action of water • All equipments will be fitted with silencers to eliminate noise • Water Cart will be utilised to surpass dust generated during site establishment to avoid the atmospheric pollution • Install dust bucket on mining area and the surrounding to determine the influence of the proposed mining operation. These will act as a monitoring procedure to determine the effectiveness of the proposed dust suppression measures and where possible provide the most	1	2	2	2	10	L

								appropriate mitigation measures.						
Construction of Access roads/traces	No impacts as there would not be any construction of access road on the site.	0	0	0	0	0	L	• During the construction of drilling roads, the topsoil will be removed and stored separately, in which at the latter stage the said topsoil will be used for backfilling. • All equipments will be fitted with silencers to eliminate noise • Water Cart will be utilised to surpass dust generated during this phase and also to surpass dust from vehicular movement. • Ensure that the exposed areas are concurrently rehabilitated to avoid erosion.	0	0	0	0	0	L
Drilling	Generation of noise. Generation of dust.	1	2	4	2	14	L	• However, all vehicles, diesel generators, compressors and other machinery will be fitted with silencers or mufflers to minimise the noise generation. • This process/drilling utilises water in that no dust is expected from the drilling	1	2	2	2	10	L
Hydrocarbon Storage	Soil pollution or contamination of soil	1	2	4	2	14	L	• Tarpaulins will be utilised when handling any oil, grease and hydraulic fluids by placing it on the ground to prevent the chemicals coming in contact with the soil.	1	2	2	2	10	L
Waste Disposal	Nuisance/Littering of the area by papers.	1	2	4	2	14	L	• Suitable covered 210 litre drums for various types of waste (e.g. glass, plastic and paper) will be available at all times on site and conveniently placed for the disposal of waste and these drums will be removed from site on weekly basis for recycling or disposal at a licensed disposal facility.	1	2	2	2	10	L
Ablution	Air pollution or odour produced smell.	2	2	4	2	16	L	• Chemical toilets will be utilised to mitigate against the soil and air pollution.						
Water storage	No impacts identified	0	0	0	0	0	L	• No measures	0	0	0	0	0	L

4 REGULATION 52 (2) (d): Financial provision.The applicant is required to-

4.1 Plans for quantum calculation purposes.

(Show the location and aerial extent of the aforesaid main mining actions, activities, or processes, for each of the construction operational and closure phases of the operation).

PHASE	Activity	Expertise required	Duration
1	Data collecting Data modelling Borehole surveying & staking	Mine Surveyor Geologist	6 months
2	**Construction Phase** Site preparation • Access roads • Core stores area • Sumps **Operational Phase** Drilling: the drilling of 20 boreholes and additional 10 on the later phases depending on the result of initial drilling phases. **Closure Phase** Final rehabilitation • scraping the surface • re-vegetating the disturbed area • sealing of the boreholes Logging & assaying	Drill contractor & geologist	18 months
3	**Post Closure Phase** Pre-feasibility study EMP studies Mining right Application	Mining engineer Environmentalist Economist	12 months

4.2 Alignment of rehabilitation with the closure objectives

(Describe and ensure that the rehabilitation plan is compatible with the closure objectives determined in accordance with the baseline study as prescribed).

All the borehole will be backfilled and capped with concrete, monitored in such a way that the will be no future impact on the surrounding area.

4.3 Quantum calculations.
(Provide a calculation of the quantum of the financial provision required to manage and rehabilitate the environment, in accordance with the guideline prescribed in terms of regulation54 (1) in respect of each of the phases referred to).

See Annexures

4.4 **Undertaking to provide financial provision**
(Indicate that the required amount will be provided should the right be granted).

An amount of R35, 783.00 will be paid in the form of bank guarantee should the proposed prospecting operation be granted.

5 REGULATION 52 (2) (e): Planned monitoring and performance assessment of the environmental management plan.

5.1 List of identified impacts requiring monitoring programmes.

- The rehabilitation plan will be conducted in such a way that no monitoring will be required for during the post prospecting activity.

5.2 Functional requirements for monitoring programmes.

- There are no factions required for monitoring the post prospecting activity as the rehabilitation will be conducted into a state of not requiring monitoring.

5.3 Roles and responsibilities for the execution of monitoring programmes.

- The environmental practitioner will be consulted quarterly to conduct a site visit on the site to evaluate if there are no latent environmental impacts on the prospecting environment.

5.4 Committed time frames for monitoring and reporting.

- Progress report will be submitted to the DMR annual to stipulate the status of the environment and the affected environment.

6 REGULATION 52 (2) (f): Closure and environmental objectives.

6.1 Rehabilitation plan

(Show the areas and aerial extent of the main prospecting activities, including the anticipated prospected area at the time of closure).

There will be a site establishment and contractor will utilise the place established for rest also.

6.2 Closure objectives and their extent of alignment to the pre-mining environment.

Closure or end use objectives for the site applied for as guided by the baseline study.

Closure and environmental objectives
If the prospecting programme indicates sufficient economical viable reserves are available, an application for a mining right will be lodged.
All prospecting boreholes will be backfilled and a concrete plug will be installed at a depth of 500mm below surface elevation. Subsoil and a minimum 300mm layer of topsoil will be placed over the concrete plug
All sumps will be backfilled to surface and covered with a 300m layer of topsoil.
All roads and traces will be scarified and ripped to a depth of 100mm to allow re-vegetation.
No prospecting infrastructure will be left on site
Once the prospecting activities are completed, the area will have a land use and capability comparable to the pre-prospecting land use and capability, and all affected area will have a sustainable vegetation cover.

6.3 Confirmation of consultation

(Confirm specifically that the environmental objectives in relation to closure have been consulted with landowner and interested and affected parties).

(Refer to Consultation Report).

7 REGULATION 52 (2) (g): Record of the public participation and the results thereof.

(Refer to Consultation Report Attached).

7.1 Identification of interested and affected parties.

(Provide the information referred to in the guideline)

(Refer to the Consultation Report attached)

7.2 **The details of the engagement process**.

7.2.1 Description of the information provided to the community, landowners, and interested and affected parties

Site notice where place on the surrounding communities together with a local community newspaper advertisement.

7.2.2 List of which parties indentified in 7.1 above that were in fact consulted, and which were not consulted.

(Refer to the Consultation Report attached)

7.2.3 List of views raised by consulted parties regarding the existing cultural, socio-economic or biophysical environment.

(Refer to the Consultation Report attached)

7.2.4 List of views raised by consulted parties on how their existing cultural, socio-economic or biophysical environment potentially will be impacted on by the proposed prospecting or mining operation.

(Refer to the Consultation Report attached)

7.2.5 Other concerns raised by the aforesaid parties.

There were no concerns raised during the consultation and site visit of the area.

7.2.6 Confirmation that minutes and records of the consultations are appended.

There were no formal meetings held with anyone or a one on one communication.

7.2.7 Information regarding objections received.

There were no objections received so far and during public participation process.

7.3 **The manner in which the issues raised were addressed**.

Refer to Consultation Report

8 SECTION 39 (3) (c) of the Act: Environmental awareness plan.

8.1 Employee communication process

(Describe how the applicant intends to inform his or her employees of any environmental risk which may result from their work).

- All the employees will be provided with an Environmental awareness pocket broacher containing all the important environmental safety procedure, protection and list of authorities that deals with environmental emergency and risk remediation.

8.2 Description of solutions to risks

(Describe the manner in which the risk must be dealt with in order to avoid pollution or degradation of the environment).

Environmental Performance Assessment

In accordance with Regulation 55(1) (b), the mine will commission an independent environmental consultant to undertake an Environmental Performance Assessment of the EMP. This performance assessment will be undertaken every two years [as per Regulation 55(2) (b)] and submitted to the DME.

ENVIRONMENTAL AWARENESS PLAN

In terms of section 39(3)(c) of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002), Mgcibelo Minerals and Resources (Pty) Ltd must compile and implement an environmental awareness plan. The above-mentioned environmental awareness plan must describe the manner in which the applicant will inform their employees of any environmental risk which may result from their work and the manner in which the environmental risks will be addressed to avoid pollution or/and degradation of the environment.

This document, therefore concerns the details of the environmental awareness plan for the proposed prospecting operation as required by the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002).

In view of the above, Mgcibelo Minerals and Resources (Pty) Ltd has developed an environmental awareness plan for the proposed prospecting operation, which is explained in more detail below.

Note: The responsible person will revise these environmental awareness procedures from time to time. The date of commencement of the revised procedure will always be indicated to prevent confusion.

This Environmental Awareness (Standard Training Procedure) sets out the applicant's training objectives regarding to environmental awareness. It is a stand-alone procedure, which serves to improve awareness, training and competency in the environmental field. It contains no detail on the actual training initiatives but rather serves to ensure that a responsible person is appointed to deal with and increase environmental awareness on the area.

Objectives and Legal Requirements

Objectives

The following are the objectives of the environmental awareness plan.

- To identify the necessary training needs for different categories in the mine.
- To train all employees on environmental issues on the mine.

Legal requirements

The following legislation apply to this environmental awareness plan

- Employment Equity Act, 1998 (Act 55 of 1998).
- National Environmental Management Act, 198 (Act 77 of 1998).
- Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002).

Manner of informing employees of risks to avoid pollution and degradation of the environment

Induction Programme

An Induction Programme (prospecting guidelines and operation induction), which will include environmental awareness programme will be established for Mgcibelo Minerals and Resources prospecting activities. During the training sessions various topics will be discussed such as, but not limited to; Water Pollution Prevention, Good Environmental Housekeeping, etc. Through the Induction Programme, the contractor, safety officer, or any other responsible appointed person shall ensure that all staff receives training in:

- Administrative requirements and procedures, which will include the Environmental Emergency Procedures.
- Resource conservation and environmental reporting and general environmental awareness for mine related environmental issues.

All employees (including contractor employees) will undergo induction. The induction includes training and awareness on environmental issues on the prospecting and is compulsory for all new employees. The induction programme will as mentioned above, have an environmental management component. On an annual basis the environmental section of the induction gets updated to ensure that it is up to date. Consideration should be given to:

- Significant environmental impacts as identified in the EMP
- Procedures: environmental awareness and emergency procedures
- Trends in incidents
- Discovery of any cumulative impact that may arise or be formed by the proposed prospecting.

Trainee needs

The identification of environmental training and environmental awareness needs are derived from an analysis of the type of role different categories of employees play at the site and prospecting operation as a whole. The following categories are considered:

- Senior Management
- Middle management (Environmental Officers)
- Supervisors
- Operators of the drilling machine.
- Visitors and contractors

Each of these categories has different responsibilities and therefore has different knowledge requirements and environmental awareness training needs, to obtain that knowledge.

All the employees will be inducted on the issues of environment and the contractor will make sure that no any other activities will be conducted accept those of prospecting application.

8.3 Environmental awareness training.
(Describe the general environmental awareness training and training on dealing with emergency situations and remediation measures for such emergencies).

NB: In case of emergency the land owner and relevant authority will be contacted. All employees will be given a list of relevant authorities and that of the land owner.

Training Planning

Identified and agreed training needs shall be included in budgets. Course attendance (other than at the internal induction courses) shall be scheduled on the basis of the importance of task contribution to the maintenance, effectiveness and improvement of the objectives.

General environmental awareness training

General awareness training will be offered to operators, processors and the other various sections of the employee during the safety toolbox talks. This will be conducted on rotational basis. New environmental awareness topics are determined and new topics are introduced after all the shifts have received training/awareness on the current topic. The following will be undertaken to ensure that the above awareness training is conducted.

- A monthly environmental awareness topic for discussion will be distributed to all mine sections. These topics will be discussed at the safety toolbox talks, by SHE (Safety, Health and Environmental) reps /Environmental officers if available.
- All the employees will be provided with an Environmental awareness pocket broacher which contain all the important environmental safety procedure, protection and list of authorities that deals with environmental emergency and risk remediation.

- Ad hoc environmental awareness sessions to various departments/sections will be conducted on request. The presentations will focus on the environmental issues relevant to individual tasks.

Job specific environmental awareness training

Job specific training will be developed to address urgent training needs as identified /required. The training material will focus on the following:

- Waste prevention and control (implementation of the waste management procedure).
- Water management (Leaking pipes and taps).
- Hydrocarbon and chemical spill reporting and clean-up.
- Storing and handling of chemicals.
- Rehabilitation.
- Dust management on the mine.

Supervisory staff within specific operational sections will be equipped with the necessary knowledge and information to guide their employees on environmental aspects applicable in performing a specific task.

Competency training

Management (training official/environmental officer if available) is responsible for the environmental competency and awareness training of middle management and supervisors. This training will be conducted on both a one to one basis and through workshops. If required, external organizations may be requested to provide training to selected employees (e.g. EMP auditing).

Competence and the effectiveness of training and development initiatives as described in the matrix will be determined through the following:

- Trend analysis and reporting.
- Analysis of work areas during visits and audits.

Trend analysis of monthly incidents (or zero tolerance if available) as recorded per the operation.

9 SECTION 39 (4) (a) (iii) of the Act: Capacity to rehabilitate and manage negative impacts on the environment.

Mining Activities	Impacts Identified	Mitigation Measures	Management Cost	Final Rehabilitation Cost
Site Establishment • Camps • Sumps • Core storage areas • Demarcate and/or prepare the drill site	• Destruction of soil fertility. • Generation of noise. • Generation of dust. • Destruction of vegetation. • Soil erosion as the result of exposed surfaces.	• Topsoil will be removed from all area where physical disturbance of the surface will occur. • The topsoil stockpiles will be stored, shaped and sited in such a way that they do not interfere with the flow of water to cause damming or erosion, or itself eroded by the action of water • All equipments will be fitted with silencers to eliminate noise • Water Cart will be utilised to surpass dust generated during site establishment to avoid the atmospheric pollution • Install dust bucket on mining area and the surrounding to determine the influence of the proposed mining operation. These will act as a monitoring procedure to determine the effectiveness of the proposed dust suppression measures and where possible provide the most appropriate mitigation measures.	R3,750.00 / borehole	R 17, 891.50
Construction of Access roads/traces	Possible impacts are the following: • Destruction of soil fertility. • Generation of noise. • Generation of dust • Exposing the area to soil	• During the construction of drilling roads, the topsoil will be removed and stored separately, in which at the latter stage the said topsoil will be used for backfilling. • All equipments will be fitted with silencers to eliminate noise		

	erosion However, there will be no construction of access roads/ traces on the site.	• Water Cart will be utilised to surpass dust generated during this phase and also to surpass dust from vehicular movement. • Ensure that the exposed areas are concurrently rehabilitated to avoid erosion.		
Drilling	• Generation of noise. • Generation of dust	• However, all vehicles, diesel generators, compressors and other machinery will be fitted with silencers or mufflers to minimise the noise generation. • This process/drilling utilises water in that no dust is expected from the drilling	R11, 560.00	R 17, 891.50
Hydrocarbon Storage	• Soil pollution due to oil spillages	• Tarpaulins will be utilised when handling any oil, grease and hydraulic fluids by placing it on the ground to prevent the chemicals coming in contact with the soil.	R6,700.00	
Waste Disposal	• Nuisance and littering of the surrounding area.	• Suitable covered 210 litre drums for various types of waste (e.g. glass, plastic and paper) will be available at all times on site and conveniently placed for the disposal of waste and these drums will be removed from site on weekly basis for recycling or disposal at a licensed disposal facility.	R2,520.00	
Ablution	• Air pollution and possible odour generation by smell. The will be no waste disposal of toilets on the site.	• Chemical toilets will be utilised as that may be the case no measure where identified	R2,494.00	
Water storage	• No impacts, there will be no storages of water on the site.	• No measures	No finance	
Total Concurrent Rehabilitation			R 27, 024.00	
Final Rehabilitation Cost				R 35, 783.00

9.1 The annual amount required to manage and rehabilitate the environment.
(Provide a detailed explanation as to how the amount was derived)

The amount was derived on the use of calculation of the quantum for financial provision (guideline from the Department of Mineral Resources).

9.2 Confirmation that the stated amount correctly reflected in the Prospecting Work Programme as required.

Due to the financial capability of the company and the number of quotation conducted by the company it shows that the whole programme require the amount stated on the prospecting work programme.

10 REGULATION 52 (2) (h): Undertaking to execute the environmental management plan.

Herewith I, the person whose name and identity number is stated below, confirm that I am the person authorised to act as representative of the applicant in terms of the resolution submitted with the application, and confirm that the above report comprises EIA and EMP compiled in accordance with the guideline on the Departments official website and the directive in terms of sections 29 and 39 (5) in that regard, and the applicant undertakes to execute the Environmental management plan as proposed.	
Full Names and Surname	Professor Dumisane Mtombeni
Identity Number	8605195583081

-END-