

## **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.**

The Kuruman town it is located approximately 8km on the northeast of the application area. The regional road (R31) runs approximately 8km on the east of the proposed area..The national road(N14) lies approximately 2km on the north of the application area.

#### **Land Use and Land Capacity**

The area is characterized by natural veld scattered with trees. The flat plains on the site are deemed to fall in Class 6- severely limited, restricting land uses to pasture, range, woodlands and wildlife. However the hills ridges fall into Class 8 restricting the land use to recreation, wildlife, water supply or aesthetic purposes

#### **Climate:**

Due to the location and nature of the prospecting process, there are no extreme weather conditions like extremely high rainfall events, wind, temperatures, etc. that need to be considered during the prospecting operation and rehabilitation of the prospected and disturbed areas.

#### **Regional setting:**

The proposed prospecting area is located in a typical Northern Cape summer rainfall area with moderate cold winters and to hot summers.

**Rainfall:**

55 normally receives about 300mm of rain per year, with most rainfall occurring mainly during mid-summer. It receives the lowest rainfall (10mm) in June and the highest (81mm) in January.

**Temperature:**

The monthly distribution of average daily maximum temperatures (centre chart below) shows that the average midday temperatures for Northern Cape range from 22.3°C in June to 36.9°C in January.

**Topography:**

The general physical characteristics of the area are determined by the different geological formations. The general area is almost flat, at an average elevation of around 1180 m.a.s.l. The elevation range on the site (the whole prospecting right applied for) is from 1206 m.a.s.l. in the south east to 1160 m.a.s.l. in the north-west. The drainage system is not well defined, with only ephemeral streams present and very small farm dams present.

**Land use:**

The land-use on the proposed prospecting area and the surrounding area are mainly for game farming as well as other agricultural activities. The closure objectives will be to return the land to farming use.

**Vegetation:**

Biomes are broad ecological units that represent major life zones extending over large natural areas (Rutherford 1997). The PR area falls within the Savanna Biome, the largest Biome in Southern Africa, occupying over one-third the area of South Africa.

The Savanna biome is characterized by a grassy ground layer and a distinct upper layer of woody plants (trees and shrubs). Where this upper layer is near the ground (low growing) the vegetation may be referred to as Shrubveld, where it is tall and dense as Woodland and the intermediate stage are locally known as Bushveld (nBGIS 2011). Most of the savannah vegetation types are used for grazing, mainly by cattle or game.

**Veld types/ Vegetation types**

According to Acocks (1988) classification of the vegetation of South Africa, the study area falls within one recognized veld type, namely Veld Type 15- Mopane Veld and the veld type is the Mpoane Bushveld.

According to Mucina & Rutherford (2006), the study area is situated within the:

The grass layer is characterized by *Aristida* spp. (Three-awn grasses), *S. uniplumis* (Silky Bushman grass), *S. pappophoroides* (Sand Quick), *B. delexa* (False Signal Grass), *E. cenchroides* (Nine-awned grass) and *U. mosambicensis* (Bushveld Signal grass).

This vegetation type covers the irregular ridges of much of the area in the vicinity of the Nzhelele river. The altitude varies from 300 m to 700 m in the east. The vegetation structure is moderately open savannah with a poorly developed ground layer. *K. acuminate* (White Seringa) is prominent on many of the ridges along with a *digitata* (Baobab). On shallow calcereous gravel and calc-silicate soils, the shrub *Catophractes alexanderi* is dominant.

**Animal life:**

In its original natural state, the area would have supported a wide variety of game, but due to the land use of commercial farming (grazing), it now only hosts some buck (kudu have been reported), small mammals, reptiles and birds suited to this environment, in addition to cattle and sheep.

**Surface water:**

The Northern Cape Province has limited surface and groundwater resources and most of the water resources in the Northern Cape Water Management Area are severely stressed.

The PR area is situated in a semi-arid zone. The area is situated in the summer rainfall region and rainfall occurs in the form of heavy thunderstorms and soft rain. The area is characterized by cool, dry winters (May to August) and warm, wet summers (October to March), with April and September being transition months. Winter is moderate with frost occurring in the low-lying regions only. The rainfall in this area is between 300-399 mm per annum.

The PR is located in quaternary catchment A71K of the Northern Cape Water Management Area (refer to Error! Reference source not found.)

A valley head seep wetland and valley depression wetland occur in the PR area (Figure 7).

Water required for the operation will be a maximum of 5 000 litres on a daily basis during drilling (including potable use).

**Ground water:**

According to the Northern Cape SOER, groundwater resources in the province are classified in three main categories: major, minor and poor. The major groundwater resources are found in the central and north-eastern parts of the province. The groundwater resource value in the majority of the province is classified as minor.

The assessment area falls within the area where expected yield from boreholes are between 0.5-2 litres per second (LDA 20110- refer to

Figure 2. Groundwater resources in the area are defined as robust as seen in ERROR! Reference source not found. The proposed area constitutes two tributaries of Marievale Estuaries located on the western side of the proposed area. There are also small ponds within close proximity of the proposed area which are 1km away from prospecting site and railway line 90 m away.

Groundwater is used for domestic use, stock watering and limited agricultural purposes within the PR area. It is not expected that drilling of prospecting holes will influence groundwater quality or quantity.

**Air quality:**

The air quality is essentially unpolluted but it can be disturbed by the movement of heavy earthmoving equipment which can generate dust and cause nuisance and health implications to workers and people living nearby. The prospecting operation will ensure that the dust suppression method is implemented.

**Noise:**

The surrounding areas are characterized by agricultural setting in which some equipment such as tractors and trucks operate. The proposed operation will comply with the provisions of the Mine Health and Safety Act, 1996 (Act 29 of 1996) and its regulation as well as other applicable legislations regarding noise control. Employees will be supplied with ear plugs. All mining vehicles will be equipped with silencers and maintained in a road worthy condition.

**Sites of archaeological and cultural interests:**

No sites of archaeological or cultural interest were identified by DEAT (2001) or the South African Heritage Resources Agency: Northern Cape (SAHRA).

**Protected Areas:**

There are no protected areas near the site, or within 20 km of it. The site is not within any threatened ecosystem as per government notice 1002 of 2011.

**Project motivation:**

Mining sector contributes significantly to the economy of South Africa. It is one of the major employers. Mineral exploration/prospecting are required in order to sustain and also to increase the contribution of mining of the Companies to have a better understanding of the mineral deposit/occurrence. Decisions to open a mine are based on exploration/prospecting results. Opening of a mine brings (to rural areas in particular) benefits such as job creation, infrastructure development, training and bursaries amongst others. If the project is not implemented, the opportunity of improving the lives of the affected communities would have been lost.

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

The environmental features on the site which may require protection, remediation, management or avoidance include the following:

- Drainage lines
- Protected flora and fauna species (if identified); and
- Heritage/cultural resources (if identified).

No specific environment features on site applied which will need protection as there will be cutting down of trees.

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

See Appendix 1

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**REPLY SLIP: PLEASE FILL-IN AND RETURN**

	<b>Surname</b>	<b>FARM NAME</b>	<b>FARM PORTIONS</b>
	Nel	Sterkfontein 1C2	Portion 1 MT Limpopo
<b>farm (ha)</b>			
<b>Phone</b>	<b>Fax</b>	<b>E-Mail</b>	<b>Cell</b>
		Gnel4@fnb.co.za	082 774 2002

Your comment about the drilling activity here:

Note that the hunting season is from the 1<sup>st</sup> May until end August each year and we (father and son) need to be consulted before entering the farms, also because they are adjacent to each other.

For further contact details below:

*[Signature]* 25/7/2013

<b>Name of another person whom you think should be consulted</b>	
<b>Full name and surname</b>	Cecil Nel
<b>Address and portion</b>	Hertzog
<b>Phone</b>	082 925 9494

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**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)**

The project will use existing access roads as far as practicable. If there is a need to establish access roads, they will be constructed in such a way that minimum number of bushes/trees is felled and existing structures such as fence lines shall be followed as far as possible. If required, topsoil will be removed and protected. Topsoil removed will be used during rehabilitation process. If there is a need to erect gate in fence lines the applicant will consult and reach agreement with the landowner/s and other affected parties before erecting a gate. The opening and closing status of gates shall be clarified with the landowner and other affected parties. The applicant will also negotiate with the landowner/s to use existing toilet facilities and if this is not possible chemical toilet facilities will be provided.

**POTENTIAL IMPACT RATING**

C.6.7. Possible impact as a result of the prospecting operation	Description	Duration	Impact rating	C.6.8. Mitigatory measures to manage the impacts of the prospecting operation
Dust Fallout		Entire duration of drilling operation	Low	
Site clearing	A 2m x 2m site will have to be cleared for each borehole. There may be a need to clear site for the caravan office	2 days only the area which the drilling borehole will be conducted	High	Topsoil will be removed and stockpiled to any prospecting activities. After the drilling activities is finished, topsoil will be replaced and backfilling will be done to ensure that the drilled hole is suitable for use for grazing, as well as crop Production.

Water requirement	Drinking water will be brought to site in bottles on a daily basis	Entire duration of drilling Operation.	Medium	No impact anticipated and therefore no mitigatory measures have been established
Drill rig location	Unnecessary site clearing	Entire duration of drilling operation	Low	Possible flattening and degradation of the vegetation where the rig is located. No tree felling will be undertaken during the drilling activities. The drill holes will be backfilled as soon as drilling is finished
Tools and equipment	All equipment except the drill rig will be stored in the caravan office at the end of each day	Entire duration of drilling operation	Low	
Access road	Movement of vehicles around the site	Entire duration of drilling operation	High	Should excessive dust be generated at these road, measures such as water spraying of the road will be considered. The speed limit around the area will be kept low as possible in order to reduce dust.
Ablution		Entire duration of drilling operation	Medium	Ensure that ablution facilities are cleaned on daily basis. Ensure that the chemical toilet is appropriately lined and well maintained to avoid any spillages that could lead to possible contamination of the groundwater
Accommodation	No employees will be accommodated	Entire duration of drilling operation	Low	No impact anticipated and therefore no mitigatory measures have been established
Contamination of soil	Contamination as a results of	Entire duration of drilling	Low	There will be no storage of fluid on



	spillage	operation		site if it happens to store fluid, there will be a demarcated site for the storage and a stand will be provided to avoid contamination to the soil
Noise	Operation of heavy machinery and traffic	Entire duration of drilling operation	Low	The noise impact will be mitigated by the fact that the drilling operation will be only occur on the day and 500radius away from the community

### **PROSPECTING WORK PROGRAMME**

#### **Description of land being applied for:**

Farm name: Carrington 440  
 Farm no.: 440  
 Magisterial district: Kuruman  
 Subdivision no.: Whole farm

#### **Minerals applied for:**

Silver and Gold

### **Prospecting Work Programme**

The prospecting work programme will be divided into 2 phases, invasive and non-invasive prospecting:

#### **Phase 1 (Month 1 to 6) – Desktop study**

- Desktop study involves the collection of existing information or data, interpretation and report;
- Planning of logistics of the physical drilling program;
- Geological mapping, sampling and analysis.

#### **Phase 2 (Month 6 to 18)**

- 5 boreholes will be drilled during this phase with a total estimated depth of 150 meters.
- A minimum of 1 sample per seam intersection will be taken. More samples will be required when large variations in reserve quality occur within a seam. Therefore an estimated 3 samples per borehole is budgeted for.
- Results of the laboratory analysis of each sample are anticipated 28 days after each submission.
- Establishment of the data base, recording of borehole logs, evaluation and geological modeling will be carried out after all the results have been recorded.

### **Phase 3 (Month 19 to 30)**

- 5 boreholes will be drilled during this phase with a total estimated depth of 150 meters.
- A minimum of 1 sample per seam intersection will be taken. More samples will be required when large variations in reserve quality occur within a seam. Therefore an estimated 3 samples per borehole is budgeted for.
- Results of the laboratory analysis of each sample are anticipated 28 days after each submission.
- Establishment of the data base, recording of borehole logs, evaluation and geological modeling will be carried out after all the results have been recorded.

### **Phase 4 (Month 31 to 36)**

- Feasibility study
- Environmental studies and reports
- Socio-economic impact assessment

Rehabilitation

### **Secondary activities:**

No food preparation is to be done on-site, and no wood collection allowed. This will eliminate the desire for wood collection reducing the quantity of waste to be generated and will reduce the risk of fire, attraction of pests and development of untidy conditions.

Water will be required for the prospecting drilling operations and ancillary activities. On average 1000 liters of water per day would be required per drilling site (only during the drilling phase of the project). This average is on assumption that the drilling conditions are reasonably good.

Chemical toilets will be hired and maintained/serviced by a registered service provider, in accordance with the requirements of the municipality, Occupational Health and Safety Act and other appropriate legislation. Such toilets will be kept neat and clean/hygienic. Waste will be regularly removed, while care will be taken to prevent any spillages of sewage, and disposed of in a legal manner. No disposal of sewage will take place directly into the environment.

Working hours are to be limited to normal working hours, i.e. from 7:00 to 16:00 during weekdays and 7:00 to 13:00 on Saturdays. Where possible work on Saturdays will be avoided, especially near potential noise sensitive areas. However, if unavoidable, affected landowners and occupants are to be negotiated with to minimise any disturbance. No prospecting activities should take place on Sundays and public holidays. Working hours are to be defined based on consultation with the effected landowner/lawful occupier.

Necessary precautions should be taken on the sites to reduce the risk of uncontrolled fires. These should include:

- No open fires will be allowed on-site and no worker will be allowed to discard cigarettes or cigarette butts (or any other waste) into the environment;
- Fire extinguishers will be kept at all drilling sites and on all vehicles; and
- The proposed prospecting areas will be regarded as a no-smoking zone by all workers.

Noise will be generated by the prospecting activities. Noise sources may include:

- Vehicular movements to and from the sites as well as activities on each specific site;
- Operation of the drilling equipment (and other prospecting equipment e.g. seismic equipment);
- The use of excavators for the bulk sampling;
- Noise is likely to be generated by low flying aircraft during geophysical surveying (if required); and
- Operation of generators.

It is not anticipated that the noise generated from the prospecting will present a significant detrimental impact based on the following :

- The area has a low residential / population density and therefore there are very few noise receptors; and
- The prospecting activities are of relatively short duration and only occur during working hours.

Waste which may be generated by the prospecting activity include the following:

- Excess rock cores and cuttings from the drilling process;
- Settled sediments and materials from wet drilling;
- Used plastic linings from the drilling process; and
- General domestic wastes from the staff on site.

Removed soils and overburden will be collected and stored in a designated area (as close as practically possible to the drill point). Where necessary the materials are to be used for rehabilitation of the site (any excess will be disposed of at a suitable disposal facility. Topsoil must be stored separately from overburden and used in the rehabilitation process.

General solid wastes are to be collected and stored on site in closed, secure (scavenger proof) storage containers, and the content of these containers to be disposed of at a suitably licensed facility on a regular basis (at least once a week). The quantities of waste to be generated will be too small to justify on-site separation of different waste streams for recycling (volumes are too low to be viable).

After prospecting related disturbances cease, the disturbed area is to be reinstated. If subsoil was removed the subsoil will be placed back first. Before topsoil is spread, the compacted area will be deep-ripped to a depth of at least 30 cm where soil depth permits. The access tracks and other areas where significant compaction has occurred must be deep ripped to allow for re-establishment of vegetation. All directly disturbed areas must be ameliorated with natural fertiliser (if necessary) and seeded with a vegetation unit specific grass mixture.

Cost breakdown of activities to be carried out throughout the prospecting programme

**Table 9.1**

ACTIVITY	YEAR 1 Expenditure (R')	YEAR 2 Expenditure (R')	YEAR 3 Expenditure (R')	YEAR 4 Expenditure (R')	YEAR 5 Expenditure (R')
<b>PHASE 1 (e.g. 12 months)</b>					
Geophysical Survey	R 30 000.00	R 0.00	R 0.00	R 0.00	R 0.00
Literature Survey	R 30 000.00	R 0.00	R 0.00	R 0.00	R 0.00
Sampling	R 20 000.00	R 30 000	R 0.00	R 0.00	R 0.00
<b>PHASE 2 (e.g. 24 months)</b>					
Drilling	R 0.00	R 452 000.00	R 497 500.00	R 0.00	R 0.00
Trenching	R 20 000.00	R 19 000.00	R 0.00	R 0.00	R 0.00
Excavations	R 15 000.00	R 10 000.00	R 0.00	R 0.00	R 0.00
Sampling & Laboratory Analysis	R 0.00	R 0.00	R 20 000	R 0.00	R 0.00
<b>PHASE 3 (e.g. 12 months)</b>					
Legal and Community Costs	R 20 000.00	R 20 000.00	R 25 000.00	R 25 000.00	R 25 000.00
Environmental Management Costs	R 20 000.00	R 15 000.00	R 30 000.00	R 30 000.00	R 30 000.00
Analytical Desktop Studies	R 0.00	R 0.00	R 0.00	R 200 000.00	R 150 000.00
Rehabilitation	R 20 000.00	R 10 000.00	R 0.00	R 0.00	R 0.00
<b>Annual Total</b>	<b>R 175 000.00</b>	<b>R 526 000.00</b>	<b>R 572 500.00</b>	<b>R 255 000.00</b>	<b>R 205 000.00</b>
				<b>Total Budget</b>	<b>R 1 733 500.00</b>

The total cost of prospecting activities will be **R 1 733 500.00**

### 2.1.2 Plan of the main activities with dimensions

The planned prospecting work is summarised on the table below:

Type of Prospecting Activities planned	Dimensions
Boreholes	A total of 1090 m of drilling is planned. An average depth is 363 m. Drill rigs producing core of NQ diameter will be utilised.
Access roads	Decision not yet made. Plan is to make use of existing access roads, however this is subject to approval by the landowner/s and other affected parties and if access roads have to be constructed they will be similar to existing roads in width (generally less than 4 m). Length will be determined by condition of existing access roads.
Ablution facilities	Chemical toilet facilities will be Utilised if use of existing facilities is not possible (number of toilets will be controlled by the project phase and number of employees and contractors on-site).

### 2.1.3 Description of construction, operational, and decommissioning phases.

#### Construction phase

Prospecting activities are temporary in nature; i.e. prospecting activities do not take a very long period as compared to mining. Permanent structures will not be required for the proposed prospecting. There will be no permanent storage of grease oil, diesel or hydraulic fluid within the prospecting premises. The land owner will be consulted regarding the storage of the above should there be a need to store on his premises or else a camp or contactor's site will be used.

A caravan or mobile container, chemical portable toilet and the storage area will be established with consultation of the land owner. Temporary fencing will be established around this area to prevent easy access. Existing farm access roads will be used but should there be a need to construct new roads that will be done with the consultation of the land owner or legal occupier.

#### Decommissioning phase

Concurrent rehabilitation will be practiced. This will ensure that there is no abundant overburden and topsoil which have to be removed at the closure phase. Nevertheless, the iron prospecting activities do not involve in generation of stockpiles of overburden and topsoil. As temporary structures will be utilised for this prospecting activities, minor or no decommissioning will be required as well as minor rehabilitation will be required

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

The prospecting activities will not involve in any construction or development which will trigger registration and approval of such activities before they can be commenced with as required in terms of NEMA 2006 and 2010 EIA Regulations. Should there be a case wherein such listed activities are required, the EMP will be amended and submitted to the DMR for approval. The relevant processes for EIA in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) will be followed before such activities can commence.

## **2.2 Identification of potential impacts** (Refer to the guideline)

### **2.2.1 Potential impacts per activity and listed activities.**

Based on the studies conducted, no significant environmental impacts are expected from the proposed project. Impacts associated with all activities and phases of the project are discussed in the sections that follow and they include

- a) Surface disturbance
- b) Dust generation
- c) Noise generation
- d) Waste generation

#### Geological mapping, geochemical (soil and/outcrop) sampling and geophysical surveys

First steps in mineral prospecting projects involve the evaluation of available geological information from all sources (i.e. Geological Surveys; published and unpublished papers and reports and maps; Universities and mining and/or exploration companies). This is mainly followed by geological mapping in order to understand the geology of the project area. It is common practice to collect rock and soil samples during mapping. These are taken for geochemical analyses and petrological/microscope studies. Geophysical surveys are also conducted to assist geological mapping. At the end of the above mentioned investigations, targets areas for further investigations are identified. These investigations have no or minor impacts on the environment.

#### Core/diamond drilling

**Removal and loss of vegetation:** Removal of vegetation might be required to allow the entry of heavy vehicles mounted with drilling rigs into the project area/drilling sites. No significant impacts are expected on the biophysical environment. Clearing of vegetation for construction of access roads will be limited to areas where there are no existing roads, if there are existing roads the projects will use them and if required, the access roads will be upgraded using local materials. As part of the rehabilitation plan indigenous vegetation will be planted. Topsoil removed will be stored and used during rehabilitation.

**Dust and noise will be generated:** Dust emissions are expected as a result of movement of traffic at the project site; as such dust control measures will be implemented. Noise pollution may include noise from vehicle engines, etc. To reduce noise impacts, drilling activities will utilise machines producing less noise (i.e. Noise level equivalent to that produced by agricultural tractor). Speed limits within the project area will also help in reducing the noise from on-site traffic. To reduce or avoid the impact of noise to people, employees who are at risk to noise exposure will be required to use personal hearing protection devices, known as noise clippers. Drilling will be done during the day-making the impact temporary and if required to drill at night arrangements and permission will be required from all those who will be affected. Generation of domestic waste: Generation of domestic waste is expected during the project mainly during drilling phase of the project. Dust bins will be provided for domestic waste and these will be emptied at approved disposal sites.

**Soil pollution:** soil pollution can occur as a result of accidental oil spills. Vehicles and equipment used during the project; mainly during drilling might cause soil pollution due to accidental spillages. If this occurs, contaminated soil will be cleaned up immediately and disposal done at approved site.

**Impacts on air quality:** Cars that transport employees, and heavy vehicles used mainly during drilling can be the source of air pollutants. The level of polluting emissions from these sources depends on the fuel and condition of the equipment.

Fire prevention measures will include prohibition on smoking in certain areas; positioning of heat sources to prevent contact with combustible material; control of contractors or employees using blowlamps; cutting or welding equipment. Maintenance programmes for electrical wiring and appliances; adequate cleaning of work areas and special engineering solutions such as to make it impossible for a fire to begin by controlling the presence of oxygen, fuel or energy. Implementation of practical and appropriate mitigation measures can help to minimise or avoid potential impacts identified.

### **2.2.2 Potential cumulative impacts.**

Clearing of vegetation in preparation of drilling activities if not well managed can cause soil erosion. This can lead to recurring loss of habitat in areas that are disturbed and re-disturbed over extended periods. Soil erosion will wash chemicals in soils (mainly from fertilisers) into nearby water bodies. This has the potential to cause water pollution and might also negatively affect the organisms in the affected water bodies. Contaminated sediments may also lower the pH of soils to the extent that vegetation and suitable habitat are lost.

The ongoing development of employment opportunities and enhancement of local labour skills base as successive projects come on stream.



### **2.2.3 Potential impact on heritage resources**

No heritage resources were identified onsite, but a specialist will be consulted if graves and other heritage resources are encountered during the prospecting activity.

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

#### **Impacts on Communities:**

This project may create jobs, roads, schools, and also increase the demands of goods and services in the affected area/s. The applicant intends to involve the communities affected by the project when making important decisions. This will avoid cases where the communities feel that they are being unfairly treated or inadequately compensated because this can lead to social tension and violent conflicts.

People from local communities will be given first preference when employment opportunities arise. If the required skills are not available in the affected areas, people from other areas might be appointed to work for the applicant during the implementation of the approved prospecting work programme. They will not work full time in the area. When they are in the area better accommodation will be arranged for them ensuring that their families can be able to visit them.

Providing better accommodation for the employees will reduce cases where employees get involved in relationships (sexual) with local people mainly because they cannot be able to accommodate their families in houses provided/arranged by the employer. And this will also help in reducing unwanted pregnancies and also reduce the spread of sexually transmitted diseases. The leaders in the community will be notified of their presence in the area.

The conditions of roads and other infrastructures in the area might also be improved if the project is implemented. This will be done after consultation with the communities and the local municipality concerned. Projects implemented by the community for the benefit of the entire community (i.e. Youth Training Programmes; ABET and Environmental awareness) might receive support from the project.

#### **Impacts on individuals:**

The project has the potential to improve the living standard of people living in and around affected communities. This is because the proposed prospecting project has the potential to create jobs for the locals. Although the jobs created might be temporary, permanent jobs will be created once the project has proved to be viable and a decision to open a mine is made. These people will also be given opportunities to gain experience in the field of mineral

exploration and this will enable them to get better jobs in the mining industry which in turn will help in reducing the poverty levels. Businesses offering accommodation and catering services will benefit from the proposed operation because people from outside the project area who will be involved in the project will require their services and as such increasing the income or profits of the said businesses.

Impacts on competing land uses: The area is mainly used for settlement and agricultural activities. There is no alternative land use/s that may be affected by the proposed mining operation.

#### Impact assessment criteria

<p>The criteria below were used to assess the significance of the impacts. The cut-off points have been defined in relation to characteristics of mining, but those for Probability, Intensity/Severity and Significance are subjective, based on rule-of-thumb and experience. In assessing the significance of the impact, natural and existing mitigation measures will be considered. These natural mitigation measures will be defined as natural conditions, conditions inherent in the project design and existing management measures that alleviate (control, moderate and curb) impacts.</p> <p>The assessment procedure described below will make use of:</p> <p>Predictive methods: the magnitude of the impact will be predicted.</p> <p>Evaluation methods: the significance of the impacts will be assessed.</p>		
<p><b>TIMING</b></p> <p>Immediate</p> <p>Construction/operation (C/O)</p> <p>Rehabilitation</p>	<p><b>DURATION</b></p> <p>Short term (S/T) = 0-6 months</p>	<p><b>EXTENT</b></p> <p>On-site</p> <p>Local = 0 – 40 km radius</p> <p>District, Regional, National</p>
<p><b>PROBABILITY</b></p> <p><b>Definite:</b> 100% probability of occurrence</p> <p><b>High (H):</b> 99 - 50% probability of occurrence</p> <p><b>Moderate (M):</b> 49 - 15% chance of occurrence</p> <p><b>Low(L):</b> &lt;15% probability of occurrence</p>	<p><b>INTENSITY/ SEVERITY</b></p> <p><b>High (H):</b> 100 – 50% degree of change in area of direct effect/ impact</p> <p><b>Medium (M):</b> 50-15% change in the area of effect</p> <p><b>Low (L):</b> &lt;15% change in area of effect</p>	
<p><b>SIGNIFICANCE</b></p> <p>The significance of the unmanaged and managed impacts has been assessed through consideration of the probability of the impact occurring, the extent over which the impact will be experienced, and the intensity/severity of the impacts</p> <p><b>Negligible (N):</b> the impact is non-existent or insubstantial, is of no or little importance to any stakeholders and can be ignored.</p> <p><b>Low (L):</b> the impact is limited in extent, has low to medium intensity; whatever its probability of occurrence is, the impact will not have a material effect on the decision and is unlikely to require management intervention carrying significant costs.</p> <p><b>Moderate (M):</b> the impact is of importance to one or more stakeholders, and its intensity will be medium or high; therefore, the impact may materially affect the decision, and management intervention will be required.</p> <p><b>High (H):</b> the impact could render development options controversial or the entire project unacceptable if it cannot be reduced to acceptable levels; and/or the cost of management intervention will be a significant factor in project decision-making.</p>		

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

We confirm that consultations were done with affected and/or interested parties. However, we are still waiting for written comments from the affected and interested

parties.

### 2.2.6 Confirmation of specialist report appended.

No specialist report/s and report/s on specialised processes has been appended.

## 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

Impact assessment involves determining the significance of impacts and the potential for mitigation of negative impacts. There are numerous criteria which may be used to assign the significance of impacts. For the purpose of this investigation, only the most important and relevant criteria were used.

#### 3.1.1 Criteria of assigning significance to potential impacts

The criteria for assigning significance to potential impacts took into consideration the following:

- a) Probability
- b) Extent
- c) Duration and
- d) Potential for mitigation

Details of the impact assessment criteria used are provided in Table below:

Criteria	Categories
Probability	Almost certain
	Likely
	Possible
	Unlikely
	Rare
Extent	Large (>3 stakeholders or more people)
	Medium ( 2-3 stakeholders or some)
	Short (1 stakeholder or few people)
Duration	Short term (< 1 year)
	Medium term (1-3 years)
	Long term (longer than 3 years)
Potential mitigation	High (Strategy identified and possible)

	Medium ( Strategy identified but difficult)
	Low (No strategy identified/impossible)

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

Main Activity	Significance						
	Without mitigation						
Geological, Geochemical and Geophysical mapping	Ins						
Pollution of in-situ soil due to spillage of hazardous substances such as fuel, oil and cement	L						
Noise impacts to people	VL						
Dust emission	L						
Surface disturbance	H						
<b>Drilling</b>							
Pollution of in-situ soil due to spillage of hazardous substances such as fuel, oil and cement	H						
Noise impacts to people	VH						
Dust emission	L						
Surface disturbance	M						
<b>Transportation</b>							
Dust generation	L						
Noise impact	L						
VH = Very High	H = High	M = Medium	L = Low	VL = Very Low	Ins = insignificant	n/a = not applicable	

### 3.1.3 Assessment of potential cumulative impacts.

The objective of the cumulative impact assessment is to identify those environmental and/or socio economic aspects that may not on their own constitute a significant impact but when combined with impacts from past, present or reasonably foreseeable future activities associated with this and/or other projects, result in a large and more significant impact/s. Examples of these kind of impacts are:

- (i) The recurring loss of habitat in areas that are disturbed and re-disturbed over an extended periods and
- (ii) The ongoing development of employment opportunities and enhancement of local labour skills base as successive projects come on stream.

#### Water quality

Surface water may be contaminated due to erosion that might result from excavation to be carried out during the project. Sedimentation may occur in the river water. Oil and grease spills may contaminate surface waters if they are not handled properly. The level of cumulative impact is rated as low because the extent of the impact is low and the severity is moderate.

### Employment opportunities

Apart from the negative impacts resulting from mineral prospecting projects, there are also positive impacts such as employment opportunities for local people. General workers appointed will be from local communities. In addition to positive impacts on the livelihoods and standards of living people, this increase in the employment rates will contribute indirectly to development of the local economy. If the project continues to a mining stage, the improvement in the local economy and development will be valid in a wider geographic area.

### **3.2 Proposed mitigation measures to minimise adverse impacts.**

Prospecting activities will be monitored on a continuous basis. Potential impacts will be identified timeously, and corrective measures put in place, with environmental management plan amended to reflect such additional measures.

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

Drilling activities have potential to cause significant impact to the environment as such mitigation measures are required.

**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)

Drilling results in only minor localised ground impact and is generally not of concern for impacts to heritage resources. The following be done to control or minimise the impact of drilling to the environment:

- a) Areas cleared and levelled for drill platforms will be minimised as much as possible
- b) For the purpose of drilling, drill pads would be constructed by removing vegetation (where necessary) and levelling the ground surface. Soil stripped in the process would be stockpiled as a berm for sediment control and would be available for redistribution during rehabilitation process
- c) Sumps would be excavated and the resulting material and growth media would be stockpiled on site for use in backfilling and rehabilitation. On completion of excavation and filling, the topsoil will be spread over the excavated area to encourage re-vegetation. If there is a need stockpiles will be protected by temporarily seeding,

no more than 30 days after the formation of the stockpile?

### 3.2.3 Review the significance of the identified impacts

(After bringing the proposed mitigation measures into consideration).

Main Activity	Significance					
	Without mitigation	With mitigation				
<b>Geological, Geochemical and Geophysical mapping</b>	Ins	Ins				
Pollution of in-situ soil due to spillage of hazardous substances such as fuel, oil and cement	L	VL				
Noise impacts to people	VL	Ins				
Dust emission	L	VL				
Surface disturbance	H	VL				
<b>Drilling</b>						
Pollution of in-situ soil due to spillage of hazardous substances such as fuel, oil and cement	H	VL				
Noise impacts to people	VH	VL				
Dust emission	L	VL-Ins				
Surface disturbance	M	VL				
<b>Transportation</b>						
Dust generation	L	VL-Ins				
Noise impact	L	VL-Ins				
VH = Very High	H = High	M = Medium	L = Low	VL = Very Low	Ins = insignificant	n/a = not applicable

#### 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).

See the attached plan

##### 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).

Closure objective is to ensure return of prospecting area to pre-prospecting condition or as close as possible to pre-prospecting. Prospecting activities will cause minor or no impacts on the current land use as such post-mining land use for the project area would remain consistent with pre-prospecting land use. The

1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	14509	0	0	0	0	0	0	0
2 (A)	Demolition of steel buildings and structures	m2	0	21087	0	0	0	0	0	0	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	2681	0	0	0	0	0	0	0
3	Rehabilitation of access roads	m2	0	24852	0	0	0	0	0	0	0
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	28818	0	0	0	0	0	0	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	150016	0	0	0	0	0	0	0
5	Demolition of housing and/or administration facilities	m2	0	7687	0	0	0	0	0	0	0
6	Opencast rehabilitation including final voids and ramps	ha	0	10001	0	0	0	0	0	0	0
7	Sealing of shafts adits and inclines	m3	0	12496	0	0	0	0	0	0	0
8 (A)	Rehabilitation of overburden and spoils	ha	0	12496	0	0	0	0	0	0	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	30423	0	0	0	0	0	0	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	30423	0	0	0	0	0	0	0
9	Rehabilitation of subsided areas	ha	0	30423	0	0	0	0	0	0	0
10	General surface rehabilitation	ha	0	30423	0	0	0	0	0	0	0
11	River diversions	ha	0	30423	0	0	0	0	0	0	0
12	Fencing	m	0	30423	0	0	0	0	0	0	0
13	Water management	ha	0	30423	0	0	0	0	0	0	0
14	2 to 3 years of maintenance and aftercare	ha	0	30423	0	0	0	0	0	0	0
15 (A)	Specialist study	Sum	0	30423	0	0	0	0	0	0	0
15 (B)	Specialist study	Sum	0	30423	0	0	0	0	0	0	0
2	Contingencies	Sum	0	30423	0	0	0	0	0	0	0
1	Preliminary and General	Sum	0	30423	0	0	0	0	0	0	0
1	Preliminary and General	Sum	0	30423	0	0	0	0	0	0	0
2	Contingencies	Sum	0	30423	0	0	0	0	0	0	0
			Sub Total 1	30562.12							
			Sub Total 2	37285.79							
			Sub Total 3	37285.79							
			VAT (14%)	5220.01							
			VAT (14%)	5220.01							
			Grand Total	42506							
			Grand Total	42506							

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

## CALCULATION OF THE QUANTUM

Applicant: GSK HOLDINGS (PTY) LTD

Location:

KURUMAN

Date:

Apr-14

No.	Description	Unit	A	B	C	D	E=A*B*C*D
			Quantity	Master Rate	Multiplication factor	Weighting factor 1	Amount (Rands)
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	10.27	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	143.09	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	210.87	1	1	0
3	Rehabilitation of access roads	m2	3.00	25.61	1	1	76.83
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	248.52	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	135.56	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	286.18	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha	0	150016.59	1	1	0
7	Sealing of shafts adits and inclines	m3	0	76.82	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha	0	100011.06	1	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	124561.97	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	361787.01	1	1	0
9	Rehabilitation of subsided areas	ha	0	83744.2	1	1	0
10	General surface rehabilitation	ha	0	79225.63	1	1	0
11	River diversions	ha	0	79225.63	1	1	0
12	Fencing	m	4	90.37	1	1	361.48
13	Water management	ha	1	30123.81	1	1	30123.81
14	2 to 3 years of maintenance and aftercare	ha	0	10543.33	1	1	0
15 (A)	Specialist study	Sum	5	1		1	0
15 (B)	Specialist study	Sum				1	0
Sub Total 1							30582.12

1	Preliminary and General	3667.4544	weighting factor 2	3667.4544
2	Contingencies		1	3056.212
Subtotal 2				37285.79
VAT (14%)				5220.01
Grand Total				42506



**GSK HOLDINGS (PTY) LTD** hereby declares that it will provide the finances necessary for the rehabilitation of damage caused by the prospecting operations should be prospecting right 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.**

Impacts required monitoring programmes include the following:

- Soil pollution from accidental spillages
- Noise impacts
- Dust emission
- Soil erosion
- Generation of domestic waste
- Surface water contamination; and
- Impacts on cultural/heritage resources

**5.2 Functional requirements for monitoring programmes.**

GSK HOLDINGS (PTY) LTD will take full responsibility to ensure that all employees and contractors involved in the prospecting project conduct their work in such a way that all avoidable impacts are avoided and also ensuring that all regulations and legislation is complied with. The employees and contractors involved in prospecting projects normally work in teams and each team will have a team leader who will ensure that all the employees conduct work in accordance with the approved Environmental Management Plan. All employees and contractors have the responsibility to report any suspected impact/s to the environment to their immediate supervisor/or team manager who will ensure that corrective measures are put in place if a problem is identified after conducting initial investigations. The applicant will also appoint specialists (i.e. Environmental Scientist/Archaeologist/Anthropologist) to monitor compliance to the approved EMP.

GSK HOLDINGS (PTY) LTD will conduct an environmental awareness with the employees to educate them about the possible environmental impacts and the mitigation measures to be done if it happens. Ongoing monitoring will be conducted to the site. The site will always be monitored by a site environmental officer who will always be on site and document information.

### 5.3 Roles and responsibilities for the execution of monitoring programmes.

Mitigation: Action/mitigation	Responsibility	Timeframe
Soil pollution from spillages: Drill pans will be in place under all stationary machinery. Servicing of vehicles and other equipment will be done regularly to avoid spillages. No equipment shall be extensively repaired in any place other than in the maintenance yard. Rehabilitation of disturbed areas should be undertaken as soon as possible and properly monitored. Disposal of contaminated soils will be done at approved sites.	GSK HOLDINGS (PTY) LTD Supervision Consultant on behalf of GADABI MINERAL RESOURCES AND PROJECTS CC	Full duration of the project
Noise impacts to people: Make use of personal hearing devices (i.e. noise clippers). Drilling activities will also utilise machines producing less noise (i.e. noise level equivalent to that produced by agricultural tractor). Drilling will also be done during the day and this will not be done throughout the life of the project, thereby making the impacts temporary. If there is a need to drill at night, arrangements will be made to ensure that no or minor impacts are caused by such activities.	GSK HOLDINGS (PTY) LTD Supervision Consultant on behalf of GADABI MINERAL RESOURCES AND PROJECTS CC	Drilling phase and when working close to equipment generating high noise levels (i.e. core cutting machine).
Dust emission: Control speed of vehicles entering and leaving the project area.	GSK HOLDINGS (PTY) LTD Supervision Consultant on behalf of GADABI MINERAL RESOURCES AND PROJECTS CC	Full duration of the project
Soil erosion: Rehabilitation of disturbed areas will be undertaken as soon as possible and properly monitored. Rehabilitation will involve the replacement of suitable and adequate topsoil and the encouragement of indigenous local vegetation to stabilise the soil.	GADABI MINERAL RESOURCES AND PROJECTS CC GSK HOLDINGS (PTY) LTD (Pty) Ltd/ Supervision Consultant on behalf of GADABI MINERAL RESOURCES AND PROJECTS CC	Full duration of the project
Generation of domestic waste: Dust bins will be provided for domestic waste. These bins will be emptied at approved disposal sites.	GADABI MINERAL RESOURCES AND PROJECTS CC Supervision Consultant on behalf of GADABI MINERAL RESOURCES AND PROJECTS CC	Full duration of the project
Surface water contamination: Erosion will be avoided to ensure that washing of chemicals from soils into the nearby water bodies does not occur. Water samples will be taken from these water bodies for analyse in order to ensure that the water is still in condition similar to that before prospecting. If there are some changes, corrective action will be taken.	GSK HOLDINGS (PTY) LTD Supervision Consultant on behalf of GADABI MINERAL RESOURCES AND PROJECTS CC	Full duration of the project
Impacts on cultural/heritage resources: Prospecting activities have potential to cause serious impacts on heritage/cultural resources. Before any drilling is conducted the applicant will appoint a specialist to do phase 1 heritage scoping assessment which involves identification of archaeological sites and assessing their significance and; phase 2 which involves recording, sampling and setting sites that are to be destroyed. This will enable identification of available resources and the appointed specialist will give advice on how the identified resources should be protected.	GADABI MINERAL RESOURCES AND PROJECTS CC/ Supervision Consultant on behalf of GADABI MINERAL RESOURCES AND PROJECTS CC	Full duration of the project

#### **5.4 Committed time frames for monitoring and reporting.**

The Applicant will as part of the terms and conditions for a prospecting right ensure compliance with the approved environmental management plan (EMP) and to assess the adequacy of the EMP. The following will be done:

- (i) Conducting monitoring on a continuous basis in order to ensure that the provisions of the programme are adhered to.
- (ii) Conduct performance assessment of the EMP, and to compile and submit the assessment report every two years to the relevant Department.
- (iii) Ongoing and regular reporting of the progress of implementation of the approved environmental management plan and
- (iv) Conducting visual inspections on erosion and physical pollution on a regular basis.

The applicant is committed to adhere to all relevant legislation (including national, provincial and local) is complied with during the prospecting operations.

### **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).

As per the DMR guidelines, in view of this mission, GSK HOLDINGS (PTY) LTD needs to ensure that if an area is found to be none feasible for mining related economic activity that area can be returned at minimum to the current land use over the area requested. Of importance to note is that whilst conducting the prospecting activities GSK HOLDINGS (PTY) LTD will not impact on the current economic land use of the area, with the nature of drilling activities being isolated in area, and thus not preventing pastoral and agricultural activities from continuing outside of these sites. The disturbed area will be rehabilitated to facilitate revegetation.

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

All buildings and surface infrastructures will be dismantled unless they are necessary to achieve and maintain the satisfactory condition or to support the area's socioeconomic development. Any waste material including scrap, rubble and tyres will be removed entirely from the prospecting area and disposed of at a recognised landfill facility. The affected areas will be re-vegetated to control erosion and restore the site's natural condition. If necessary the area will be fertilised to allow rapid establishment of vegetation. The characteristics of the planted vegetation should resemble that of the natural environment. Rapid reestablishment of natural vegetation and restoration of site ecology will also be promoted.

### **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).

### **6.4 Description of the information provided to the community, landowners, and interested and affected parties**

The prospecting work programme (in a simplified format to ensure that they have a better understanding of what is planned); applicant details (postal address and Company registration number, etc); details of the minerals applied for were given to the Community, landowners and interested and affected parties. Some of the affected and/or interested parties (i.e. Land owners, communities, etc) were visited and they were also offered the opportunity to ask questions or raise concerns. Most of them have indicated that they will send us their comments and if they need clarity they will contact us since they have our contact details.

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

### **7.1 Identification of interested and affected parties.** (Provide the information referred to in the guideline)

Notification letter was sent to the identified interested and/or affected parties..

### **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.**

Project details such as the prospecting work programme (in a simplified format to ensure that they have a better understanding of what is planned); applicant details (telephone; email, mobile contact number, postal address and Company registration number, etc); details of the minerals applied for were given to the landowner, adjacent landowners and interested and affected parties.

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

An advert was put on the local newspaper and email was sent.

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

There is a hunting season from 1 May until end of August each year. So before we enter to the farm we need to inform them.

**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.**

The socio-economic conditions of persons on and non-adjacent properties will be affected by the proposed prospecting operation. This is because the project has a potential of creating jobs and as such reducing the poverty levels in the area. Also the infrastructure development (i.e. roads, etc) will be improved. Community based Organisations will also receive financial support from the proposed project. If the project continues to a mining stage, people from surrounding communities will receive support (bursaries, etc) from the mine to study at Universities and further education and training mostly in areas of science and technology. This will enable them to get good and better paying jobs as such improving their lives.

People from the area will gain experience in the field of mineral exploration and this will enable them to get better jobs in the mining industry which in turn will help in reducing the poverty levels in the Province.

Businesses providing accommodation and catering services will benefit from the proposed operation because people from outside the project area who will be involved in the project will require their services and as such increasing the income or profits of the said businesses.

The proposed prospecting project has the potential to create jobs for the locals. Although the jobs created might be temporary, permanent jobs will be created once the project has proved to be viable and the mine opens.

Infrastructure development: the conditions of roads and other infrastructures in the area will be improved.

Projects implemented by the community for the benefit of the entire community (i.e. Youth Training Programmes; ABET and Environmental awareness) might receive support from the project.

Employment opportunities: It was also indicated that there are problems in other parts of the Province where locals are not benefiting (employment opportunities) from projects operating in their areas. The Applicant will give first preference to locals (the community leaders will also be involved in the process) and if the required skills are not available in the area, then the Applicant will consider employing people from other areas.

**7.2.5 Other concerns raised by the aforesaid parties.**

No concerns were raised by the aforesaid party

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

Consultation was done through registered mail.

**7.2.7 Information regarding objections received.**

No objection received, any information received from the interested and effected parties will be forwarded to the department

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

**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).

Prospecting work subjects employees to hard physical work that includes frequent lifting of heavy objects, using potentially dangerous equipment and being exposed to heat, cold, etc. Therefore it becomes essential that employees be in good physical condition and in good health when they begin field work. Employees will be reminded that they should be free of communicable diseases that may rapidly spread through a field camp. Exploration workers will also be trained in basic first aid skills. In order to inform employees of dangers in the workplace, and how to avoid them, GSK HOLDINGS (PTY) LTD intends to do the following:

- a. Providing them with information about the materials health effects for all the materials that will be used.
- b. The employer will also motivate workers and also provide resources necessary to conduct all prospecting activities in a safe and healthful manner. Each employee must understand that safety is their responsibility and everyone is involvement is needed for success including participation of safety committees in hazard identification and control.
- c. The employer will also inform the employee of the location of the nearest medical treatment facility.
- d. Instructing employees of specific hazards associated with their workplace and duties and ensure use of appropriate personal protective equipment.
- e. Train employees in the safe use of all equipment to be used in the project.

## **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).

Responsibilities could come in many different forms, they include testing machinery regularly, providing adequate safety equipment, personal protective equipment required, fire fighting measures and decomposition products of the material, chemical reactivity and incompatibilities, spill and leak handling procedures and disposal procedures.

To avoid or minimise the impacts on the heritage resources all GSK HOLDINGS (PTY) LTD employees and other Contractors involved in the project will be briefed in their induction to report any sign of buildings, structures or evidence of cultural sites of any sort and to stop work until the site has been investigated by an accredited person.

## **8.3 Environmental awareness training.**

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

Emergency procedures and communications will be carefully planned and tested before field work commences. The applicant will also provide exploration employees with a safety manual that addresses the issues of the region (project location) where they work. A comprehensive safety manual will form the basis for camp orientation meetings, training sessions and routine safety meetings throughout the field season.

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

### **9.1 The annual amount required to manage and rehabilitate the environment.**

(Provide a detailed explanation as to how the amount was derived)

The annual amount required to manage and rehabilitate the environment is R 42 506.00. A detail of how the R 42 506.00 was determined is shown in Table below:

*Costs pertaining to the rehabilitation and management of environmental impacts*

C.6.7. Possible impact as a result of the prospecting operation	Description	Duration	Impact rating	C.6.8. Mitigatory measures to manage the impacts of the prospecting operation	C.6.9. Annual management and concurrent rehabilitation cost	C.6.10. Final rehabilitation
Dust	Exploration vehicles travelling on gravel road	Entire duration of drilling operation	Medium	Restrict travelling speed of vehicles and spraying of water will reduce dust.	R650.00	R 5, 000.00
Site clearing	2 *2m site will have to be cleared for each borehole and if there may be a need to clear some vegetation for the caravan office	2-3 days in the area were drilling will be conducted	High	Topsoil will be removed and stockpiled separately prior to any prospecting activities. After the drilling activity is finished, topsoil will be replaced and backfilling.	R150.00	R1,600.00
Water requirement	Drinking water will be brought to site in bottles on a daily basis.	Entire duration of drilling operation	Low	No impact anticipated and therefore no Mitigatory measures have been established.	R0.00	R10 000.00
Ground water contamination	Contamination as a result of seepage of fuel and oils	Entire duration of drilling operation	High	Ensure that chemicals, oils and fuels are appropriately lined and well maintained to avoid any spillages that can lead to possible contamination of the ground water.	R 1, 000.00	R10 000.00
Access road	Movement of vehicles around the site	Entire duration of drilling operation	Medium	No mitigation measures, existing farmer's access road will be used.	R 2, 000.00	R 3, 500.00
Contamination of surface water	Spillages of fuels, oils and waste.	Entire duration of drilling operation	High	Provide toilet and waste disposal facilities at drilling site.	R300.00	R1600.00
Influx of people	No employees will be accommodated	Entire duration drilling operation	Low	No impact anticipated and therefore no Mitigatory measures have been established.	R0.00	R0.00
Contamination of soil	Contamination as a result of spillages	Entire duration drilling operation	Low	There will be no storage of fluid on site if it happens to store fluid, there will be a demarcated site for the storage and a stand will be provided to avoid	R60.00	R900.00



				contamination to the soil.		
Noise	Operation of heavy machinery and traffic	Entire duration drilling operation	Low	The noise impact will be mitigated by the fact that the drilling operation will be only occur on the day and there are no community within 500m radius of the site which can be negatively affected by prospecting activities.	R0.00	R0.00
<b>Total</b>					<b>R1 280.00</b>	<b>R 41 226.00</b>

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

The Applicant confirms that the stated amount of **R 42 506.00** in 9.1 is correctly reflected in the submitted prospecting work programme.

What method will be used to furnish DME with this financial provision?

Cash deposit	
Bank guarantee	<b>x</b>
Trust Fund	
Other: (specify) (Note: other methods must be approved by the Minister)	

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

<p><b>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.</b></p>	
<b>Full Names and Surname</b>	Mr Khathu Masenya
<b>Identity Number</b>	7809155723080

**-END-**

From:

To:0865344538

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