

**BASIC ASSESSMENT REPORT AND ENVIRONMENTAL  
MANAGEMENT PROGRAMME REPORT FOR THE  
APPLICATION OF A PROSPECTING RIGHT  
SITUATED ON THE REMAINING EXTENT OF THE  
FARM VAALBANK 135, A PORTION OF PORTION 1 OF  
THE FARM VAALBANK 135 AND PORTION 2 OF THE  
FARM VAALBANK 135, IN THE MAGISTERIAL  
DISTRICT OF LEJWELEPUTSWA, IN THE TOWN OF  
WELKOM**

**FOR  
RUTENDO HR CONSULTANTS (PTY) LTD**

**DMR REF. NO. FS 10678 PR**



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**mineral resources**

Department:  
Mineral Resources  
**REPUBLIC OF SOUTH AFRICA**

**BASIC ASSESSMENT REPORT**  
**AND**  
**ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT**

SUBMITTED FOR ENVIRONMENTAL AUTHORISATIONS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 AND THE NATIONAL ENVIRONMENTAL WASTE ACT, 2008 IN RESPECT OF LISTED ACTIVITIES THAT HAVE BEEN TRIGGERED BY APPLICATIONS IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (MPRDA) (AS AMENDED).

**NAME OF APPLICANT:** RUTENDO HR CONSULTANTS (PTY) LTD

**REFERENCE NUMBER:** FS 10678 PR

**PROJECT NAME:** REMAINING EXTENT OF THE FARM VAALBANK 135, A PORTION OF PORTION 1 OF THE FARM VAALBANK 135 AND PORTION 2 OF THE FARM VAALBANK 135

**DATE:** 04 October 2023

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## **ABBREVIATIONS USED IN THIS REPORT**

<b>DMR</b>	:	Department of Mineral Resources
<b>DRPW</b>	:	Department of Roads and Public Works
<b>DWS</b>	:	Department of Water and Sanitation
<b>ECO</b>	:	Environmental Control Official
<b>EIA</b>	:	Environmental Impact Assessment
<b>EMP</b>	:	Environmental Management Programme
<b>FS</b>	:	Free State
<b>IAPs</b>	:	Interested and Affected Parties
<b>LOM</b>	:	Life of Mine
<b>MPRDA</b>	:	Minerals and Petroleum Resources Development Act
<b>NEMA</b>	:	National Environmental Management Act
<b>SAHRA</b>	:	South African Heritage Resources Agency
<b>SAPS</b>	:	South African Police Services

## 1.1 IMPORTANT NOTICE

In terms of the Mineral and Petroleum Resources Development Act (Act 28 of 2002, as amended), the Minister must grant a prospecting or prospecting right if among other the prospecting “will not result in unacceptable pollution, ecological degradation or damage to the environment”.

Unless an Environmental Authorization can be granted following the evaluation of an Environmental Impact Assessment and an Environmental Management Program report in term so of the National Environmental Management Act (Act 107 of 1998) (NEMA), it cannot be concluded that the said activities will not result in unacceptable pollution, ecological degradation or damage to the environment.

In terms of section 16(3) (b) of the EIA Regulations, 2014, any report submitted as part of an application must be prepared in a format that may be determined by the Competent Authority and in terms of section 17(1) (c) the Competent Authority must check whether the application has taken into account any minimum requirements applicable or instructions or guidance provided by the Competent Authority to the submission of applications.

**It is therefore an instruction** that the prescribed reports required in respect of applications for an environmental authorization for listed activities triggered by an application for a right or a permit submitted in the exact format of, and provide all information required in terms of, this template. Furthermore, please be advised that failure to submit the information required in the format provided in this template will be regarded as a failure to meet the requirements of the Regulation and will lead to the Environmental Authorization being refused.

**It is furthermore an instruction that** the Environmental Assessment Practitioner must process and interpret his/her research and analysis and use the findings thereof to compile the information required herein. (Unprocessed supporting information may be attached as appendices). The EAP must ensure that the information required is placed correctly in the relevant sections of the Report, in the order, and under the provided headings as set out below, and ensure that the report is not cluttered with un-interpreted information and that it unambiguously represents the interpretation of the applicant.

## 1.2 OBJECTIVE OF THE BASIC ASSESSMENT PROCESS

The objective of the basic assessment process is to, through a consultative process

- (a) Determine the policy and legislative context within which the proposed activity is located and how the activity complies with and responds to the policy and legislative context;
- (b) Identify the alternatives considered, including the activity, location, and technology alternatives;
- (c) Describe the need and desirability of the proposed alternatives;
- (d) Through the undertaking of an impact and risk assessment process inclusive of cumulative impacts which focused on deterprospecting the geographical, physical, biological, social, economic, heritage, and cultural sensitivity of the sites and locations within the sites and the risk of impact of the proposed activity and technology alternatives on these aspects to determine:
  - i. The nature, significance, consequence, extent, duration, and probability of the impacts occurring to; and
  - ii. The degree to which these impacts –
    - a. Can be reversed
    - b. May cause irreplaceable loss of resources; and
    - c. Can be managed, avoided or mitigated;
- (e) Through a ranking of the site sensitivities and possible impacts the activity and technology alternatives will impose on the sites and location identified through the life of the activity to –
  - i. Identify and motivate a preferred site, activity and technology alternative;
  - ii. Identify suitable measures to manage, avoid or mitigate identified impacts; and
  - iii. Identify residual risks that need to be managed and monitored.



## PROJECT DETAILS

**Name of Project:** Remaining extent of the Farm Vaalbank 135, a portion of Portion 1 of the Farm Vaalbank 135 and Portion 2 of the Farm Vaalbank 135

**Prospecting right:** FS 10678 PR

**Name of Applicant:** Rutendo HR Consultants (Pty) Ltd

**Responsible person:** Ntshaba Phelisa Faith

**Physical Address:** 950 Matsie Street, Kanana Orkney, North West

**Postal Address:** 950 Matsie Street, Kanana Orkney, North West

**Telephone:** 051 430 1748

**Environmental Consultant (EAP):** Mr T Mulaudzi

**Responsible Person:** Mr T Mulaudzi

**Physical Address:** 15 Barnes Street, Westdene, Bloemfontein, Free State, 9301

**Postal Address:** P.O. Box 22372, Extonweg, 9313, Free State

**Telephone:** 051 430 1748

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**E-mail:** [info@engedime.com](mailto:info@engedime.com)

**Expertise of EAP:** Refer to Part A (3) (a) (ii) on the expertise of EAP

## **PART A**

### **SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT**

#### **1.3 Contact details of**

##### **a) Details of EAP**

###### **i. Details of the EAP**

Name of the Practitioner: Tshimangadzo Mulaudzi

Tel No.: 051 430 1748

Fax No.:086 556 2568

Email address: info@engedime.com

###### **ii. Expertise of the EAP**

###### **1) The qualifications of the EAP (with evidence)**

Tshimangadzo Mulaudzi hold an Honours Degree in Mining and Environmental Geology from the University of Venda. Have since been working as an environmental geologist and environmental practitioner. He has 5 years' experience in Environmental Science, 5 years' experience in Geology, and 5 years' experience in public participation.

###### **2) Summary of the EAP's past experience (in carrying out the Environmental Impact Assessment Procedure)**

Tshimangadzo Mulaudzi has been carrying out Environmental Impact Assessment Procedure since 2012, in 2012, he joined a large mining consulting company in Kimberly called Breeze Court Investments 47 (Pty) Ltd (Geologist and Mining Consulting firm). This is where Mr Mulaudzi acquired in-depth experience and know how in the mining consulting business by assisting the large to small scale mining companies to obtain prospecting right, mining rights, mining permits, technical co-operate permits, reconnaissance permits, exploration rights, production rights, integrated water use license, and environmental authorisation among other licenses.

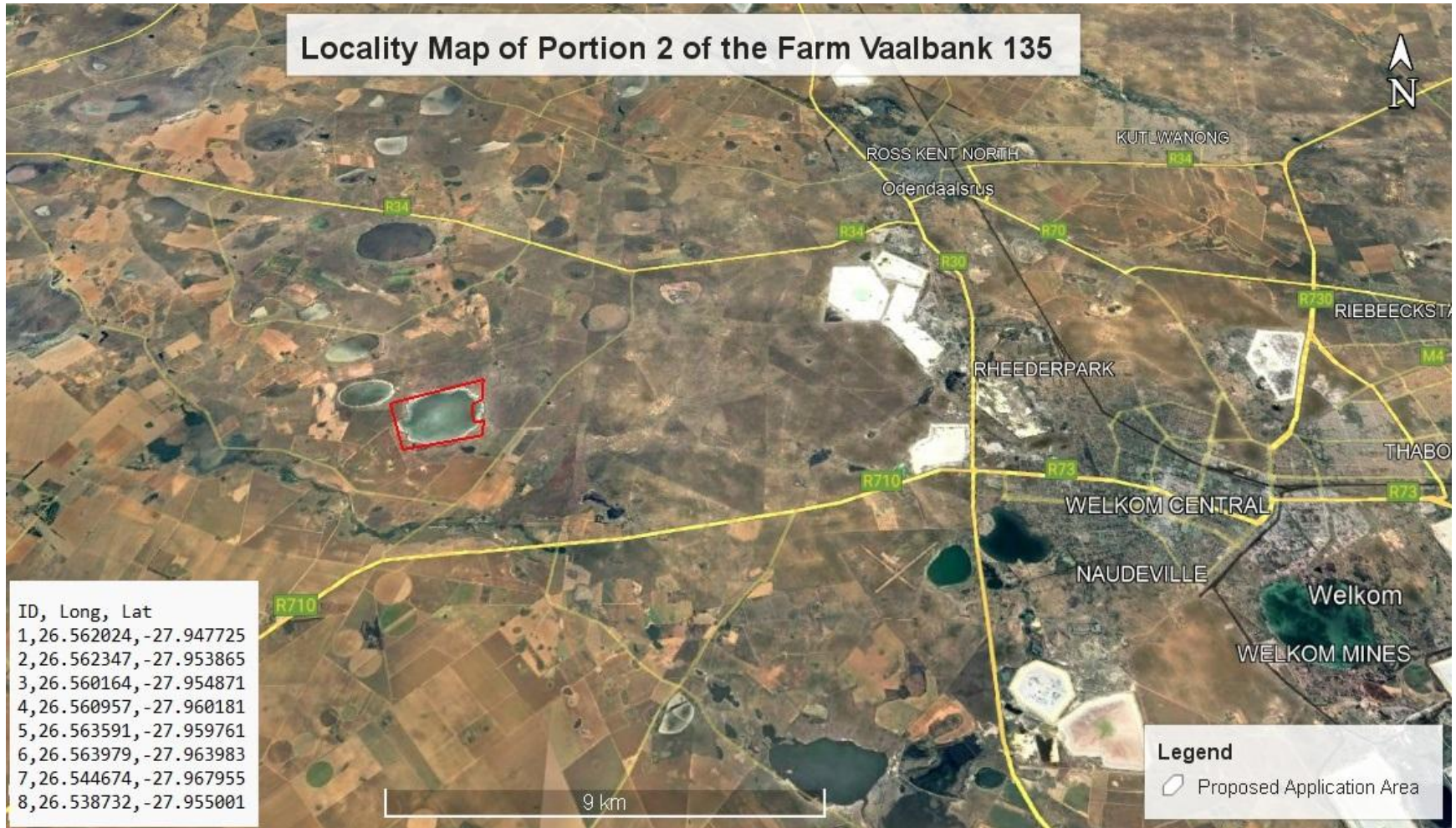
Mulaudzi has five years working experience in environmental management, geology and public participation process.

**b) Location of the overall Activity**

<b>Farm name:</b>	Remaining extent of the Farm Vaalbank 135, a portion of Portion 1 of the Farm Vaalbank 135 and Portion 2 of the Farm Vaalbank 135
<b>Application area (Ha):</b>	357.10 Ha
<b>Magisterial district:</b>	Lejweleputswa
<b>Distance and direction from nearest town:</b>	Approximately 13 west of Welkom town
<b>21 digit Surveyor General Code for each farm portion:</b>	F03900000000135000000 F03900000000135000001 F03900000000135000002

c) Locality map

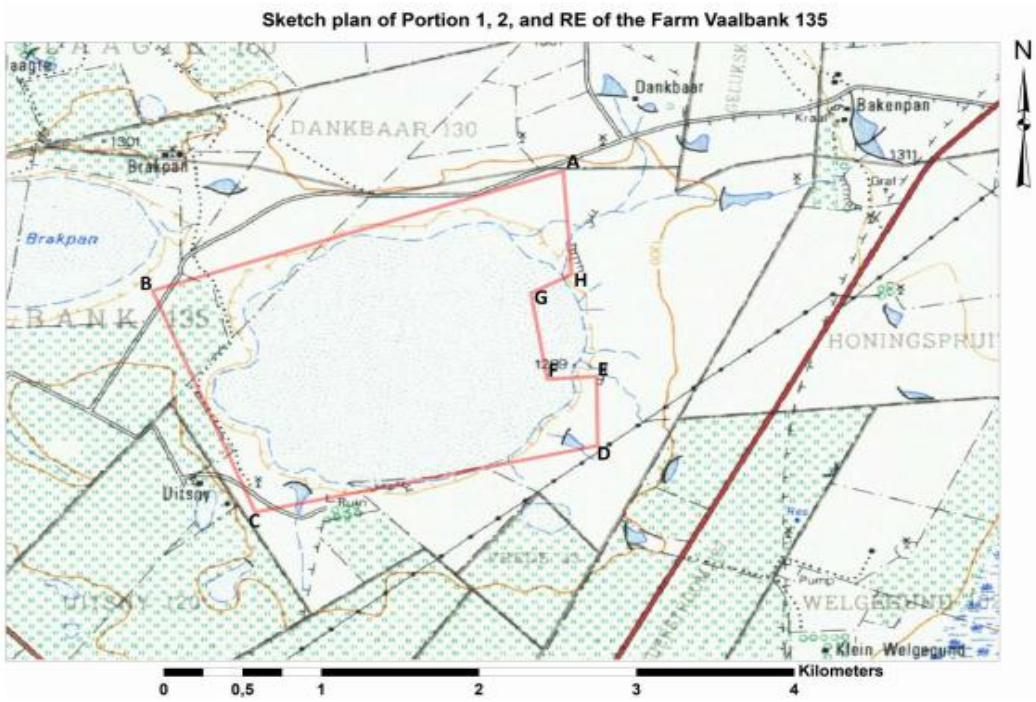
(show nearest town, scale not smaller than 1:250 000)



**d) Description of the scope of the proposed overall activity**

(Provide a plan drawn to a scale acceptable to the competent authority but not less than 1: 10 000 that shows the location, and area (hectares) of all the aforesaid main and listed activities, and infrastructure to be placed on site)

<b>APPLICANT:</b> RUTENDO HR CONSULTANTS			
SKETCH PLAN PREPARED IN ACCORDANCE WITH REGULATION 2(2)			
SKETCH PLAN FOR THE <b>APPLICATION FOR A PROSPECTING RIGHT IN TERMS OF SECTION 16 OF THE MPRDA, 2002</b>			
OVER THE AREA LETTERED A, B, C, D, E, F, G & H IN EXTENT OF 357,10 Ha SITUATED ON PORTION 1, 2 AND RE OF THE FARM VAALBANK 135 IN THE MAGISTERIAL DISTRICT OF WELKOM PROVINCE: FREE STATE PROVINCE			
<b>SURVEY SYSTEM WGS 84 CO-ORDINATES: WG 25</b>			
Name	E	S	
A	26.562024,	-27.947725	
B	26.562347,	-27.953865	
C	26.560164,	-27.954871	
D	26.560957,	-27.960181	
E	26.563591,	-27.959761	
F	26.563979,	-27.963983	
G	26.544674,	-27.967955	
H	26.538732,	-27.955001	
PLAN APPROVED		DATE	
REGIONAL MANAGER, NORTHERN CAPE		DRAWN AND COMPILED BY: ENGEDI MINERALS AND ENERGY (PTY) LTD. (GEOLOGICAL, GIS & ENVIRONMENTAL CONSULTANTS)	
		03 JULY 2023	
SIGNATURE		DATE	



Compiled by: ENGEDI MINERALS AND ENERGY (PTY) LTD

e) **Listed and specified activities**

<b>NAME OF ACTIVITY</b> <b>E.g. for prospecting –</b> prospecting, blasting, stockpiles, discard dumps or dams, loading, hauling and transport, water supply dams and pitting and trenching, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc.)	<b>Aerial extent of the Activity (Ha or m<sup>2</sup>)</b>	<b>LISTED ACTIVITY</b> (Mark with an X where applicable or affected)	<b>APPLICABLE LISTING NOTICE (GNR 324, GNR 325 OR GNR 327)</b>  <b>GNR 327</b>
Geological investigations	356 Ha	X	Listing Notice 1, Activity No. 20
Establishment of prospecting site camps comprising of the drill site with sumps and parking, equipment storage, geologist logging area, water storage, waste bins and portable toilets.	1.1 Ha	X	Listing Notice 1, Activity No. 20

**i. Description of the activities to be undertaken**

(Describe Methodology or technology to be employed, including the type of commodity to be prospected and for a linear activity, a description of the route of the activity)

The activity is for the prospecting right which will involve the prospecting of Gold ore and Sand at the proposed area.

**Phase 1**

Non-invasive prospecting work will be as follows:

**Desktop Analysis**

The geology of the area will be interpreted by using aerial photos, available mapping, literature reviews and landsat data – target areas will be identified. Further to this field mapping of outcrop will be conducted.

### **Geophysical Survey**

A geophysical electromagnetic survey (magnetometer) and gravity survey will be done where so targeted by the Geologist to proof the availability of the anomalies of the proposed prospected mineral of interest (gold). This is done to determine any anomalies which may be present in the underlying geology. This requires carrying a proton magnetometer which passes an electric current through the underlying sediments/ore body. No samples are taken at this phase thus no excavations are required. Information gained from this phase will be useful to site further drilling and position of pits for pit testing. The desktop studies and geophysical survey will take a period of 12 months.

### **Phase 2**

Invasive prospecting methods will be as follows:

#### **Core Drilling**

Invasive prospecting consists of 2 core drilling (Reverse Circulation) and the results of this phase will determine the final positions of the proposed pits for pit testing. This phase is considered to have a medium impact on the environment. Drilling equipment and transport vehicles will be mobilized. The drilling team will be required to adhere to commitments of the EMP and management are required to ensure that environmental management principles are adhered to at all phases. Existing roads will be used wherever possible. Any new access road construction will be conducted in close consultation with the landowner. The drilling method will take a period of over 24 months.

#### **Core Drilling**

30 holes will be drilled 50 m deep at interval of 5 meters apart.

**Borehole Chips**– logged, sampled and analyzed  
30 samples

### **Phase 3**

**drilling and CPR report**

The remaining boreholes which were not done in the phase 2 will be finalised followed by the compilation of the competent persons report. The pit process will take place over a period of 12 months.

<b>APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT</b>  (a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process)	<b>REFERENCE WHERE APPLIED</b>	<b>HOW DOES THIS DEVELOPMENT COMPLY WITH AND RESPOND TO THE LEGISLATION AND POLICY CONTEXT.</b>  (E.g. in terms of the National Water Act a Water Use License has/has not been applied for)
National Environmental Management Act (NEMA), No. 107 of 1998, as amended	Section 24	In terms of the National Environmental Management Act, an application for an Environmental Authorisation has been applied for.
Regulation 982. National Environmental Management Act (Act No. 107 of 1998): Environmental Impact Assessment Regulations, 2014	Regulation 19	In terms of the NEMA EIA Regulations a Basic Assessment Report (BAR) and Environmental Management Programme (EMPr) were prepared to submit to the competent authority.
Regulation 983. National Environmental Management Act (Act No. 107 of 1998): Listing notice 1: List of activities and competent authorities identified in terms of sections 24(2) and 24D	Regulation 20	In terms of NEMA EIA Regulations R.983, Listing notice 1, the activity triggers regulation 21 which refers to a prospecting right application and therefore needs an Environmental Authorizations to proceed as well as follow procedures as prescribed in regulation 19 of R.982 (EIA Regulations, 2014).
Mineral and Petroleum Resources	Section 27	In terms of the MPRDA, any person



Development Act (Act No. 28 of 2002)		who wishes to apply for a prospecting right must lodge the application in the prescribed manner.
Mineral and Petroleum Resources Development Amendment Act (Act No. 49 of 2008)	Section 23	In terms of the MPRDA, any person who wishes to apply for a prospecting right must simultaneously apply for an environmental authorisation and must lodge the application to requirements contemplated by competent authority.

**f) Need and desirability of the proposed activities**

*(Motivate the need and desirability of the proposed development including the need and desirability of the activity in the context of the preferred location)*

The need for the proposed development is of paramount importance as it is going to assist the Matjhabeng local community in terms of poverty alleviation through job creation, black economic empowerment in terms of the prospecting charter which will contribute to the nation’s visions of job creation.

**g) Motivation for the overall preferred site, activities and technology alternative**

The proposed prospecting site is preferred because:

1. The area is comprised of the old Gold ore and Sand pans and thus enhance our confidence that the area is suitable for Gold ore and Sand mining but our prospecting results will definitely ascertain our confidence about the occurrence of Gold ore and Sand in the vicinity
2. The area under application is in the vicinity of cattle farming environment and thus come we happy and confidence with the Gold ore and Sand grade, it will be viable for good marketing.

Full description of the process followed to reach the proposed preferred alternatives within the site

NB!!! – This section is about the determination of the specific site layout and the location of infrastructure and activities on site, having taken into consideration the issues raised by interested and affected parties, and the consideration of alternatives to the initially proposed site layout.

**i. Details of the development footprint alternatives considered.**

With reference to the site plan provided below and the location of the individual activities on site, provide details of the alternatives considered with respect to:

- a. The property on which or location where it is proposed to undertake the activity;
- b. The type of activity to be undertaken;
- c. The design or layout of the activity;
- d. The technology to be used in the activity;
- e. The operational aspects of the activity; and
- f. The option of not implementing the activity

No alternatives are applicable to this project since there is an old Gold ore and Sand pan in the area under application and thus gives us hope and confidence that there is high possibility of sand occurrence and this will be proven after drilling has been done. Locating the development to another area will result in the Gold ore and Sand possibly not being found and the economy and society not benefitting from proposed prospecting activity.

**ii. Details of the Public Participation Process Followed**

(Describe the process undertaken to consult interested and affected parties including public meetings and one on one consultation. NB the affected parties must be specifically consulted regardless of whether or not they attend public meetings. Information to be provided to affected parties must include sufficient detail of the intended operation to enable them to assess what impact the activities will have on them or on the use of their land)

***Definitions:***

**‘consultation’** means a two way communication process between the applicant and the community or interested and affected party wherein the former is seeking, listening to, and considering the latter’s response, which allows openness in the decision making process.

**‘community’** means a group of historically disadvantaged persons with interest or rights in a particular area of land on which the members have or exercise communal rights in terms of an agreement, custom or law: Provided that, where as a consequence of the provisions of the Act negotiations or consultations with the community are required, the community shall include the members or part of the community, directly affected by prospecting or prospecting, on land occupied by such members or part of the community.

**‘Interested and affected’ parties** include, but are not limited to; –

- Host Communities
- Landowners (Traditional and Title Deed owners)
- Traditional Authority
- Land Claimants
- Lawful land occupier
- The Department of Land Affairs,
- Any other person ( including on adjacent and non-adjacent properties) whose socio-economic conditions may be directly affected by the proposed prospecting or prospecting operation
- Matjhabeng Local Municipality,
- Lejweleputswa District Municipality,
- The relevant Government Departments, agencies and institutions responsible for the various aspects of the environment and for infrastructure which may be affected by the proposed project.

The following I&APs were contacted:

- Land owner
- Free State Department of Rural, Environment and Agricultural Development;
- Chief Director: Department of Rural Development and Land Reform (Free State);
- Lejweleputswa District Municipality – Municipal Office;
- Matjhabeng local municipality- Municipal office;
- Department of Water and Sanitation;
- Other relevant parties or departments.

The identified I&APs were provided with information regarding the applied proposed prospecting activity. The final location of the planned prospecting will be decided in consultation with the landowners during prospecting. All comments from the identified I&APs will be noted and taken into consideration.

After the directly affected land owner has been identified, these parties were consulted per email or personally (whichever method is most convenient for the party concerned).

The public participation process mainly comprises engagement with Interested and Affected Parties (I&APs) and is of utmost importance in any environmental assessment process. The public participation process, *inter alia*, involves the following:

- Inform, raise awareness, educate and increase understanding of a broad range of environmental issues that might be arise with the proposed extension in the size of prospecting operation.
- Establish lines of communication between stakeholders, I&APs and the project team.
- Provide opportunity to all parties for the exchange of information and expression of views and concerns.
- Obtain contributions of stakeholders and I&APs and ensure that all views, issues, concerns and queries raised are fully documented.
- Identify all the significant issues associated with the proposed extension of project

**Engedi Minerals and Energy (Pty) Ltd** was appointed by **Rutendo HR Consultants (Pty) Ltd** as the independent consultant to conduct the public participation process as part of the Basic

Assessment Report and Environmental Management Programme Report. As stipulated in Section 27 (5) (b) of the MPRDA (Act 28 of 2002) as amended by the MPRDA (Act 49 of 2008) and Regulations, Interested and Affected Parties (I&APs) need to be notified and consulted with, as part of a prospecting right application and extension thereof.

The public participation process aims to provide I&APs with objective information in order to assist them to:

- Raise issues of concern and make suggestions for enhanced benefits;
- Contribute local knowledge and experience;
- Verify that their issues have been captured;
- Verify that their issues have been considered; and
- Comment on the findings of the EMP.

An email explaining the project and the background information will be sent to all other I&APs introducing the project. Specifically, the Free State Department of Mineral Resources responded that **Engedi Minerals and Energy(Pty) Ltd** does not need to send them any information as the BAR and EMPr will be provided to them from the DMR once the BAR and EMPr is submitted.

The draft BAR and EMPr was made available for all the registered I&APs. The draft BAR and EMPr was made available to inform the I&APs of the activities, background information of the area, the possible impacts and mitigation measures and other relevant information, and to request input and comment on it.

## 1.4 THE ENVIRONMENTAL ATTRIBUTES ASSOCIATED WITH THE ALTERNATIVES

(The environmental attributed described must include socio-economic, social, heritage, cultural, geographical, physical and biological aspects).

### a) Type of environment affected by the proposed activity

(Its current geographical, physical, biological, socio-economic, and cultural character)

#### 1.4.1 Baseline Environment

##### Location

The Matjhabeng Local Municipality is a Category B municipality situated in the Lejweleputswa District in the Free State. It is bound by Nala to the north, Masilonyana to the south, Tswelopele to the east and Moqhaka to the west. It is one of five municipalities in the district. Matjhabeng represents the hub of mining activity in the Free State Province.



## **Climate**

Welkom normally receives about 401mm to 550mm of rain per year, dependent on wet or dry cycles, with most rainfall occurring mainly during midsummer. It receives the lowest rainfall (0mm) in July and the highest (70mm) in January. The monthly distribution of average daily maximum temperatures ranges from 17 °C in June to 29 °C in January. The region is the coldest during July when the mercury drops to 0 °C on average during the night

## **Topography and Elevation**

Koppie Alleen is the only hill near Welkom and therefore is aptly named for its oddity. The terrain elevation above sea level is 1435 metres. The largest water catchment is the Sand River to the south-east of Welkom in Virginia's direction. Large saline pans such as Flamingo Pan and Theronia Pan are situated to the south-west of Welkom.

## **Geology and Soils**

Welkom is located on the south-western corner of the Witwatersrand Basin. This basin situated on the Kaapvaal Craton, is filled by a 6-kilometre thick succession of sedimentary rocks, which extends laterally for hundreds of kilometres.

### **Basal Reef**

The Basal Reef is the most common reef horizon. It varies from a single pebble lag to channels of more than 2m thick. It is commonly overlain by shale, which thickens northwards.

### **The De Bron Fault**

The Free State Goldfields are divided into two sections, cut by the north-south striking De Bron Fault. This major structure has a vertical displacement of about 1500m as well as a lateral shift of 4 km. A number of other major faults lie parallel to the De Bron Fault. Dips occur mostly towards the east, averaging 30 degrees but this becomes steeper approaching the De Bron Fault. To the east of the fault, a dip occurs towards the west at 20 degrees, although structurally complex dips of up to 40 degrees have also been measured. Between these two blocks, lies the uplifted horst block of the West Rand Group of sediments with no reef preserved.

## **2.4.1 Biological Environment**

### **Vegetation**

Welkom is situated on two vegetation units, the Western Free State Clay Grassland and Vaal-Vet Sandy Grassland; these are differentiated by soil types, rainfall and frost. The dominant grass species are *Hyparrhenia hirta*, *Themodatriandra*, *Sporobolus pyramidalis*, *Eragrostis* sp, *Aristida* sp, and other grasses and herbs.

Trees and shrubs are infrequent due to heavy frost in the winter months. The grasslands surrounding Welkom also include small mammal communities of Yellow Mongoose, Ground Squirrel, Cape Porcupine, African Mole-rat, Pouched Mouse, Large-eared Mouse, Four-stripe Grass Mouse, and Multimammate Mouse.

### **Birds**

There is good number of species, many of which are fairly tame (including Crimson-breasted Shrike, Kalahari Scrub-Robin, Marico Flycatcher, Ground scraper Thrush and Scaly-feathered Finch). Bush thickets close to the dam are good for warblers, when Garden Warbler, Willow Warbler, African Reed-Warbler, Marsh Warbler and Icterine Warbler have been recorded. All three southern African species of mousebird (White-backed Mousebird, Red-faced Mousebird and Speckled Mousebird) may be encountered, with Speckled Mousebird being the least common.

Woodland habitats provide a wealth of birdlife. A family of Magpie Shrike is also present and a few pairs of Southern Yellow-billed Hornbill may also be encountered. Common Scimitarbill is fairly common and Red-crested Korhaan. Pririt Batis and Chestnut-vented Tit-Babbler are common. Acacia Pied Barbet and Crested Barbet, as well as Cape Penduline-Tit, African barred warbler, Yellow-bellied Eremomela and Long-billed Crombec. Waxbills and finches are common in thornveld and also in thicket areas between the gravel road and the edge of Bloemhof Dam. Species such as Blue Waxbill, Black-faced Waxbill and Violet-eared Waxbill, Green-winged Pytilia and Red-billed Firefinch are present, while Jameson's Firefinch is an occasional. Fawn-coloured Lark and



Sabota Lark also prefer thornveld habitat. White-backed Vulture nest in this habitat and Verreaux's Eagle-Owl may also be encountered here, particularly at dusk, when its gruff calling may be heard.

### **Conservation areas**

There are currently no formally protected areas within close proximity of the proposed prospecting site.

#### **3.4.1 Surface water**

##### Catchments

Vaal Dam is supplying the area around in Welkom with water. The largest water catchment is the Sand River to the south-east of Welkom in Virginia's direction, while Flamingo Pan and Theronia Pan are situated to the south-west of Welkom.

### **Water Management Area**

Middle Vaal Water Management Area.

### **Rivers and dams**

Five rivers run through the municipality, including the Koolspruit, Sand, Sandspruit and Vet. The Sand River (formerly Zand Rivier) is a river in the Free State, South Africa. It is located close to Welkom and Virginia in the gold mining center of the Free State..

#### **4.4.1 Socio-economic setting**

The setting around Welkom is mostly dependant on mining and agriculture for its socio-economic development and employment .The economy of the Matjhabeng Municipality was based on the gold mining industry, and although the gold mining industry has declined since 1991, three of the biggest gold producers in the world are still active in the area and some are even expanding. The mining activities located in and around Allanridge, Odendaalsrus, Welkom and Virginia. Manufacturing aimed at the mining sector exists to a limited extent in the above towns. Other manufacturing activities are limited.

Mining still dominates the local economic scene by contributing 58% of the GDP of the area and 19% of the province. Major strategies are in place to change the economic base away from the mining dependency. The FGF Development Centre, economic development arm of the Matjhabeng Council is devising major strategies to change the economic base away from the mining dependency.

### **Population (2011)**

The population of Welkom, South Africa is 64130 (382.76 per km<sup>2</sup>) according Census 2011

### **Race**

According to Census 2011 both black and white are found in the area but the blacks are pre-dominant.

<b>Population group</b>		<b>Percentage</b>
Black African	38953	60.74%
Coloured	17226	11.14%
Indian or Asian	575	0.90%
White	17226	26.86%
Other	234	0.36%

### **Age Groups**

<b>Age Structure</b>	<b>Percentage</b>
Population under 15	27.30%
Population 15 to 64	68.10%
Population over 65	4.70%

## Gender composition

The male population were slightly higher than the female population according to (Global Insight 2009).

Gender	Population	Percentage
Female	30871	48.14%
Male	33259	51.86%

## Education

Education (aged 20 +)	
No schooling	4.60%
Higher education	9.00%
Matric	28.00%

## Poverty and inequality

The current employment situation is analysed by considering employment in the various sectors. The GDP report directly point to the sectors which employ the greatest numbers of people. These sectors are agriculture and hunting, food and beverages, transport, finance and insurance education and health and social services of which people that are illiterate and have no skills mostly found within the agriculture sector.

Labour Market	
Unemployment rate (official)	37.00%
Youth unemployment rate (official) 15-34	49.70%

## Employment

	2014/15	2013/14	2012/13	2011/12
<b>Employment</b>				
Employment Costs (R'000)	550 429	482 974	435 167	462 381

	2014/15	2013/14	2012/13	2011/12
<b>Employment</b>				
Remuneration of councillors (R'000)	25 449	24 682	22 703	19 999
Total Employee Positions	2 379	3 704	3 653	2 131
Total Vacant Employee Positions	0	1 657	1 604	1
Total Vacancy Percentage	0.00%	44.74%	43.91%	0.05%

66% of Coloured and 27% of African females are unemployed. 46% of coloured men are also unemployed with only 13.7% of African males unemployed. This huge difference is explained by the high number of men who are employed in agriculture, mining, and hunting. The high number of coloureds unemployed is a challenge as this could lead to social problems like crime, drug abuse and further depress the upliftment of the racial group.

### Income

<b>Income category of agricultural households</b>	
Annual income category of agricultural household heads	Number
No income	4,982
R1-R4 800	741
R4 801-R38 400	7,526
R38 401-R307 200	2,951

<b>Income category of agricultural households</b>	
Annual income category of agricultural household heads	Number
R307 201+	277
Unspecified	334

**b) Description of the current land uses**

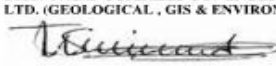
Agricultural and mining.

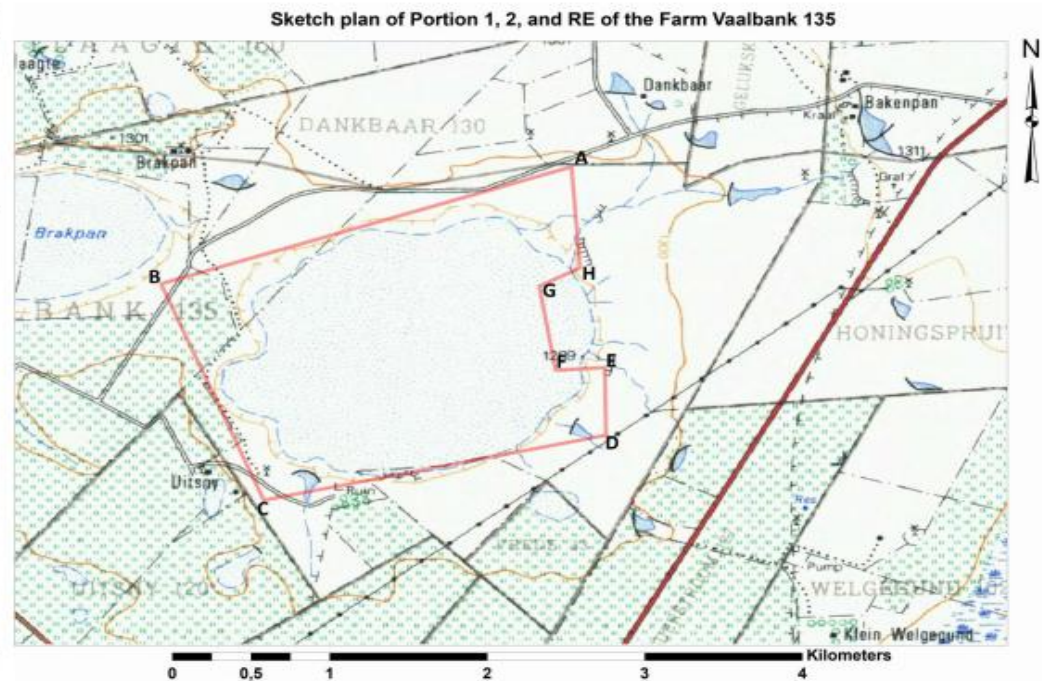
**c) Description of specific environmental features and infrastructure on the site**

Mining and Agriculture. Vegetation also available for grazing.

**d) Environmental and current land use map**

(Show all environmental and current land use features)

<b>APPLICANT:</b> RUTENDO HR CONSULTANTS		
SKETCH PLAN PREPARED IN ACCORDANCE WITH REGULATION 2(2)		
SKETCH PLAN FOR THE <b>APPLICATION FOR A PROSPECTING RIGHT                  IN TERMS OF SECTION 16 OF THE MPRDA, 2002</b>		
OVER THE AREA LETTERED A,B,C,D,E, F, G & H IN EXTENT OF 357,10 Ha SITUATED ON PORTION 1, 2 AND RE OF THE FARM VAALBANK 135 IN THE MAGISTERIAL DISTRICT OF WELKOM PROVINCE: FREE STATE PROVINCE		
SURVEY SYSTEM WGS 84 CO-ORDINATES: WG 25		
Name	E	S
A	26.562024 ,	-27.947725
B	26.562347 ,	-27.953865
C	26.560164 ,	-27.954871
D	26.560957 ,	-27.960181
E	26.563591 ,	-27.959761
F	26.563979 ,	-27.963983
G	26.544674 ,	-27.967955
H	26.538732 ,	-27.955001
PLAN APPROVED REGIONAL MANAGER, NORTHERN CAPE DRAWN AND COMPILED BY: ENGEDI MINERALS AND ENERGY (PTY) LTD. (GEOLOGICAL, GIS & ENVIRONMENTAL CONSULTANTS)		
		DATE
SIGNATURE		03 JULY 2023 DATE



Compiled by: ENGEDI MINERALS AND ENERGY (PTY) LTD

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iii. **Impacts and risks identified including the nature, significance, consequence, extent, duration and probability of impacts, including the degree to which these impacts**

(Provide a list of the potential impacts identified of the activities described in the initial site layout that will be undertaken, as informed by both the typical known impact of such activities, and as informed by the consultations with affected parties together with the significance, probability, and duration of these impacts. Please indicate the extent to which they can be reversed, the extent to which they may cause irreplaceable loss of resources and can be avoided, managed or mitigated).

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

<b>N o</b>	<b>Activity</b>	<b>impact</b>	<b>Durati on</b>	<b>intensi ty</b>	<b>Probabil ity</b>	<b>Significance Rating</b>	
1	Site Preparation	Loss of vegetation	3	5	10	80	High
		Habitat Destruction	3	5	10	80	High
		Visual scarring	3	4	8	56	Mediu m
		Soil erosion	3	4	6	42	Low
	Drilling	Noise	2.5	5	10	75	high
		Visual Scarring	3	4	8	56	mediu m
		Soil erosion	3	4	6	42	low

- **Potential cumulative impacts**

Since they are other prospecting company around, the cumulative impact will be noise and dust.

- **Potential impact on heritage resources**

No heritage sites which may be present on the site may be disturbed and/or damaged during prospecting.

- **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.)

Expectations could be created that numerous job and business opportunities will become available during prospecting. All Interested and Affected Parties (I&APs) need to be informed throughout the Prospecting.

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

The draft BAR and EMPr was made available to the interested and affected parties for comment and input. The list of potential impacts was included in the draft BAR and EMPr.

- **Confirmation of specialist report appended**

(Refer to guideline)

No specialist studies were conducted for this BAR and EMPr. The baseline information contained herein is based on a desktop study and one site visit.

iv. **Methodology used in determining and ranking nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks;**

(Describe how the significance, probability, and duration of the aforesaid identified impacts that were identified through the consultation process was determined in order to decide the extent to which they initial site layout needs revision).

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

The significance of the impacts was determined through the consideration of the following criteria:



Probability:	Provides a description of the likelihood/probability of the impact occurring
Extent:	Describes the spatial scale over which the impact will be experienced
Duration:	The period over which the impact will be experienced
Intensity:	The degree/order of magnitude/severity to which the impact affects the health and welfare of humans and the environment
Significance:	Overall significance of the impact on components of the affected environment and whether it is a negative or positive impact

The impacts were individually described and assessed using the criteria drawn from the Environmental Impact Assessment (EIA) Regulations, published by the DEA in terms of the NEMA (Act 107 of 1998).

The significance of each impact is assessed using the following formula (before and after mitigation):

$$\text{Significance Point (SP)} = (\text{Probability} + \text{Extent} + \text{Duration}) \times \text{Intensity}$$

The maximum value is 150 SP. The impact significance will then be rated as follows:

SP > 75	Indicates <b>high</b> environmental significance	An impact that could influence the decision about whether or not to proceed with the project regardless of any possible mitigation.
SP 30 – 75	Indicates <b>moderate</b> environmental significance	An impact or benefit which is sufficiently important to require management and which could have an influence on the decision unless it is mitigated.
SP < 30	Indicates <b>low</b> environmental significance	Impacts with little real effect and which should not have an influence on or require modification of the project design.
+	Positive impact	An impact that is likely to result in positive consequences/effects.
<b>Probability (P)</b>		

None (N)	1	The possibility of the impact occurring is none, due either to the circumstances, design or experience (0%).
Possible (P)	2	The possibility of the impact occurring is very low, due either to the circumstances, design or experience (25%).
Likely (L)	3	There is a possibility that the impact will occur to the extent that provisions must therefore be made (50%).
Highly likely (H)	4	It is most likely that the impacts will occur at some stage of the development and plans must be drawn up before carrying out the activity (75%).
Definite (D)	5	The impact will take place regardless of any prevention plans, and only mitigation actions or contingency plans to contain the effect can be relied on (100%).
<b>Extent (E)</b>		
Footprint (F)	1	The impact area extends only as far as the activity which occurs within the total site area.
Site (S)	2	The impact could affect the whole site or a significant portion of the site.
Regional (R)	3	The impact could affect the area including the neighbouring farms, the transport route and/or the adjoining towns.
National (N)	4	The impact could have an effect that expands throughout the country.
International (I)	5	Where the impact has international ramifications that extend beyond the boundaries of the country.
<b>Duration (D)</b>		
<i>The period over which the impact will be experienced</i>		
Temporary (T)	1	0 – 3 years (or confined to the construction period).
Short term (S)	2	3 – 10 years (or confined to the construction and part of the operational period).
Medium term (M)	3	10 – 15 years (or confined to the construction and whole operational period).
Long term (L)	4	For the whole life of mine (including closure and rehabilitation period).

Permanent (P)	5	Beyond the anticipated lifetime of the project.
<b>Intensity (I)</b>		
Insignificant (I)	2	Will have a no or very little impact on the health and welfare of humans and environment
Low (L)	4	Will have a slight impact on the health and welfare of humans and environment
Moderate (M)	6	Will have a moderate impact on the health and welfare of humans and environment
High (H)	8	Will have a significant impact on the health and welfare of humans and the environment
Very high/ don't know (V)	10	Will have a severe impact on the health and welfare of humans and the environment

v. **Summary of the positive and negative impacts and risks of the proposed activity and identified alternatives;**

No alternatives were considered. The summary of identified positive and negative risks is as follows.

**Negative Impacts:**

- Visual Impacts
- Noise Impacts
- Air Quality Deterioration
- Water pollution
- Safety and Security Impacts
- Land Degradation

**Positive impacts:**

- Creation of employment opportunities
- Training and skills development opportunities

**e) The possible mitigation measures that could be applied and the level of risk**

(With regard to the issues and concerns raised by affected parties provide a list of the issues raised and an assessment/discussion of the mitigations or site layout alternatives available to accommodate or address their concerns, together with an assessment of the impacts or risks associated with the mitigation or alternatives considered).

**WASTE DISPOSAL**

- All personnel must be instructed to dispose of waste in a proper manner in the correct designated areas.
- Suitable receptacles shall be available at all times and conveniently placed for the disposal of waste.
- No waste shall under any circumstance be disposed of in the veld. No burning of waste is permitted on site and the proposed prospecting area should be protected from illegal dumping of waste.
- All used oils, grease or hydraulic fluids shall be placed in appropriate impervious containers and these receptacles will be removed from the site on a regular basis for disposal at a registered or licensed disposal facility or sent for recycling/reuse with a registered facility.
- Spills should be cleaned up immediately by removing the spillage together with the polluted soil and by disposing of them at a recognised facility. In areas where the spills are some, an absorbent agent can be used and the area treated.
- Contaminated materials and residues from machinery maintenance and other sources contaminated with hazardous waste should be stored in proper containers that avoid seepage to ground.
- The reduce, reuse, recycle waste management philosophy will be used where possible.
- Only authorized registered waste disposal contractors should be hired for collection of waste for all waste streams.

**SOCIAL IMPACTS**

- Effective two-way public disclosure and public consultation should be implemented to allay community perceptions. There should be an opportunity provided for the resolution of grievances or complaints received and recorded

from individuals in the community.

- Community should be adequately informed of activities being done at the proposed prospecting that are likely to affect them.
- Labour recruitment should occur in a manner that is objective, transparent, and wherever possible, provide opportunities for people from the local area.
- The activities of contractors, consultants, and company employees should be routinely reviewed to ensure good community relations are being maintained. The project proponent should use its influence as employer to encourage responsible behavior among employees.

#### **EQUIPMENT USED ON SITE**

- Only well-maintained vehicles and equipment should be operated onsite and all machinery should be serviced regularly during the proposed prospecting operation.
- The maintenance of vehicles and some equipment used for any purpose during the proposed prospecting operation will take place only in the maintenance workshops which are not located on the prospecting. No vehicle may be extensively repaired in any place other than in the maintenance yard
- A maintenance schedule should be prepared in order to ensure that equipment is in its best form so as to not cause unnecessary pollution such as noise, emissions and makes effective use of energy.
- Equipment used in the proposed prospecting process must be adequately maintained so that during operations it does not spill oil, diesel, fuel, or hydraulic fluid.
- Machinery or equipment used on the proposed prospecting area must not constitute a pollution hazard. No equipment leaking oil should be used. Drip tray should be used to prevent pollution.

#### **NOISE**

- Construction activities required outside normal working hours must be approved by the Project Manager, and where necessary, advance warning provided to adjacent residents.
- Noise levels exceeding 85dB shall only be permitted where approved and with appropriate advanced warning to adjacent residents (minimum of 2 days) being

provided.

- Noise that could cause a major disturbance should only be carried out during daylight hours and with advance warning provided as above.
- Adequate ear protection should be provided to employees in noisy areas.
- No amplified music shall be allowed at the site.
- Construction vehicles and plant to be in good working order.

**f) Motivation where no alternative sites were considered**

No location alternatives are applicable to this project since the Gold ore and Sand is contained in the proposed prospecting area. Locating the development to another area will result in the Gold ore and Sand not being found and the economy and society not benefitting from future proposed possible prospecting activities. The proposed site for the proposed prospecting is located within an area which is already severely disturbed as a result of agricultural activities and previous prospecting practice compare to the breaking down of a new virgin ground.

**g) Statement motivating the alternative development location within the overall site**

(Provide a statement motivating the final site layout that is proposed.)

The prospecting of the site is motivated by the need to improve life of the community of Matjhabeng Local Municipality, which is currently faced with poverty due to high unemployment rate and through this project poverty will be alleviated. The proposed prospecting site is preferred as it is situated on the rightful spot for Gold ore and Sand prospecting reflecting to the previous prospecting which was taking place thereby.

**h) Full description of the process undertaken to identify, assess and rank the impacts and risks of the activity will impose on the preferred site (in respect to the final site layout plan) through the life of the activity including:**

- (i) a description of all the environmental issues and risks that were identified during the environmental impact assessment process and
- (ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures.)

An activity mapping exercise was conducted for the proposed activity, then potential environmental impacts were identified. The DEA impact assessment matrix was used. The impact with medium to high significance requires mitigation/control measures, the following are the possible impacts the project will have on the environment:

- Dust generated by movement of causing air pollution.
- Noise generated by machinery during Gold ore and Sand prospecting and vehicles.
- Erosion causes by removal of vegetation for access to site
- Visual impact due to prospecting activities, prospecting will be enlarged and machinery around the site will disturb the natural visual landscape.
- Improper disposal of waste resulting in land pollution.
- Fuel and oil leakages causing ground and surface water pollution.

**i) Assessment of each identified potentially significant impact and risk**

(This section of the report must consider all the known typical impacts of each of the activities (including those that could or should have been identified by knowledgeable persons) and not only those that were raised by registered and affected parties).

<b>NAME OF ACTIVITY</b>  E.g. For prospecting – prospecting, stockpiles, discard dumps or dams, loading, hauling and transport, water supply dams and pitting and trenching, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc.)	<b>POTENTIAL IMPACT</b> (Including the potential impacts for cumulative impacts)  (E.g. dusts, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc.)	<b>ASPECTS AFFECTED</b>	<b>PHASE In which impact is anticipated</b>  (e.g. Construction, commissioning, operational, decommissioning , closure, post-closure)	<b>SIGNIFICANC E</b> <b>If not mitigated</b>	<b>MITIGATION TYPE</b>  (modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc.)	<b>SIGNIFICANC E</b> <b>If mitigated</b>
Site Establishment activities (fencing, signage, access formation, etc)	Loss of vegetation	Visual character, Land use	Pre-prospecting	Medium	Remedy through rehabilitation, Limit footprint	Low
	Habitat Destruction	Visual character	Pre-prospecting	Medium	Remedy through rehabilitation,	Low



					Limit footprint	
	Visual scarring	Visual character	Pre-prospecting	Medium	Remedy through rehabilitation	Low
	Soil erosion	Visual character, Land use	Pre-prospecting	Medium	Remedy through rehabilitation, Limit footprint, Control through storm water control	Low
Waste Disposal and Material storage	Soil contamination	Land degradation	Operational Phase	Low	Avoidance	Low
Waste Disposal and Material storage	Water pollution	Water	Operational Phase	Low	Avoidance	Low
Waste Disposal and Material storage	Increased risk of fire	Safety	Operational Phase	Low	Avoidance	Low
Material handling, hauling and transportation	Dust	Air quality	Operational Phase	Low	Control through dust control measures	Low
	Increased risk of accidents	Safety	Operational Phase	Low	Stop through site management protocols	Low
	Noise	Noise	Operational Phase	Low	Control through noise control measures	Low

	Soil contamination from oil/fuel leaks	Land degradation	Operational Phase	Low	Stop through operational control measures e.g. drip trays and use of well serviced machinery	Low
Community and labour relations management	Community conflicts and tensions	Community relations	Operational	Low	Control through Site Management protocols	Low
	Increase risk of fire	Fire risk	Operational	Low	Control through Site Management protocols	Low
	Reduced security on area	Safety Issues	Operational	Low	Control through Site Management protocols	
	Improved employment Improved skills	Community relations Community relations	Operational	Low	Control through Site Management protocols	Low

**j) Environmental impact statement**

**i. Summary of the key findings of the environmental impact assessment;**

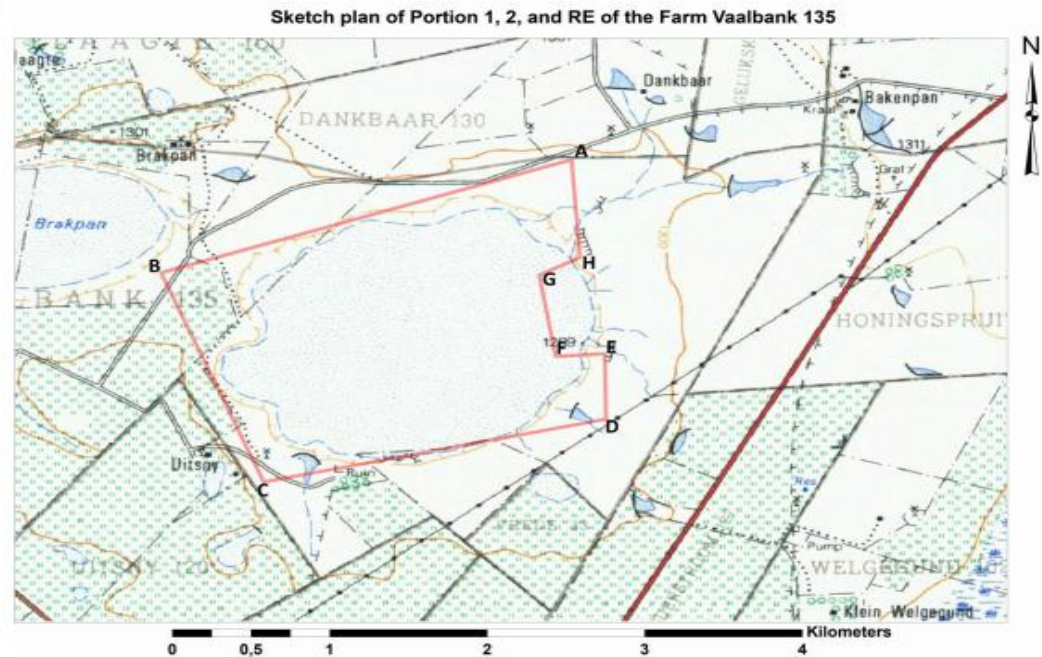
In general, it is recognized that the proposed prospecting activities has the potential to pose various risks to the environment as well as to the residents or businesses in the surrounding area. Therefore, it is important that these possible risks and key issues are identified during the draft phase of the BAR compilation. These impacts, issues and risks will be addressed in consultation with the I&APs, through an internal process based on similar developments.

**ii. Final Site Map**

(Provide a map at an appropriate scale which superimposes the proposed overall activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers)

**Attach as Appendix C**

<b>APPLICANT:</b> RUTENDO HR CONSULTANTS		
SKETCH PLAN PREPARED IN ACCORDANCE WITH REGULATION 2(2)		
SKETCH PLAN FOR THE <b>APPLICATION FOR A PROSPECTING RIGHT                  IN TERMS OF SECTION 16 OF THE MPRDA, 2002</b>		
OVER THE AREA LETTERED A,B,C,D,E, F, G & H IN EXTENT OF 357,10 Ha SITUATED ON PORTION 1, 2 AND RE OF THE FARM VAALBANK 135 IN THE MAGISTERIAL DISTRICT OF WELKOM PROVINCE: FREE STATE PROVINCE		
SURVEY SYSTEM WGS 84 CO-ORDINATES: WG 25		
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D	26.560957,	-27.960181
E	26.563591,	-27.959761
F	26.563979,	-27.963983
G	26.544674,	-27.967955
H	26.538732,	-27.955001
PLAN APPROVED _____ DATE _____ REGIONAL MANAGER, NORTHERN CAPE DRAWN AND COMPILED BY: ENGEDI MINERALS AND ENERGY (PTY) LTD. (GEOLOGICAL, GIS & ENVIRONMENTAL CONSULTANTS)		
 SIGNATURE		03 JULY 2023 DATE



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**iii. Summary of the positive and negative impacts and risks of the proposed activity and identified alternatives;**

No alternatives were considered. The summary of identified positive and negative risks is as follows.

**Negative Impacts:**

- Visual Impacts
- Noise Impacts
- Air Quality Deterioration
- Disruption of surface drainage
- Destruction of flora and loss of habitat
- Loss of soil and agricultural potential
- Water pollution
- Erosion
- Safety and Security Impacts
- Land Degradation

**Positive impacts:**

- Creation of employment opportunities
- Training and skills development opportunities

**k) Proposed impact management objectives and the impact management outcomes for inclusion in the EMPr;**

**Based on the assessment and where applicable the recommendations from specialist reports, the recording of proposed impact management objectives, and the impact management outcomes for the development for inclusion in the EMPr as well as for inclusion as conditions of authorisation**

The objectives of impact management are to avoid and/or minimize negative impacts of a proposed development to ensure minimal impact on the environment.

The mitigation measures are detailed in the EMPr which must be provided to the contractor at tendering stage, implemented and monitored.

It is therefore recommended that an Environmental Control Officer be appointed to monitor and audit the project during prospecting activities to ensure adherence to the recommendations of the EMPr.

**l) Aspects for inclusion as conditions of Authorization**

Any aspects which must be made conditions of the Environmental Authorization

EMPr must be on site

- The contractor and key personnel must get an understanding of the EMPr.
- An Environmental Control Officer must be appointed to ensure that environmental controls are being implemented, and quarterly reports must be forwarded to the Competent Authority (DMR among others).
- The proponent and contractor must be made aware that they are responsible for rehabilitating the environment they damage to the pre-state of which they found it to be.
- Upon getting done with the prospecting activity, closure report must be submitted to the competent authority ensuring that all the disturbed environmental features are rehabilitated to the pre prospecting state.

**m) Description of any assumptions, uncertainties and gaps in knowledge**

(Which relate to the assessment and mitigation measures proposed)

No specialist were engaged hence some impacts could have been missed.

**n) Reasoned opinion as to whether the proposed activity should or should not be authorized**

**i. Reasons why the activity should be authorized or not.**

The project will have an advance community development and to fulfill the Integrated Development Plan and mandate of the Matjhabeng local municipality to provide services to the community in terms of job creation.

**ii. Conditions that must be included in the authorization**

EMPr must be on site;

- The contractor and key personnel must get an understanding of the EMPr
- An Environmental Control Officer must be appointed to ensure that environmental controls are being implemented, and quarterly reports must be forwarded to the Competent Authority.
- The proponent and contractor must be made aware that they are responsible for rehabilitating the environment they damage to the pre-state of which they found it to be.
- Upon getting done with the prospecting activity, closure report must be submitted to the competent authority.

**o) Period for which the Environmental Authorisation is required**

The Environmental Authorisation is required for the duration for which a prospecting right is being applied for a period of 5 years.

**p) Undertaking**

Confirm that the undertaking required to meet the requirements of this section is provided at the end of the EMPr and is applicable to both the Basic Assessment Report and the Environmental Management Programme report.

**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 BAR and EMPr 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 Basic Assessment Report and Environmental Management Programme as proposed.**

<b>Full Names and Surname</b>	<b>Tshimangadzo Mulaudzi</b>
<b>Identity Number</b>	<b>8803265731082</b>

**q) Financial provision**

State the amount that is required to both manage and rehabilitate the environment in respect of rehabilitation.

The amount will be R 49 613.59.56

**i. Explain how the aforesaid amount was derived.**

The financial provisions were derived in order to ensure that the amount of money required for rehabilitation and remediation of environmental impacts and associated damage as well as close-out is provided for and adequately calculated. The money would cover decommissioning and final closure of the operation; and post closure management of residual and latent environmental impacts. The amount was based on an assessment of the expected operational activities that will take place, the level of disturbance damage expected, the sensitivity of the area and the amount of work that is required to bring the site



back to a self-sustaining ecosystem again. Consideration on how much it will cost to get labour, material and equipment used for the rehabilitation were also considered.

Calculation of the quantum of the financial provision required to manage and rehabilitate the environment has been worked out. The financial provision was calculated in line with the Financial Provisioning Regulation, 2015.

**CALCULATION OF THE QUANTUM**

Applicant:  
Evaluator(s)

**Rutendo HR Consultants - FS 10678 PR  
Engedi Minerals and Energy (Pty) Ltd**

Location:  
Date:

**Welkom  
Oct-23**

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	21	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	287	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	424	1	1	0
3	Rehabilitation of access roads	m2	5.00	51	1	1	255
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	499	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	272	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	575	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha	0.1	301350	1	1	30135
7	Sealing of shafts adits and inclines	m3	0	154	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha	0.01	200900	1	1	2009
8 (B)	Rehabilitation of processing waste deposits and evaporatic ponds (non-polluting potential)	ha	0	250217	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporatic ponds (polluting potential)	ha	0	726749	1	1	0
9	Rehabilitation of subsided areas	ha	0.01	168223	1	1	1682.23
10	General surface rehabilitation	ha	0.01	159147	1	1	1591.47
11	River diversions	ha	0	159147	1	1	0
12	Fencing	m	0	182	1	1	0
13	Water management	ha	0	60512	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0	21179	1	1	0
15 (A)	Specialist study	Sum	0			1	0
15 (B)	Specialist study	Sum				1	0
<b>Sub Total 1</b>							<b>35672.7</b>

1	Preliminary and General	4280.724	<b>weighting factor 2</b>	4280.724
			1	
2	Contingencies	3567.27		3567.27
<b>Subtotal 2</b>				<b>43520.69</b>
<b>VAT (15%)</b>				<b>6092.90</b>
<b>Grand Total</b>				<b>R 49 613.59</b>

**ii. Confirm that this amount can be provided for from operating expenditure.**

(Confirm that the amount is anticipated to be an operating cost and is provided for as such in the Financial and Technical Competence Report (Ftat) or Prospecting Work Programme as the case may be).

Financial provision has been made available through the company's cash reserves. The reserves provide for sufficient funds for premature and planned closure of the prospecting operation. The quantum for financial provision for rehabilitation will be re-assessed on an annual basis and arrangement to fund shortfalls will be made.

**r) Specific information required by the Competent Authority**

**i. Compliance with the provisions of sections 24(4)(a) and (b) read with section 24(3)(a) and (7) of the National Environmental Management Act (Act 107 of 1998). The EIA report must include the:**

**1. Impact on the socio-economic conditions of any directly affected person.**

(Provide results of investigation, assessment, and evaluation of the impact of the prospecting, bulk sampling or alluvial diamond prospecting on any directly affected person including the landowner, lawful occupier, or, where applicable, potential beneficiaries of any land restitution claim, attach the investigation report as an **Appendix**.

The safety of the people including animals if the prospecting operations are not fenced off and guarded. If water accumulates after rain, there is a risk of drowning and death.. Socio-economic impact will be due the job creation and revenue generation for the Matjhabeng local municipality Local Economic Development.

**2. Impact on any national estate referred to in section 3(2) of the National Heritage Resources Act.**

(Provide the results of investigation, assessment, and evaluation of the impact of the prospecting, bulk sampling or alluvial diamond prospecting on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) with the exception of the national estate contemplated in section 3(2)(i)(vi) and (vii) of that Act, attach the investigation report as **Appendix 2.19.2** and confirm that the applicable mitigation is reflected in 2.5.3; 2.11.6 and 2.12 herein).

No historical or cultural sites were identified by the previous miners. In case any human remains are excavated during operation, work should be stopped and a report made to the police and SAHRA for removal of the human remains.

**s) Other matters required in terms of sections 24(4) (a) and (b) of the Act**

(the EAP managing the application must provide the competent authority with detailed, written proof of an investigation required by section 24(4)(b)(i) of the Act and motivation if no reasonable or feasible alternatives, as contemplated in sub-regulation 22(2)(h), exist. The EAP must attach such motivation as **Appendix B**).

*The Environmental Authorization applied for, is attached as Appendix B.*

## **PART B**

### **ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT**

#### **1.5 Draft environmental management programme**

##### **a) Details of the EAP**

(Confirm that the requirement for the provision of the details and expertise of the EAP are already included in PART A, section 1(a) herein as required).

- b) Muneiwa Rakhalaru has been carrying out Environmental Impact Assessment Procedure since 2015. In 2012, he joined a large prospecting consulting company in Kimberly called Breeze Court Investments 47 (Pty) Ltd (Geologist and Prospecting Consulting firm). This is where Mr Rakhalaru acquired in-depth experience and know how in the prospecting consulting business by assisting the large to small scale prospecting companies to obtain prospecting right, prospecting rights, prospecting rights, technical co-operate permits, reconnaissance permits, exploration rights, production rights, integrated water use license, and environmental authorisation among other licenses. Rakhalaru has five years working experience in environmental management, geology and public participation process.

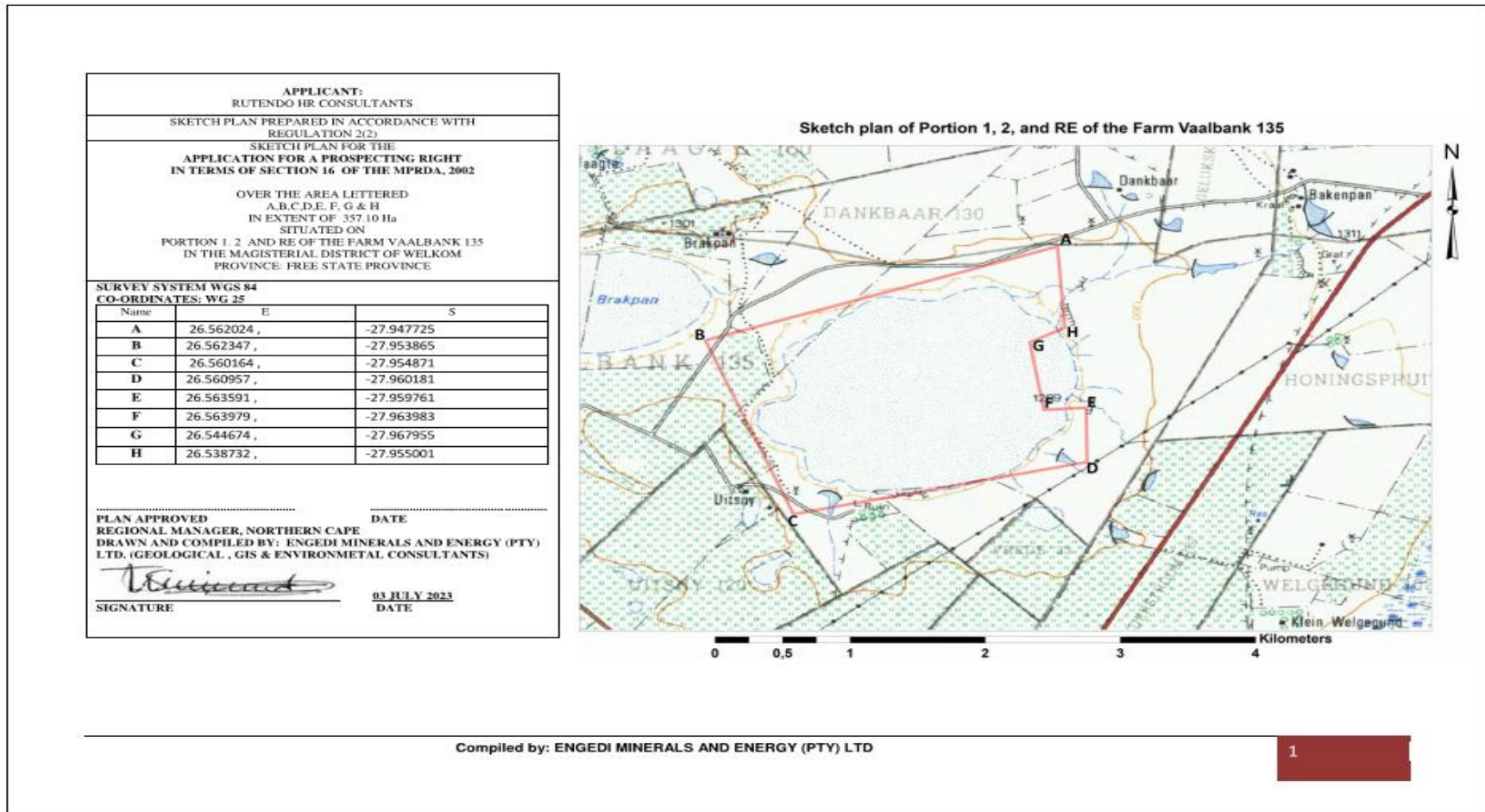
##### **c) Description of the Aspects of the Activity**

(Confirm that the requirement to describe the aspects of the activity that are covered by the draft environmental management programme is already included in PART A, section (1)(h) herein as required).

I, Tshimangadzo Mulaudzi, hereby confirm that the requirements to describe the aspects of the activity that are covered by the draft environmental management programme are already included in PART A, section 1(h) herein

**d) Composite Map**

(Provide a map (**Attached as an Appendix**) at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that any areas that should be avoided, including buffers)



**e) Description of Impact management objectives including management statements**

- i. **Determination of closure objectives.** (ensure that the closure objectives are informed by the type of environment described)

The following closure objectives will be applicable for rehabilitation:

- Return the disturbed area to an acceptable post prospecting state
- Ensure that all areas are stable, and there is no risk of erosion
- Prevent alien plant invasion on the site until the site is in a stable state
- Ensure that all areas are free draining and non-polluting

If the commitments in this EMPr are adhered to and rehabilitation is undertaken as described above, it is not anticipated that there will be any long-term management or maintenance required for areas disturbed during prospecting.

ii. **Volumes and rate of water use required for the application.**

About 20 cubic meter of water per annum will be used.

iii. **Has a water use license been applied for?**

The application will be lodged with the department of water affairs.

**iv. Impacts to be mitigated in their respective phases measures to rehabilitate the environment affected by the undertaking of any listed activity**

ACTIVITIES	PHASE	SIZE AND SCALE of disturbance	MITIGATION MEASURES	COMPLIANCE WITH STANDARDS	TIME PERIOD FOR IMPLEMENTATION
<p><b>E.g. For prospecting –</b> prospecting, blasting, stockpiles, discard dumps or dams, loading, hauling and transport, water supply dams and pitting and trenching, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc)</p>	<p>(Of operation in which activity will take place. State; Planning and design, Pre-Construction, Construction, Operational, Rehabilitation, Closure, Post closure)</p>	<p>(volumes, tonnages and hectares or m<sup>2</sup>)</p>	<p>(describe how each of the recommendations in herein will remedy the cause of pollution or degradation and migration of pollutants)</p>	<p>(A description of how each of the recommendations herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)</p>	<p>Describe the time period when the measures in the environmental management programme must be implemented. Measures must be implemented when required. With regard to Rehabilitation specifically this must take place at the earliest opportunity. With regard Rehabilitation, therefore state either –</p> <ul style="list-style-type: none"> <li>• Upon cessation of the individual activity</li> </ul> <p>Or</p> <ul style="list-style-type: none"> <li>• Upon cessation of prospecting as the case may be.</li> </ul>
<p>Site Establishment activities (fencing, signage, access formation, etc.)</p>	<p>Start-up</p>	<p>± 0.01ha</p>	<p>Dust Suppression  Service equipment to reduce noise  No loud music.</p>	<p>Issues of compliance with standards will be incorporated into the day to day business activities at the proposed prospecting. The work methods used the monitoring and measures done and the review processes will be aimed at ensuring that legal</p>	<p>During start up, operational phase</p>

				<p>thresholds as set out in the environmental standards are complied with.</p> <p>This will include compliance with standards as per COLTO 1998, the standards as per Prospecting and Petroleum Resources Development Act regulations, Mine Health and Safety Act regulations, National Water Act regulations.</p> <p>COLTO 1998 Refers to - Standard Specification for Road and Bridge Works for State Road Authorities by the South African Committee of Land Transport Officials.</p>	
Waste Disposal and Material storage	Operational	Undetermined	<p>Dust control net or wetting of top to prevent the dust being blown away.</p> <p>Service of vehicles to control noise &amp; exhaust fumes</p>	<p>The waste management hierarchy and the proximity principle will be used in ensuring that the environmental standards as set out in COLTO 1998 and the National Environmental Management Waste Act regulation and National Water Act regulation, are complied with.</p>	Operational Phase
Community and labour relations management	Operational	N/A	<p>Prospecting will comply with the employees standards for prospecting</p>	<p>Will comply with standards as per COLTO 1998, Basic Conditions of Employment Act regulations, Employment equity Act, Labour Relations Act and Skills Development Act</p>	During Operational Phase



**f) Impact Management Outcomes**

(A description of impact management outcomes, identifying the standard of impact management required for the aspects contemplated in paragraph;

<b>ACTIVITY</b> (whether listed or not listed) (E.g. Prospecting, blasting, stockpiles, discard dumps or dams, loading, hauling and transport, water supply dams and pitting and trenching, accommodation, offices, ablution stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines conveyors, etc.)	<b>POTENTIAL IMPACT</b> (E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc.)	<b>ASPECTS AFFECTED</b>	<b>PHASE</b> In which impact is anticipated (e.g. Construction, commissioning, operational, decommissioning, closure, post-closure)	<b>MITIGATION TYPE</b> (modify, remedy, control, or stop) through (E.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc.)	<b>STANDARD TO BE ACHIEVED</b> (Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives etc.)
Site Establishment activities (fencing, signage, access formation, etc.)	Loss of vegetation	Visual character, land use	Start-up	Remedy through rehabilitation Limit footprint	Impact managed effectively, Rehabilitate to a self-sustaining environment
	Habitat Destruction	Visual character, land	Start up	Remedy through rehabilitation Limit footprint	Impact reduced

		use			
	Visual scarring	Visual character	Start up and operational	Remedy through rehabilitation	Impact managed effectively
	Soil erosion	Visual character, land use	Start up and operational	Remedy through rehabilitation, Storm water control. Limit footprint, Control through storm water control	Impact avoided
Waste Disposal and Material storage	Soil contamination	Land degradation	Operational Phase	Avoidance, Operational control measures	Impact Avoided
	Water pollution	Water	Operational Phase	Avoidance, Operational control measures	Impact Avoided
	Increased risk of fire	Safety	Operational Phase	Avoidance, Operational control measures	Impact avoided or managed to low levels
Community and labour relations management	Community conflicts and tensions	Community relations	Operational	Control using site management protocols	Reduction in complaints and incidences of conflict
	Increased risk of fire	Fire risk	Operational	Control using site management protocols	Fires avoided and risk reduced
	Reduced security on area	Safety Issues	Operational	Control using site management protocols	Improvement in security and elimination of theft incidences
	Improved employment	Community relations	Operational	Control using site management protocols	Increase in number of people employed
	Improved skills	Community relations	Operational	Control using site management protocols	Improvement in skills level

**g) Impact Management Actions**

(A description of impact management actions, identifying the manner in which the impact management objectives and outcomes contemplated in paragraphs (c) and (d) will be achieved).

<b>ACTIVITY</b> (whether listed or not listed)  (E.g. Prospecting, blasting, stockpiles, discard dumps or dams, loading, hauling and transport, water supply dams and pitting and trenching, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc.)	<b>POTENTIAL IMPACT</b>  (E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc.)	<b>MITIGATION TYPE</b>  (modify, remedy, control, or stop) through (E.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc.)	<b>TIME PERIOD FOR IMPLEMENTATION</b>  Describe the time period when the measures in the environmental management programme must be implemented. Measures must be implemented when required. With regard to Rehabilitation specifically this must take place at the earliest opportunity. With regard Rehabilitation, therefore state either – <ul style="list-style-type: none"> <li>• Upon cessation of the individual activity</li> </ul> Or Upon cessation of prospecting, as the case may be.	<b>COMPLIANCE WITH STANDARDS</b>  (A description of how each of the recommendations in 2.11.6 read with 2.12 and 2.15.2 herein comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities).
Site Establishment activities (fencing, signage, access formation, etc.)	Habitat Destruction	Limit footprint	Start-up	
	Visual scarring	Remedy through rehabilitation	Start up and operational	

	Soil erosion	Limit footprint	Start up and operational	
Waste Disposal and Material storage	Dust	Control with dust control measures  Control with blast control measures	Operational Phase	This will be achieved by clearly outlining the environmental standards to be achieved and the thresholds which are not to be exceeded in the management system used at the site. This will include compliance with standards as per COLTO 1998, Explosive Act regulations, Mine Health and Safety Act Regulations and the Hazardous Substances Act
	Soil contamination	Avoidance, Operational control measures	Operational Phase	
Community and labour relations management	Dust	Control with dust control measures	Decommissioning and closure	The recommendations will incorporate factors that include the elimination or the minimization of negative impacts in the work methodologies used during decommissioning so as to comply with the standards as per COLTO 1998, Mining and Petroleum Resources Development Act regulations, Mine Health and Safety Act regulations and the National Environmental Management Act.
	Soil contamination from oil/fuel	Control with operational control measures	Decommissioning and closure	
	Disruption of surface drainage	Control with storm water controls	Decommissioning and closure	
	Community conflicts and tensions	Control using site management protocols	Operational	

**b. Financial Provision**

**1. Determination of the amount of Financial Provision.**

**a. Describe the closure objectives and the extent to which they have been aligned to the baseline environment described under the Regulation**

The DPR acknowledges that a proposed prospecting is a temporary land use which results in areas of land being temporarily disturbed. Whilst steps are taken throughout the project life cycle to reduce negative environmental impacts as they occur, the specific closure objectives are as follows:

- To create a post prospecting environment that eliminates unacceptable health hazards and ensures public safety.
- To leave the site in a stable, non-polluting and tidy condition with no remaining plant or infrastructure that is not required for post prospecting operational use.
- To minimise or eliminate the downstream environmental impacts on the ecosystem due to interruption of drainage once the proposed prospecting operations cease.
- To establish a stable post-prospecting land surface which has been rehabilitated that also supports vegetation growth, is erosion resistant and has long term sustainability.
- To reduce the need for long-term monitoring and maintenance by establishing.

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

Yes it is confirmed.

- c. Provide a rehabilitation plan that describes and shows the scale and aerial extent of the main prospecting activities, including the anticipated prospecting area at the time of closure.**

*Rehabilitation plan*

The exact location and extent of the prospecting activities, including the need for construction of new access tracks, will be determined once all available information has been evaluated. It is therefore not possible to include a rehabilitation plan showing the areas and aerial extent of the main prospecting activities, including the anticipated prospecting area at the time of closure. The extent of the proposed prospecting area is however shown in.

The following environmental controls will be implemented during prospecting to aid or reduce rehabilitation:

- The environment will be returned to its original state, as far as possible. No physical infrastructure will be left on the site.
- Where vegetation has been removed, they shall be re-established systematically where they used to be.
- The area will be level and even, in a natural state containing no foreign debris or other materials and to ensure ecological, hydrological and topographical integrity.
- Prospecting activities will be restricted to the designated prospecting sites and agreed upon access tracks. No further disturbances will be permitted.
- Following rehabilitation the site will blend suitably with the surrounding environment.

### *Rehabilitation of prospecting*

- Progressive rehabilitation will be undertaken during prospecting (Concurrent rehabilitation). Each prospecting and associated disturbed areas will be rehabilitated when prospecting is completed at each prospecting site.
- Once the prospecting has been refilled with rocks and coarse natural materials and profiled with acceptable contours and erosion control measures, the topsoil will be replaced across the disturbed area and shaped to allow a free draining surface. No ponding on the disturbed area will be allowed.
- In cases where native vegetation has been removed or damaged and where re-vegetation is required, species endemic to the area will be re-established.
- An inspection will be held after rehabilitation to determine alien and invasive species growth and the necessary corrective action will be implemented.

### *Closure objectives and their extent of alignment to the pre-prospecting environment*

The following closure objectives will be applicable for rehabilitation:

- Disturbed land will be rehabilitated to a stable and permanent form suitable for subsequent land use.
- There will be no adverse environmental effect outside the disturbed area and the affected area will be shaped to ensure effective drainage and prevent ponding on site.
- The disturbed area will not require any more maintenance than that in or on surrounding land after prospecting is completed.

If the commitments in this BAR are adhered to and rehabilitation is undertaken as described above, it is not anticipated that there will be any long-term management or maintenance required for areas disturbed during prospecting

- d. Explain why it can be confirmed that the rehabilitation plan is compatible with the closure objectives.**

The following closure objectives will be applicable for rehabilitation:

- Return the disturbed area to an acceptable post prospecting state.
- Ensure that all areas are stable and there is no risk of erosion,
- Prevent alien plant invasion on the site until the site is in a stable state, and
- Ensure that all areas are free draining and non-polluting.

The prospecting operations area is within the agricultural grazing land. The continuous rehabilitation program will attempt to restore the area to an acceptable standard as close to the baseline environmental state as possible to ensure safe use of the area for grazing purpose.

If the commitments in this EMPr are adhered to and rehabilitation is undertaken as described above, it is not anticipated that there will be any long-term management or maintenance required for areas disturbed during prospecting. Thus the rehabilitation plan is compatible with the closure objectives.



- e. Calculate and state the quantum of the financial provision required to manage and rehabilitate the environment in accordance with applicable guideline.

**CALCULATION OF THE QUANTUM**

Applicant:  
Evaluator(s)

**Rutendo HR Consultants - FS 10678 PR  
Engedi Minerals and Energy (Pty) Ltd**

Location:  
Date:

**Velkom  
Oct-23**

No.	Description	Unit	A	B	C	D	E=A*B*C*D
			Quantity	Master Rate	Multiplication factor	Weighting factor 1	Amount (Rands)
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4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	499	1	1	0
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5	Demolition of housing and/or administration facilities	m2	0	575	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha	0.1	301350	1	1	30135
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8 (A)	Rehabilitation of overburden and spoils	ha	0.01	200900	1	1	2009
8 (B)	Rehabilitation of processing waste deposits and evaporative ponds (non-polluting potential)	ha	0	250217	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporative ponds (polluting potential)	ha	0	726749	1	1	0
9	Rehabilitation of subsided areas	ha	0.01	168223	1	1	1682.23
10	General surface rehabilitation	ha	0.01	159147	1	1	1591.47
11	River diversions	ha	0	159147	1	1	0
12	Fencing	m	0	182	1	1	0
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14	2 to 3 years of maintenance and aftercare	ha	0	21179	1	1	0
15 (A)	Specialist study	Sum	0			1	0
15 (B)	Specialist study	Sum				1	0
Sub Total 1							35672.7

1	Preliminary and General	4280.724	<b>weighting factor 2</b>	4280.724
			1	
2	Contingencies		3567.27	3567.27
Subtotal 2				43520.69
VAT (15%)				6092.90
<b>Grand Total</b>				<b>R 49 613.59</b>

- f. Confirm that the financial provision will be provided as determined.

Yes it is confirmed.

**Mechanisms for monitoring compliance with and performance assessment against the environmental management programme and reporting thereon, including**

- h) Monitoring of Impact Management Actions**
- i) Monitoring and reporting frequency**
- j) Responsible persons**
- k) Time period for implementing impact management actions**
- l) Mechanism for monitoring compliance**

<b>SOURCE ACTIVITY</b>	<b>IMPACTS REQUIRING MONITORING PROGRAMMES</b>	<b>FUNCTIONAL REQUIREMENTS FOR MONITORING</b>	<b>ROLES AND RESPONSIBILITIES (FOR THE EXECUTION OF THE MONITORING PROGRAMMES)</b>	<b>MONITORING AND REPORTING FREQUENCY and TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS</b>
Site Establishment activities (fencing, signage, access formation, etc.)	Habitat destruction, Visual scarring, Soil erosion	Visual checks, monitoring incidences of non-compliance, recording of key parameters	Appointed Contractor	At start and as and when required. Record incidences of non-compliance monthly.
Waste Disposal and Material storage	Soil contamination, Water pollution, Increased risk of fire	Visual checks, monitoring incidences of non-compliance, recording of key parameters	Appointed Contractor	At start and as and when required. Record incidences of non-compliance monthly.
Community and labour relations management	Community conflicts and tensions, Increase risk of fire, Reduced security on area, Improved employment rates, Improved skills	Visual checks, monitoring incidences of non-compliance, recording of key parameters	Appointed Contractor	At start and as and when required. Record incidences of non-compliance monthly.

**m) Indicate the frequency of the submission of the performance assessment/environmental audit report**

The BAR and EMPr will be audited by an independent party on an annual basis to determine the level of compliance. The results of this audit will be used to improve environmental management procedures, where required. The audit report will also be submitted to the Department of Mineral Resources (DMR) upon completion.

**n) Environmental Awareness Plan**

**1. Manner in which the applicant intends to inform his or her employees of any environmental risk which may result from their work.**

Induction (including environmental awareness) training will be conducted on all people involved in the prospecting programme, including truck drivers, mine managers crew and relevant technical services, prior to the commencement of any work; according to the relevant legislation, **Engedi Minerals and Energy(Pty) Ltd** Standard Operational Procedures (SOPs) and this EMP. **Engedi Minerals and Energy(Pty) Ltd** will do in-house training, should it be necessary to its personnel on site. The prospecting contractor will be responsible for training its prospecting crew and supervisor.

**2. Manner in which risks will be dealt with in order to avoid pollution or the degradation of the environment.**

**3.1 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)*

It is essential that people involved in the prospecting programme know how to respond in the event of an environmental emergency situation in order to avoid significant environmental degradation or injury to human health. Ideally such incidents should not occur. If people involved in the prospecting programme implement all management measures outlined in this EMPr, the likelihood of such incidents occurring is greatly reduced. However, despite the best intentions and the best environmental management practices, it is impossible to ensure that no

incidents will ever occur during prospecting activities. Therefore, it is vital to ensure that all personnel are aware of the management measures to be undertaken in the event of an accident.

Two emergency incidents have been identified:

- Hydrocarbon spills.
- The outbreak of fire.

Emergency incident procedures are outlined below. An Environmental Officer will be appointed to the project to manage all environmental related aspects of the prospecting programme.

### **Emergency planning**

- The site and all people involved in the prospecting programme are to be managed in strict accordance with the Occupational Health and Safety Act (Act No. 85 of 1993).
- Potentially hazardous areas are to be cordoned off and clearly marked at all times.
- No unauthorized firearms are permitted on site.
- Adequate emergency facilities (e.g. first aid kit) must be provided for the treatment of an emergency on site.
- Emergency contact numbers are to be displayed conspicuously.
- Necessary Personal Protective Equipment (PPE) and safety gear appropriate to the task being undertaken is to be provided to all personnel working on site (e.g. hard hats, safety boots, ear plugs, masks, etc.).
- All vehicles and equipment used on site must be operated by appropriately trained and/or licensed individuals in compliance with all safety measures.

### **Management of fire risks**

- “No Smoking” signs must be prominently displayed.
- Fires will only be allowed within a facility especially constructed for the purpose of keeping warm and for cooking.
- No burning of refuse or vegetation is permitted.

- Fire equipment must be easily accessible.
- Fire equipment must be serviced, full and in good working order.

### **Management of spills**

- Ensure that a proper spill-kit is available on site. The kit must include absorptive material that can handle all forms of hydrocarbon.
- Ensure that any hydrocarbon spills are cleaned up as soon as possible.
- At least one person on site must receive formal training in the use of the spill control kit.
- Equipment is to be required immediately upon developing leaks.
- A drip tray, a thin concrete slab or a PVC lining shall be used to prevent soil and water contamination.
- All spills on site must be reported to the Control Environmental Officer (CEO).
- Spread absorbent Gold ore and Sand on areas where oil spills have occurred. Oil-contaminated soils are to be removed to a contained storage area and disposed of appropriately.
- Non-degradable waste must be collected and disposed of at a registered waste site.

### **Incident reporting**

- The supervisor on site must take corrective action to mitigate an incident appropriate to the nature and scale of the incident, immediately after the occurrence of the incident.
- Residual environmental damage that remains after having taken corrective action must be rehabilitated.
- Change operating procedures where necessary to prevent recurrence of similar incident.
- All incidents must be recorded in an Environmental Incident Report, within 24 hours of the incident occurring. Additional documents, including photos must be appended to the incident report to provide a comprehensive record of the incident and the corrective and preventative action taken.

- All incidents will be investigated in collaboration with the Environmental Officer. The focus of these investigations shall not be to apportion blame to specific employees, but to ascertain the root cause of the incident and to prevent a recurrence of similar incidents.

### **3.2 Environmental awareness training**

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

A number of key elements must be addressed during an environmental awareness training session, since it is recognised that the majority of employees are generally not informed about the environment. The following key elements must be addressed:

- An explanation of the basic key concepts;
- The importance of the environment, including the management thereof;
- Examples of environmental degradation;
- The role that the employees have in protecting the environment;
- Examples of pollution;
- Simple, easy-to-follow rules to protect the environment; and
- South African laws which protect the environment.

All people involved in the prospecting programme must receive environmental awareness training, to ensure that they are aware of their responsibilities and are competent to carry out their work in an environmentally acceptable manner. The training must also contain all relevant sections of the EMPr and must be presented in a clear, understandable manner. Relevant sections of the EMPr include:

- Access, including use of roads, tracks, gates, etc.;
- Control measures required to manage excluded and exempted areas;
- The handling, storage and disposal of waste;
- Emergency response procedures;
- Control of alien and invasive plant species;
- Fire prevention;

- Sediment and erosion control;
- Control measures to be implemented with regards to the management of water, noise and dust; and
- Rehabilitation of prospecting sites and access tracks.

This training may take the form of a PowerPoint presentation, information posters or pamphlets, and other easily accessible methods of information communication.

**o) Specific information required by the Competent Authority**

**(Among others, confirm that the financial provision will be reviewed annually).**

The BAR and EMPr will be audited by an independent party on an annual basis to determine the level of compliance. The results of this audit will be used to improve environmental management procedures, where required. The audit report will also be submitted to the Department of Mineral Resources (DMR) upon completion.

RUTENDO HR CONSULTANTS will undertake rehabilitation to minimise negative impacts on the environment.

**Appendix 1B:**

**Curriculum Vitae and Declaration of Oath of the EAP.**

**CURRICULUM VITAE**

**OF**

Tshimangadzo Mulaudzi

P.O Box 29567

Danhof

93120

Contacts: 0793626046 / 072 901 0990

E-mail: mulaudzit@engedime.com

Date of Birth: 26 March 1988

Nationality : South African

Languages : Speak and write (English and Tshivenda).

ID : 8803265731082

Gender: Male

Driver's license: Code 10 (C1)

Health status : Excellent

**EDUCACTIONAL QUALIFICATION**

Institution : Litshovhu High School

Qualification : Grade 12 (Senior Certificate)

Major subject passed : Mathematics, Physical Science, Biology, Agric,  
English and Tshivenda all in Higher Grade.

Year : 2006

Institution : University of Venda

Qualification : BSc (Honours). Mining and Environmental Geology

Subject passed : See attached Academic Record

Year : 2011

**SUMMARY**



I am a Candidate in a possession of a BSc (Hons) in Mining and Geology with vast variety of experience in Geological, Geochemical, Geophysical Exploration, and Managing of a Manufacturing team. Currently I am working as a Consultant Geologist at Breeze Court Investments 47 (Pty) Ltd and i have gained experience in Map Production (Using ArcGis), Identification of Minerals, and Applications for (Prospecting Right, Mining Right, and Mining Permit on DMR Samradonline portal), Petroleum applications ( Compilation of EMP, EIA, Progress report, Environmental Performance Assessment, Closure application, and Mineral Laws Administration (knowledge of MPRDA, 2002, NWA, 1998, NEMA, 1998, NHRA, 1999, MHSA, 1996, Mining Charter, 2010 and Freedom Charter, 1955.).

I have also worked with the small scale miners in the region of Northern Cape, Free State and North West helping them with the application for Mining permit, prospecting right and also attend the site inspection with the officials from Department Mineral Resources to help the small scale miners to comply with the legislation of the department.

I served at the Makhado Municipality for two (2) years under Local Economic Development as an Intern (**In Mining, Environmental and Geology Sectors**) and was attending seminars on Local Economic Development issues, interacting with the stake holders and helping the Small Micro Medium Enterprises (SMME's) to get funds from the sponsors.

## EMPLOYMENT HISTORY

Job title : Trainee Mine Geologist

Name of organization : Agnes gold mine

Period : June 2010 – June 2011 (1 year)

Experiences and skills : Face mapping, stope observing, continuous sampling,  
Geological data capturing, Report writing and Geological mapping.

Job title : Chief production, quality, and safety officer

Name of Organization : Tshedza concrete art

Period : January 2012 – January 2013 (1 year, 1 month)

Experiences and skills : Managing high quality production and enforcing safe working  
Environment for workers

Job title : LED Intern (in Mining, Environmental and Geology)

Name of Organization : Makhado Local Municipality (Limpopo)

Period : February 2013 – December 2014 (11 Months)

Experiences and skills : To formulate and implement measures and procedures to Facilitate for the development of SMME's. Implement Measures, processes, and procedures to attract the Investors, Facilitate and implement job creation projects and initiatives. Formulate, review and update LED plans in alignment with the Province and District Municipality. Facilitate and create Partnership with regard to service provider, trade exhibitions, Corporate and SMME's.

Job title : Consultant Environmental Geologist and GIS specialist

Name of organization : Breeze court investment (Pty) Ltd Geol & Min Consultants

Period : January 2014 – January 2015

Experiences and skills : Map Production (Using ArcGis), Identification of Minerals, and Applications for (Prospecting Right, Mining Right, and Mining Permit on DMR Samradonline portal), Technical Cooperation Permit, Reconnaissance Permit, Exploration Right, Production right (Petroleum applications) Compilation of EMP, EIA, Environmental Authorisation, Progress report, Environmental Performance Assessment, Closure application, and Mineral Laws Administration (Broad knowledge of MPRDA, 2002), Assisting small scale miners in the region of Northern Cape, North West, and Free State with application for Mining permit and Prospecting right, help them with compliance in terms of the MPRDA, 2002. Also do the site inspection with the officials from Department of Mineral Resources, and help the miners and management to comply with the statutory while operating and always work in a safe working conditions and enforce also that the act of one employee must be safer towards another employee to achieve zero harm.

Job title : Consultant Environmental Geologist and GIS specialist

Name of organization : Engedi Minerals and Energy (Pty) Ltd

Period : February 2015 – Present

Experiences and skills : Map Production (Using ArcGis), Identification of Minerals, and Applications for (Prospecting Right, Mining Right, and Mining Permit on DMR Samradonline portal), Technical Cooperation Permit, Reconnaissance Permit, Exploration Right, Production right (Petroleum applications) Compilation of EMP, EIA, Environmental Authorisation, Progress report, Environmental Performance Assessment, Closure application, and Mineral Laws Administration (Broad knowledge of MPRDA, 2002), Assisting small scale miners in the region of Northern Cape, North West, and Free State with application for Mining permit and Prospecting right, help them with compliance in terms of the MPRDA, 2002. Also do the site inspection with the officials from Department of Mineral Resources, and help the miners and management to comply with the statutory

while operating and always work in a safe working conditions and enforce also that the act of one employee must be safer towards another employee to achieve zero harm.

### **Knowledge of Legislations and Acts**

Constitution of the Republic of South Africa No.108 of 1996

Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002)

Mineral and Petroleum Resources Development Act Amendments bill 15 of 2013

Mineral and Petroleum Resources Development Act Regulations

National Water Act, 1998 (Act 36 of 1998)

Mine Health and Safety Act, 1996 (Act 29 of 1996)

National Heritage Resources Act, 1999 (Act 25 of 1999)

National and Environmental Management Act, 1998 (Act 107 of 1998)

Public Finance Management Act, 1999 (Act 1 of 1999) and Act 29 of 1999 as Amended

2014 Environmental Impact Assessment Regulations

Mining Charter, 2010

Freedom Charter, 1955

Municipal System Act, 2000 (Act 32 of 2000)

Municipal Structure Act, 1998 (Act 117 of 1998) and as amended in Act 20 of 2002.

### **COMPETENCIES**

Ability to relate with people,

Ability to work independently and as a team,  
Determination to succeed,

Strong leadership skills,

Proactive, resourceful, well organized and able to meet deadlines, and

Ability to communicate effectively

### **EXTRAMURAL ACTIVITIES AND INTERESTS**

I love reading news papers, business literatures, watching discovery channels, News, writing and Public speaking, these help me share my ideas and opinion and to get my message across, and I love learning new things everyday and i am eager to learn


## REFERENCES

Name : Mr P. Makoela  
Name of organization : Agnes gold mine (Pty) Ltd  
Position : Head of department of geology section  
Contacts : 087 351 8304 (W), 076 311 7791 (C)

Name : Mr R.P. Mamphaga  
Name of organization : Tshedza concrete art (Pty) Ltd  
Position : Managing director  
Contacts : 011 024 1167 (W), 082 857 3204 (C)

Name : Mr P. Netshivhuyu  
Name of organization : Makhado Local Municipality  
Position : Supervisor  
Contacts : 072 718 3220(C)

Name : Mr A.J. Davids  
Name of organization : Breeze Court Investments (Pty) Ltd  
Position : Consultant Environmental Geologist  
Contacts : 082 707 3239 (C)

<p>15 Barnes Street, Westdene, Langebaan Building Bloemfontein, South Africa 9301</p>		<p>Cell: 079 362 6046 (+27) Tel: 051 430 1748 (+27) Fax: 086 556 2568 (+27)</p>
<p>P.O.Box 29567 Danhof 9310</p>	<p><i>pride, determination, and resilience</i> Reg. No. 2015/153624/07</p>	<p>email: info@engedime.com mulaudzi@engedime.com www.engedime.com</p>

14<sup>th</sup> of June 2023


**UNDERTAKING AND DECLARATION UNDER OATH AS ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)**

As refer to the subject of the matter above;

I am hereby confirming that all the information contained in this report is true and correct And hereby declared that I, **Mr Tshimangadzo Mulaudzi**, of Identity number: **8803265731082**, I am an Environmental Geologist Consultants at Engedi Minerals and Energy (Pty) Ltd (Reg. No, 2015/153624/07), I am an Environmental Assessment Practitioner (EAP) registered with the SACNASP as Professional Natural Scientist (Pr.Nat.Sci -114578) and I am capable to compile Environmental reports in support of permits and rights application with Department of Mineral Resource (DMR) and Environmental authorisation with the Department of Environmental Affairs (DEA) and any relevant department including Department of Water and Sanitation amongst others.

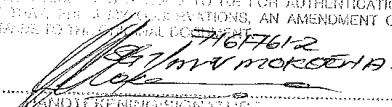
This was done and signed at Bloemfontein on the 14<sup>th</sup> of June 2023

Yours sincerely



Mr. T. Mulaudzi (Pr. Nat. Sci)  
**Engedi Minerals and Energy (Pty) Ltd (Consultant)**

I CERTIFY THAT THIS DOCUMENT IS A TRUE REPRODUCTION (COPY) OF THE ORIGINAL DOCUMENT AND SHOULD BE USED FOR AUTHENTICATION. I FURTHER CERTIFY THAT THE SIGNATURE, DATE, AMENDMENT OR A CHANGE WOULD BE MADE TO THE ORIGINAL DOCUMENT.

  
71677612  
ANDY KENINGISONA

MAGSNOMMER  
POLICE NUMBER  
MAALNOMMER

SOUTH AFRICAN POLICE SERVICE  
COMMUNITY SERVICE CENTRE  
PARK ROAD  
2023 -06- 14  
PARKWEG  
GEMEENSKAP GEBIEDSTREK  
SERVICESAARLEDEURMENS

# SACNASP

South African Council for Natural Scientific Professions

**herewith certifies that**  
**Tshimangadzo Mulaudzi**  
Registration Number: 114576  
**is a registered scientist**

in terms of section 20(3) of the Natural Scientific Professions Act, 2003  
(Act 27 of 2003)  
in the following field(s) of practice (Schedule 1 of the Act)  
Geological Science (Professional Natural Scientist)

Effective 20 March 2018

Expires 31 March 2021



*Batsha*

Chairperson

*R. J. J. J.*

Chief Executive Officer



To verify this certificate scan this code

**Environmental Assessment  
Practitioners Association  
of South Africa**



Registration No. 2019/1798

***Herewith certifies that***

**Tshimangadzo Mulaudzi**

***is registered as an***

**Environmental Assessment Practitioner**

*Registered in accordance with the prescribed criteria of Regulation 15. (1)  
of the Section 24H Registration Authority Regulations  
(Regulation No. 849, Gazette No. 40154 of 22 July 2016, of the  
National Environmental Management Act (NEMA), Act No. 107 of 1998, as  
amended).*

Effective: 01 March 2023

Expires: 29 February 2024

Chairperson

Registrar



**UNDERTAKING**

The EAP herewith confirms

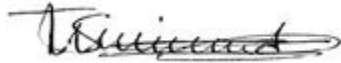
The correctness of the information provided in the reports

X
X
X

The inclusion of comments and inputs from stakeholders and I&APs;

The inclusion of inputs and recommendations from specialist reports where relevant; and

That the information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties are correctly reflected herein.



**Signature of the environmental assessment practitioner:**

**Engedi Minerals and Energy(Pty) Ltd**

**Name of company:**

**04 October 2023**

**Date:**



## APPENDIX B

### ENVIRONMENTAL AUTHORISATION



**mineral resources  
& energy**

Department:  
Minerals Resources and Energy  
REPUBLIC OF SOUTH AFRICA

Ms K Kewuli

Regional Manager: Mineral Regulation, Free State Region

Private Bag X33, Welkom, 9460

The Strip Building, 314 Stateway, Welkom, 9459

Te/No.: 057 391 1300

Enquiries: Mr N Phemula

Sub-directorate: Mineral Laws Administration

email address: norman.phemula@dmre.gov.za

File Reference: FS 30/5/1/1/2/10678PR

#### REGISTERED MAIL

The Directors

Rutendo HR Consultants (Pty) Ltd

P.O. Box 22372

Extonweg

Bloemfontein

9319

email: [info@engedime.com](mailto:info@engedime.com)

Attention: T. Mulaudzi

**ACCEPTANCE OF AN APPLICATION FOR A PROSPECTING RIGHT IN TERMS OF SECTION 16(2) OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (ACT 28 OF 2002) (AS AMENDED) [HEREIN AFTER REFERRED TO AS THE ACT].**

1. Please be informed that your application lodged on **03<sup>rd</sup> July 2023** for a prospecting right to prospect for **Sand (General) and Gold Ore**, in respect of a **Portion of the Remaining Extent of the farm Vaalbank 135, A Portion of Portion 1 of the farm Vaalbank 135 and a Portion 2 of the farm Vaalbank 135**, situated in the Magisterial District of **Lejweleputswa** in the town of **Welkom** within **Matjhabeng Local Municipality** has been accepted in terms of section 16(2) of the Act.

to give effect to the objects referred to in section 2(d) of the MPRDA by submitting to this office proof of compliance with BEE on or before **24<sup>th</sup> August 2023**, which could be any documentation including but not limited to:-

- 2.1 Certified copies of share certificates and shareholders register
  - 2.2 Certified copies of Shareholders agreements
  - 2.3 Certified copies of Articles and Memorandum of Association of the Company;
  - 2.4 Trust deed documents and letters of authority for any trust holding shares
  - 2.5 Details relating to funding (all relevant agreements)
  - 2.6 Any other information that may be necessary to explain and serve as evidence that your Company meets the appropriate HDSA ownership and/or compliance requirements of the MPRDA and Mining Charter.
- 3 In light of the minimum requirements as stipulated in section 16 (1) and 16 (2) of the EIA Regulations, your application for an Environmental Authorization was incomplete as it was not accompanied by this acceptance letter as per sub-section 16 (1) (ix) and considering that it is now completed by this acceptance letter, you are hereby required to submit the documents as stipulated in section 19 (1) to (8) of the EIA Regulations.
- 4 Your attention is drawn to the provision of section 17(1) (e) of the MPRDA, which provides that the Minister may grant an application for a mining right if the applicant is not in contravention of any relevant provision of this Act.
- 5 You are therefore reminded to ensure that payment of all prospecting fees for all the prospecting rights you may hold, are up to date, failing which, this may have a negative impact on the outcome of your current application.
- 6 Take further note that the acceptance of this application does not imply that you may mine on the land accepted for, but merely implies that your application is being processed further.

- 7 Further note that should this office discover at a later stage the existence of a right or permit issued in respect of the properties forming the subject of this application, further processing of this application shall discontinue.

Yours faithfully



**K. KEWUTI**

**REGIONAL MANAGER: MINERAL REGULATION**

**FREE STATE REGION**

**DATE: 11/07/2023**

# APPENDIX C

## LAYOUT MAP

**APPLICANT:**  
RUTENDO HR CONSULTANTS

SKETCH PLAN PREPARED IN ACCORDANCE WITH  
REGULATION 2(2)  
SKETCH PLAN FOR THE  
**APPLICATION FOR A PROSPECTING RIGHT  
IN TERMS OF SECTION 16 OF THE MPRDA, 2002**

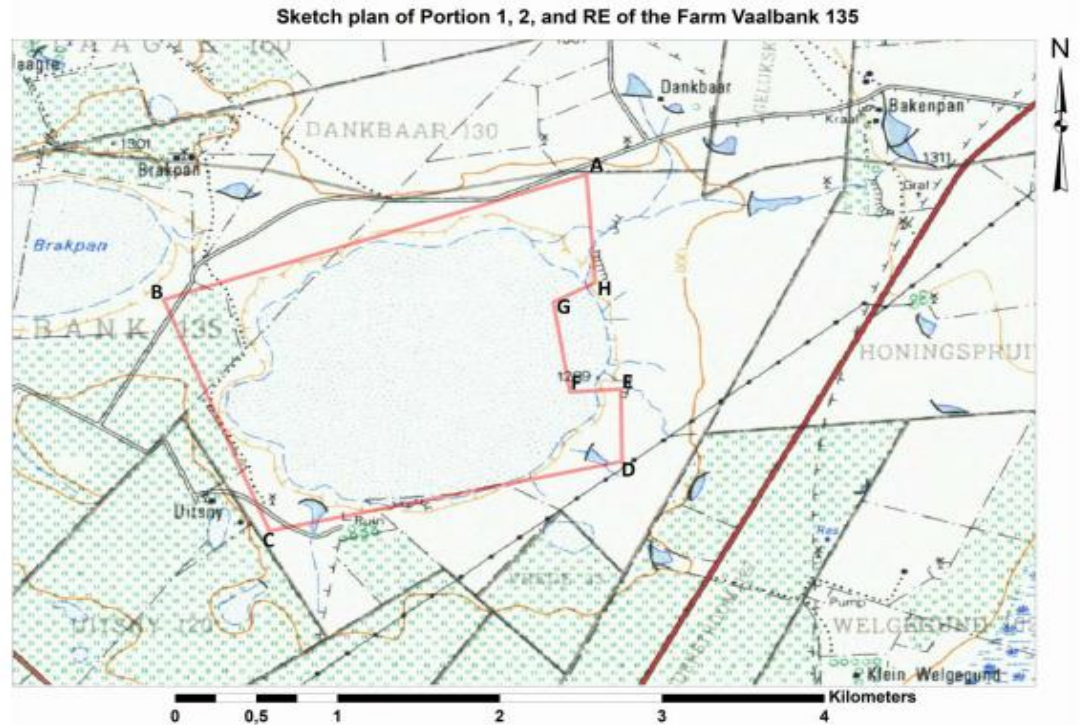
OVER THE AREA LETTERED  
A, B, C, D, E, F, G & H  
IN EXTENT OF 357,10 Ha  
SITUATED ON  
PORTION 1, 2 AND RE OF THE FARM VAALBANK 135  
IN THE MAGISTERIAL DISTRICT OF WELKOM  
PROVINCE: FREE STATE PROVINCE

**SURVEY SYSTEM WGS 84  
CO-ORDINATES: WG 25**

Name	E	S
A	26.562024 ,	-27.947725
B	26.562347 ,	-27.953865
C	26.560164 ,	-27.954871
D	26.560957 ,	-27.960181
E	26.563591 ,	-27.959761
F	26.563979 ,	-27.963983
G	26.544674 ,	-27.967955
H	26.538732 ,	-27.955001

PLAN APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
REGIONAL MANAGER, NORTHERN CAPE  
DRAWN AND COMPILED BY: ENGEDI MINERALS AND ENERGY (PTY) LTD. (GEOLOGICAL, GIS & ENVIRONMENTAL CONSULTANTS)

  
SIGNATURE \_\_\_\_\_ DATE **03 JULY 2023**



## **REHABILITATION, DECOMMISSIONING AND CLOSURE PLAN**

**REHABILITATION, DECOMMISSIONING AND CLOSURE PLAN FOR  
THE GOLD ORE AND SAND ON THE REMAINING EXTENT OF THE  
FARM VAALBANK 135, A PORTION OF PORTION 1 OF THE FARM  
VAALBANK AND PORTION 2 OF THE FARM VAALBANK 135 IN  
THE MAGISTERIAL DISTRICT OF LEJWELEPUTSWA, IN THE  
TOWN OF WELKOM,  
FREE STATE**

**FOR  
RUTENDO HR CONSULTANTS**

**DMR REF. NO. FS 10678 PR**



Compiled by: Engedi Minerals and Energy

Physical Address: 15 Barnes Street, Westdene, Bloemfontein, 9301

Postal Address: P.O. Box 22372, Extonweg, 9313

Telephone: 051 430 1748 Cell: 079 3626 046 Fax: 086 556 2568

Email address: [info@engedime.com](mailto:info@engedime.com)

Contact Person: Mr. Tshimangadzo Mulaudzi

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## 1. INTRODUCTION

The objective of the final rehabilitation, decommissioning and mine closure plan is to identify a post-prospecting land use that is feasible through:

- a) providing the vision, objectives, targets and criteria for final rehabilitation, decommissioning and closure of the project;
- b) outlining the design principles for closure;
- c) explaining the risk assessment approach and outcomes and link closure activities to risk rehabilitation;
- d) detailing the closure actions that clearly indicate the measures that will be taken to mitigate and/or manage identified risks and describes the nature of residual risks that will need to be monitored and managed post closure;
- e) committing to a schedule, budget, roles and responsibilities for final rehabilitation, decommissioning and closure of each relevant activity or item of infrastructure;
- f) identifying knowledge gaps and how these will be addressed and filled;
- g) detailing the full closure costs for the life of project at increasing levels of accuracy as the project develops and approaches closure in line with the final land use proposed; and
- h) outlining monitoring, auditing and reporting requirements.

*(Financial Provision Regulations, 2015 Appendix 4)*

In accordance to Appendix 5 of the NEMA EIA Regulations, 2014 a closure plan for the prospecting of Gold ore and Sand the Remaining Extent of the Farm Vaalbank 135, a Portion Of Portion 1 of the Farm Vaalbank 135 and Portion 2 of the Farm Vaalbank 135 In The Magisterial District Of Lejweleputswa , Free State province was formulated.

## 2. DETAIL OF THE AUTHOR

The Applicant, RUTENDO HR CONSULTANTS appointed Engedi Minerals and Energy to prepare the final rehabilitation, decommissioning and mine closure plan.

### a. Details of

#### i. Details of the EAP

<b>Name of the Practitioner:</b>	Tshimangadzo Mulaudzi
<b>Tel No.:</b>	079 362 6046
<b>Fax No. :</b>	086 556 2568
<b>E-mail address:</b>	mulaudzit@engedime.com



ii. **Expertise of the EAP**

**3) The qualifications of the EAP (with evidence)**

Tshimangadzo hold an Honours Degree in Prospecting and Environmental Geology from the University of Venda. Have since been working as an environmental geologist and environmental practitioner. He has 5 years' experience in Environmental Science, 3 years' experience in Geology, and 5 years' experience in public participation.

**4) Summary of the EAP's past experience (in carrying out the Environmental Impact Assessment Procedure)**

Tshimangadzo has been carrying out Environmental Impact Assessment Procedure

since 2012, managing a construction company called Tshedza Concrete Art in Limpopo Province, Makhado town.

In 2014, he joined a large prospecting consulting company in Kimberly called Breeze Court Investments 47 (Pty) Ltd (Geologist and Prospecting Consulting firm). This is where Mr Mulaudzi acquired in-depth experience and know how in the prospecting consulting business by assisting the large to small scale prospecting companies to obtain prospecting right, prospecting rights, prospecting permits, technical co-operate permits, reconnaissance permits, exploration rights, production rights, integrated water use license, and environmental authorisation among other licenses.

Tshimangadzo has five years working experience in environmental management, geology and public participation process.

### **3. LEGAL BACKGROUND AND BEST PRACTICE**

There are a number of statutory legal requirements that are relevant to this Final Rehabilitation Plan. These include, but are not limited to, the following:

**Constitution of South Africa (Act No. 108 of 1996)**

This section provides an overview of the legislative requirements applicable to this project and it includes the Acts, guidelines and policies considered in the compilation of this report. The legislative motivation for this project is underpinned by the Constitution of South Africa, 1996 (Act No. 108 of 1996), which states that:

The State must, in compliance with Section 7(2) of the Constitution, respect, protect, promote and fulfil the rights enshrined in the Bill of Rights, which is the cornerstone of democracy in South Africa.

Section 24 of the Constitution:

#### **24. Environment**

*-Everyone has the right-*

*(a) To an environment that is not harmful to their health or well-being; and*

*(b) To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that-*

*(i) Prevent pollution and ecological degradation;*

*(ii) Promote conservation; and*

*(iii) Secure ecologically sustainable development and use of natural resources while promoting a justifiable economic and social development.*

Section 24 of the Constitution of South Africa requires that all activities that may significantly affect the environment and require authorisation by law must be assessed prior to approval. In addition, it provides for the Minister of Environmental Affairs or the relevant provincial Ministers to identify:

New activities that require approval;

Areas within which activities require approval; and

Existing activities that should be assessed and reported on.

Section 28(1) of the Constitution of South Africa states that:

*“Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring”.*

If such pollution or degradation cannot be prevented, then appropriate measures must be taken to minimise or rectify such pollution or degradation. These measures may include:

- Assessing the impact on the environment;
- Informing and educating employees about the environmental risks of their work and ways of minimising these risks;

- Ceasing, modifying or controlling actions which cause pollution/degradation; ■
- Containing pollutants or preventing movement of pollutants;
- Eliminating the source of pollution or degradation; and ■
- Remediating the effects of the pollution or degradation

### **The National Water Act (Act No. 108 of 2008) (NWA)**

The National Water Act, 1998 (Act No. 36 of 1998) (NWA) aims to provide management of the national water resources to achieve sustainable use of water for the benefit of all water users. This requires that the quality of water resources is protected as well as integrated management of water resources with the delegation of powers to institutions at the regional or catchment level. The purpose of the NWA is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in ways, which take into account:

- Meeting the basic human needs of present and future generations; ■
- Promoting equitable access to water;
- Redressing the results of past racial discrimination;
- Promoting the efficient, sustainable and beneficial use of water in the public interest; ■
- Facilitating social and economic development;
- Providing for growing demand for water use;
- Protecting aquatic and associated ecosystems and their biological diversity; ■
- Reducing and preventing pollution and degradation of water resources;
- Meeting international obligations; and ■
- Managing floods and droughts.

The following sections of the Act are relevant:

**Table 3: NWA applicable sections**

Area of concern	Section	Legal Requirements
Prevention and remedying effects of pollution.	Section 19	<i>Any situation exist or which may cause or is likely to cause pollution of a water resource, must take all reasonable measures to prevent any such pollution from occurring, continuing or recurring.</i>
Control of emergency incidents	Section 20	<i>Incidences of pollution needs to be reported the Department and the relevant catchment agency.</i>

### National Environmental Management Act (Act No. 107 of 1998) (NEMA)

The National Environmental Management Act (NEMA) strives to regulate national environmental management policy and is focused primarily on co-operative governance, public participation and sustainable development. NEMA makes provisions for co-operative environmental governance by establishing principles for decision making on matters affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environmental functions exercised by organs of state and to provide for matters connected therewith.

The following sections are relevant:

**Table 4: NEMA Applicable Sections**

Area of concern	Section	Legal Requirements
Principles that may significantly affect the environment	Section 28	<i>General duty of care on every person who causes, has caused or may cause significant pollution or degradation of the environment to take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorized by law or cannot reasonably be avoided or stopped, to minimize and rectify such pollution or degradation of the environment.</i>
Control of emergency incidents	Section 30	<i>Incidences of pollution needs to be reported the Department.</i>
EMP	Section 34	<i>A draft EMP must include – information on any proposed management or mitigation measures that will be taken to address the environmental impacts that have been identified in a report contemplated by these Regulations, including environmental impacts or objectives in respect of – (iv) rehabilitation of the environment; as far as reasonably practicable, measures to rehabilitate the environment affected by the undertaking of any listed activity or specified activity to its natural or predetermined state or to a land use which conforms to the generally acceptable principle of sustainable development, including where appropriate, concurrent or progressive rehabilitation measures</i>

### **Regulation 1228 of NEMA, 1998**

NEMA, GNR 1228 GG 41236, known as the NEMA Financial Provision Regulations, 2015 (amended 2017), was promulgated in November 2015, and in terms of these regulations holders of

a prospecting right are allowed a transitional period of 39 months (19 February 2019) from the date of promulgation to comply.

As mentioned earlier the right holder must annually update the annual rehabilitation, final rehabilitation and remediation of latent environmental impacts and ensure it is compliant with the Financial Provision Regulations of 2015. The reports need to be conducted in the format that was supplied in the regulations as per Appendix 5 and Appendix 6.

### **National Environmental Management: Waste Act (Act No. 59 of 2008) (NEM: WA)**

The rehabilitation measures must be aligned with the objections of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEM: WA) which includes:

- (a)** To protect health, well-being and the environment by providing reasonable measures for—
- i.** Minimising the consumption of natural resources;
  - ii.** Avoiding and minimising the generation of waste;
  - iii.** Reducing, re-using, recycling and recovering waste;
  - iv.** Treating and safely disposing of waste as a last resort;
  - v.** Preventing pollution and ecological degradation;
  - vi.** Securing ecologically sustainable development while promoting justifiable economic and social development;
  - vii.** Promoting and ensuring the effective delivery of waste services;
  - viii.** Remediating land where contamination presents, or may present, a significant risk of harm to health or the environment; and
  - ix.** Achieving integrated waste management reporting and planning;
- (b)** To ensure that people are aware of the impact of waste on their health, well-being and the environment;
- (c)** To provide for compliance with the measures; and
- (d)** Generally, to give effect to Section 24 of the Constitution in order to secure an environment that is not harmful to health and well-being.

### **Waste Classification and Management Regulations, 2013 (Government Notice NR:634):**

Waste Classification and Management Regulations (WCMR) promulgated under the National Environmental Management: Waste Act, 2008 (NEM: WA) (effective 2013) provides mechanisms to:

- Facilitate the implementation of the waste hierarchy to move away from landfill; ■  
Reuse, recovery and treatment;
- Separate waste classification from the management of waste;

- Divert waste from landfill and into utilisation where possible; and ■  
Provide measures to monitor the progress.

The Waste Classification and Management Regulations ultimately enables the improved and more efficient classification and management of waste; provide for safe and appropriate handling, storage, recovery, reuse, recycling, treatment and disposal of waste and will also enable accurate and relevant reporting on waste generation and management. All waste generators, excluding domestic generators, must ensure that the waste they generate is classified within 180 days of its generation.

All wastes that were classified in terms of the “Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste in terms of the Department of Water Affairs” (2nd Edition, 1998; Department of Water Affairs and Forestry) or alternative classifications that were approved prior to the WCMR taking effect, must be re-classified and assessed within three years from the commencement of these Regulations.

Reference is made to the NEM: WA, part 8 of Chapter 4 regarding contaminated land:

All owners of land that is significantly contaminated become obliged to report that contamination is occurring. Part 8 of Chapter 4 is concerned with the remediation of contaminated land. This new legal regime for identifying contaminated land, determining its status and the risk that it poses, and regulating the remediation process is introduced. This law imposes significant legal obligation on the owners of land and on those who cause contamination, with potentially serious financial consequences. Part 8 applies where the pollution only manifest sometime after the contamination occurred and also where the action of a person (for example, the excavation of land pursuant to a development) results in a change to pre-existing contamination. Along with the notice bringing Part 8 into effect, norms and standards for the remediation of contaminated land and soil quality (list certain contaminants and specify soil screening values for human health and environmental protection). This act also has several important implications for the sale of and, sellers who know that their lands is contaminated can no longer keep silent and this is classified as an offence.

### **National Heritage Resources Act, (Act No. 25 of 1999)**

This legislation aims to promote good management of the national estate, and to enable and encourage communities to nurture and conserve their legacy so that it may be bequeathed to future generations. The South African heritage is unique and precious and it cannot be renewed. It is imperative to define the country’s cultural identity and therefore lies at the heart of all citizens spiritual well-being and has the power to build the nation. It has the potential to affirm the country’s diverse cultures, and in so doing shape the country’s national character. The South African heritage celebrates its achievements and contributes to redressing past inequities. It educates, it deepens our understanding of society and encourages us to empathise with the experience of others. It



facilitates healing and material and symbolic restitution and it promotes new and previously neglected research into our rich oral traditions and customs.

Due to the disturbed nature of the prospecting area no sites of heritage or cultural importance could be identified on the site.

### **Other Acts That Is Relevant to Mine Rehabilitation**

The Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983).

The South African Mineral Resource Committee (SAMREC) Code. Of particular importance in this regard is the determination of whether Sydenham Quarry has made an adequate provision for environmental rehabilitation in terms of Section 41 of the MPRDA.

### **Best Practice and International Guidelines**

Mine closure is an international challenge. South Africa has produced various well known and reputable guidelines on matters directly linked and or associated with mine closure. Such was the need for guidelines to manage mine closure provisions in a consistent manner provided for by the DMRE (2005).

These guidelines are the only official mine closure guideline as contemplated in Regulation 54(1) in the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002). Of particular importance is that this guideline document governs the closure cost assessment process in South Africa and is applied by the DMRE through its respective regional managers in each province.

The Chamber of Mines (CoM) (2007) issued a guideline for the rehabilitation of mined land. This document is a result of scientific knowledge experts. It is an on the ground reference document which provides written guidelines on the best rehabilitation techniques. Of value is how the document distinguishes between the financing, the planning and the licensing components of a typical prospecting program.

The World Wildlife Fund (WWF) in 2012 published a discussion document named the “Financial provision for the rehabilitation and closure in South African Mining: Discussion Document on Challenges and recommended improvements”. The document focuses on the adequacy of financial provisions and pulls a very strong link between insufficient financial allocations and that of derelict and abandoned mines in South Africa. The document further emphasizes the importance of establishing a dependency between the EMPR/EMP and financial provision which is updated and adequate

Recently a released guideline from the Government of Western Australia (GWA 2011) provides insight to the importance of mine closure. The guidelines (GWA 2011) in particular state that planning for mine closure is a critical component of environmental management in the mining

industry. Notably is that this industry leading practice also requires that planning for mine closure should start before mining commences and should continue throughout the life of the mine until final closure and relinquishment. This approach enables better environmental outcomes. It is also

good business practice as it should avoid the need for costly remedial earthworks late in the project lifecycle.

#### 4. PROJECT CONTEXT

Rutendo HR Consultants applied for environmental authorisation (EA) and a prospecting right for Gold ore and Sand on the Remaining extent of the Farm Vaalbank 135, a portion of Portion 1 of the Farm Vaalbank 135 and Portion 2 of the Farm Vaalbank 135, Free State province.

<b>Farm name:</b>	Remaining extent of the Farm Vaalbank 135, a portion of Portion 1 of the Farm Vaalbank 135 and Portion 2 of the Farm Vaalbank 135
<b>Application area (Ha):</b>	357.10 Ha
<b>Magisterial district:</b>	Lejweleputswa
<b>Distance and direction from nearest town:</b>	Approximately 13 west of Welkom town
<b>21 digit Surveyor General Code for each farm portion:</b>	F03900000000135000000 F03900000000135000001 F03900000000135000002

The proposed PR project will entail the:

The activity is for the prospecting right which will involve the prospecting of Gold ore and Sand at the proposed area.

##### **Phase 1**

Non-invasive prospecting work will be as follows:

##### **Desktop Analysis**

The geology of the area will be interpreted by using aerial photos, available mapping, literature reviews and landsat data – target areas will be identified. Further to this field mapping of outcrop will be conducted.

### **Geophysical Survey**

A geophysical electromagnetic survey (magnetometer) and gravity survey will be done where so targeted by the Geologist to proof the availability of the anomalies of the proposed prospected mineral of interest (gold). This is done to determine any anomalies which may be present in the underlying geology. This requires carrying a proton magnetometer which passes an electric current through the underlying sediments/ore body. No samples are taken at this phase thus no excavations are required. Information gained from this phase will be useful to site further drilling and position of pits for pit testing. The desktop studies and geophysical survey will take a period of 12 months.

### **Phase 2**

Invasive prospecting methods will be as follows:

#### **Core Drilling**

Invasive prospecting consists of 2 core drilling (Reverse Circulation) and the results of this phase will determine the final positions of the proposed pits for pit testing. This phase is considered to have a medium impact on the environment. Drilling equipment and transport vehicles will be mobilized. The drilling team will be required to adhere to commitments of the EMP and management are required to ensure that environmental management principles are adhered to at all phases. Existing roads will be used wherever possible. Any new access road construction will be conducted in close consultation with the landowner. The drilling method will take a period of over 24 months.

#### **Core Drilling**

30 holes will be drilled 50 m deep at interval of 5 meters apart.

**Borehole Chips**– logged, sampled and analyzed

30 samples

### **Phase 3**

#### **drilling and CPR report**

The remaining boreholes which were not done in the phase 2 will be finalised followed by the compilation of the competent persons report. The pit process will take place over a period of 12 months.

## **5. CLOSURE STRATEGY GUIDED BY ENVIRONMENTAL RISK ASSESSMENT**

A very important factor affecting the success of rehabilitation, and consequently the significance of all direct impacts, is the level of care that is taken to rehabilitate effectively. This is dependent on the level of environmental management of all prospecting activities that can impact on rehabilitation, both during the prospecting process and during the rehabilitation phase.

As mentioned earlier the Applicant will not establish any permanent infrastructure in the footprint area. Upon closure of the prospecting area all equipment will be removed from the footprint area. The area will be landscaped in order to rehabilitate the disturbance and will subsequently revert back to dormant agricultural use.

## **6. DESIGN PRINCIPLES**

Upon closure the prospecting right holder will commence with the rehabilitation of the disturbed area. The decommissioning activities will be directed by the closure objectives proposed in the EMPr, as stipulated below:

Drill holes:

- On completion, drill holes shall be capped by placing a steel casing to a suitable depth and concrete cap on top of the borehole.

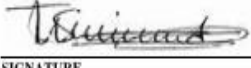
The clearing of soil surface areas would be restricted to what is really necessary for prospecting and construction/establishment of infrastructure. During rehabilitation and closure of these sites, or where vegetation is lacking or compacted, the areas would be ripped or ploughed and levelled in order to re-establish a growth medium and if necessary fertilise to ensure the regrowth of vegetation and the soil ameliorated based on a fertiliser recommendation (soil sample analysed).

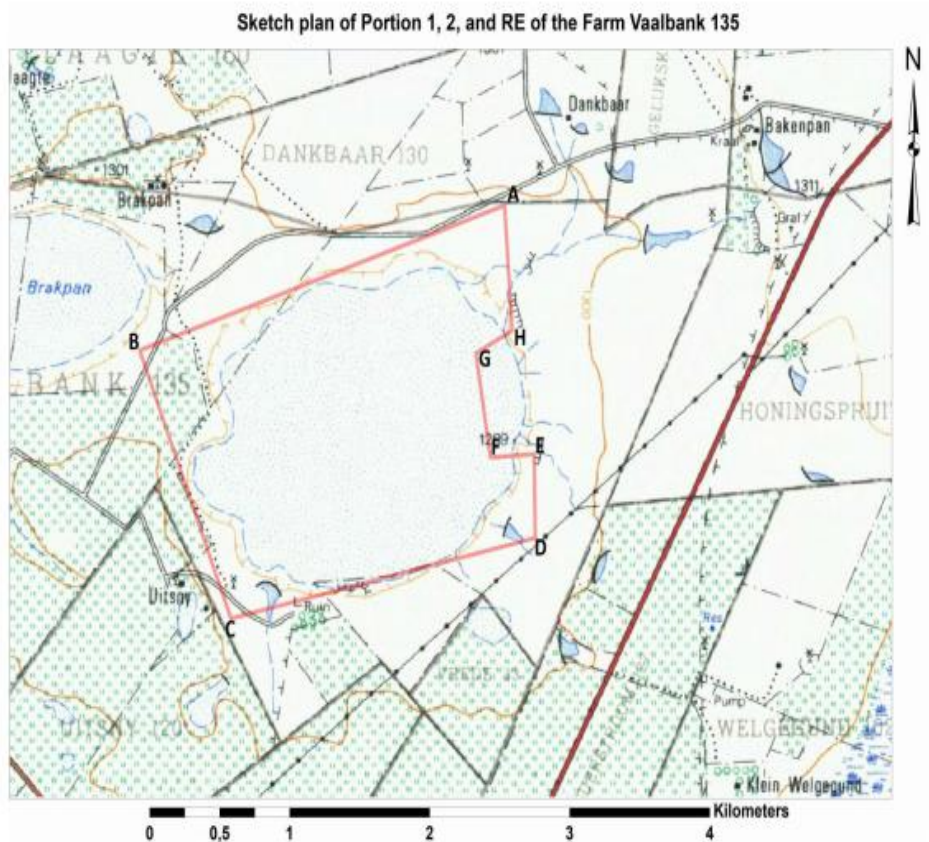
All drill holes and trenches will be rehabilitated after drilling and sampling activities have been completed to avoid risk of fauna, livestock falling into open drill holes and trenches.

The disturbed sites shall be returned as closely as possible to the original state

## **7. POST-PROSPECTING LAND USE**

The future land use of the proposed area will be dormant agriculture. Upon the replacement of the topsoil, the area around the drill holes will once again be available for grazing purposes, and the planting of the cover crop (to protect the topsoil) will tie in with the proposed land use.

<b>APPLICANT:</b> RUTENDO HR CONSULTANTS		
SKETCH PLAN PREPARED IN ACCORDANCE WITH REGULATION 2(2)		
SKETCH PLAN FOR THE <b>APPLICATION FOR A PROSPECTING RIGHT</b> IN TERMS OF SECTION 16 OF THE MPRDA, 2002		
OVER THE AREA LETTERED A,B,C,D,E, F, G & H IN EXTENT OF 357,10 Ha SITUATED ON PORTION 1, 2 AND RE OF THE FARM VAALBANK 135 IN THE MAGISTERIAL DISTRICT OF WELKOM PROVINCE: FREE STATE PROVINCE		
SURVEY SYSTEM WGS 84 CO-ORDINATES: WG 25		
Name	E	S
A	26.562024,	-27.947725
B	26.562347,	-27.953865
C	26.560164,	-27.954871
D	26.560957,	-27.960181
E	26.563591,	-27.959761
F	26.563979,	-27.963983
G	26.544674,	-27.967955
H	26.538732,	-27.955001
PLAN APPROVED REGIONAL MANAGER, NORTHERN CAPE DRAWN AND COMPILED BY: ENGEDI MINERALS AND ENERGY (PTY) LTD. (GEOLOGICAL, GIS & ENVIRONMENTAL CONSULTANTS)		DATE
		03 JULY 2023
SIGNATURE		DATE



Compiled by: ENGEDI MINERALS AND ENERGY (PTY) LTD

1

*Figure 1: Site plan of the proposed prospecting site*

## 8. CLOSURE ACTIONS

The following closure actions were stipulated in the Environmental Management Programme Report (EMPr) in order to successfully rehabilitate the prospecting area.

The applicant will comply with the minimum closure objectives as prescribed by DMRE and detailed below:

#### **4.1 Rehabilitation of the trenches:**

After all the infrastructures constructed under the prospecting right have been removed from the site, the trenched area(s) will be backfilled, compacted and leveled with the topsoil that was stored for final rehabilitation.

The topsoil will be spread evenly over the whole trenched area(s). if a need arises, the area will be fertilized and seeded with a mix of vegetation seed that is suited to the local indigenous flora.

To ensure that the area after rehabilitation resembles the area before the commencement of mining activities, photographs of the camp and office sites, and different trench sites will be taken before commencement of activities, during the prospecting activities and after the completion rehabilitation.

#### **4.2 Rehabilitation of the drill holes:**

On completion of operations, all structures or objects at the site camp shall be dealt with in accordance with the regulations. After all foreign matter has been removed from site; excavations shall be backfilled with subsoil, compacted and levelled with previously stored topsoil. No foreign matter such as cement or other rubble shall be introduced into such backfilling.

On completion of the prospecting operation, the areas shall be cleared of any contaminated soil. The surface shall then be ripped or ploughed to a depth of at least 300mm (Mispha soils limited in depth to 300mm) and the topsoil previously stored adjacent to excavations, shall be spread evenly to its original depth over the whole area. The area shall then be fertilised if necessary. The site shall be seeded with a vegetation seed mix adapted to reflect the local indigenous flora. Where sites have been rendered devoid of vegetation or where soils have been compacted by heavy machinery, the surface shall be scarified and ripped.

Drill holes shall be capped by placing a steel casing to a suitable depth and concrete cap on top of the borehole.

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



Rehabilitation of the new landscape would be done in such a manner to blend in with the surrounding landscape and allow normal surface drainage to continue. Water control systems must be implemented to prevent erosion.

The visual impact would be addressed by means of:

- Re-vegetation with grasses
  - a. Removal of any infrastructure, scrap, waste that would contribute to a negative impact.

### **4.3 Final rehabilitation:**

- b. Rehabilitation of the surface area shall entail landscaping, levelling, top dressing, land preparation, seeding (if required), maintenance, and clearing of invasive plant species.
- c. All equipment, plant, and other items used during the prospecting period must be removed from the site (section 44 of the MPRDA).
- d. Waste material of any description, including receptacles, scrap, rubble and tyres, must be removed entirely from the prospecting area and disposed of at a recognized landfill facility. It will not be permitted to be buried or burned on the site.
- e. The management of invasive plant species must be done in a sporadic manner during the life of the prospecting activities. Species regarded as Category 1a and 1b invasive species in terms of NEM:BA (National Environmental Management: Biodiversity Act 10 of 2004 and regulations applicable thereto) need to be eradicated from the site.
- f. Final rehabilitation must be completed within a period specified by the Regional Manager (DMRE).

Control of invasive plant species is an important aspect after topsoil replacement and seeding has been done in an area. Site management must implement an invasive plant species management plan during the 12 months' aftercare period to address germination of problem plants in the area.

## **9. CLOSURE SCHEDULE**

At this stage it is proposed that the rehabilitation of the prospecting area will take approximately 12 months to complete. Rehabilitation will, however, not be considered complete until the first cover

crop is well established and therefore the rehabilitation phase will extend over at least a six-month period.

Control of invasive plant species is an important aspect after topsoil replacement and seeding has been completed in an area. Site management will implement an invasive plant species management plan during the 12-month aftercare period to address germination of problem plants in the area. Final rehabilitation shall be completed within a period specified by the Regional Manager.

Table 2: Measures to rehabilitate affected environment.

Activities	Phase	Size and scale of disturbance	Mitigation measures	Compliance with standard	Time period for implementation
Drill hole closure	Decommissioning and closure	Short-term and localised	<p>All prospecting drill holes should be plugged and sealed with cement.</p> <p>Cement and liquid concrete are hazardous to the natural environment on account of the very high pH of the material and the chemicals contained therein. As a result, the contractor shall ensure that</p> <p style="text-align: center;">Concrete shall not be mixed directly on the ground</p> <p>The visible remains of concrete either solid or from washings, shall be physically removed immediately and disposed of as waste. Washing of visible signs into the ground is not acceptable</p> <p style="text-align: center;">All excess aggregate shall also be removed</p>	NWA DWF BPG	Throughout decommissioning and closure
Removal of surface infrastructure	Decommissioning	Short-term and localised	<p>All infrastructure, equipment and other items used during prospecting will be removed from the site</p> <p style="text-align: center;">Compaction of soil must be avoided as far as possible. The use of heavy machinery must be restricted in areas outside of the proposed prospecting sites to reduce the compaction of soils</p>	MPRDA Rehabilitation Plan	Decommissioning
Removal of waste (General and hazardous waste)	Decommissioning	Small scale and localised	Any excess or waste material or chemicals including drilling muds etc. must be removed from the site and must preferably be recycled (e.g. oil and other hydrocarbon waste products). Any waste materials or chemicals that cannot be recycled must be disposed of at a suitably licensed waste facility	NWA DWF BPG	Decommissioning

Monitoring	Post-operation	All rehabilitation	<p>The post-operational monitoring and management period following decommissioning of prospecting activities must be implemented by a suitable qualified independent party for a minimum of two (2) years unless otherwise specified by the competent authority</p> <p>The monitoring activities during this period will include but are not limited to:</p> <p style="text-align: center;">Biodiversity monitoring</p> <p style="text-align: center;">Re-vegetation of disturbed areas where required</p> <p>Provision must be made to monitor any unforeseen impact that may arise as a result of the proposed prospecting activities and incorporated into post closure monitoring and management</p>	MPRDA Rehabilitation Plan	Post -operation
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## **10. IMPLEMENTATION AND RESPONSIBILITY OF CLOSURE PLAN**

Implementation of the closure plan is ultimately the responsibility of the prospecting right holder.

Upon commencement of the closure phase daily compliance monitoring will be the responsibility of the site manager. The site manager will be responsible for ensuring compliance with the guidelines as stipulated in the EMPR as well as the prevention and/or rectification of environmental incidents. The applicant will appoint an Environmental Control Officer to oversee compliance of the rehabilitation/closure activities.

## **11. IDENTIFIED GAPS IN THE PLAN**

The assumptions made in this plan, which relate to the closure objectives and associated impact on the receiving environment, stem from site specific information gathered by the project team. No gaps in the Rehabilitation, Decommissioning and Mine Closure Plan could be identified.

## **12. RELINQUISHMENT CRITERIA FOR CLOSURE ACTIVITIES**

The specific rehabilitation outcomes against which the effectiveness of completed rehabilitation must be measured are:

1. that the topography has been sufficiently sloped without steep excavation edges that pose a safety risk;
2. that topsoil has been spread on the reinstated areas;
3. that there is no visible erosion across the area, or down-slope of it as a result of prospecting, and that no part of the area has been left unacceptably vulnerable to erosion;
4. that a successful cover crop has been established across the entire area.

The relinquishment criteria therefore include:

- No waste materials must have remained on site
- The vegetation cover of the disturbed target sites must be consistent with the surrounding vegetation cover, biodiversity levels restored and no faunal mortalities due to prospecting.
- All complaints registered during the prospecting and closure must have been addressed

### 13. MONITORING, AUDITING AND REPORTING

In compliance with applicable legislation the prospecting right holder will conduct monitoring of the prospecting activities for the duration of the operational- and decommissioning phases. The compliance of the site will be audited and reporting will be done to the relevant authorities. The table below stipulates the actions to be followed in this regard.

Table 4: Monitoring, auditing and reporting requirements

MONITORING, AUDITING AND REPORTING REQUIREMENTS			
AUDIT	RESPONSIBLE PERSON	FREQUENCY OF AUDIT	CLOSE OUT APPROACH
<b>LEGISLATED AUDITING AND REPORTING</b>			
<b>Environmental Auditing</b>	<b><u>Internal Review</u></b>		
	Site manager to ensure compliance with Environmental Authorization, Environmental Management Programme and Closure Plan.	Daily compliance monitoring.	Any non-conformance must immediately be addressed by site management and weekly reported on.
	<b><u>External Auditing</u></b>		
	Independent Consultant	Annual auditing and reporting to the Department of Mineral Resources	Depending on the significance of the findings site management has a maximum of four weeks to address and close out auditing results.

<b>MONITORING, AUDITING AND REPORTING REQUIREMENTS</b>			
<b>AUDIT</b>	<b>RESPONSIBLE PERSON</b>	<b>FREQUENCY OF AUDIT</b>	<b>CLOSE OUT APPROACH</b>
<b>LEGISLATED AUDITING AND REPORTING</b>			
<b>Financial Provision Review</b>	<p><b><u>Financial Provision Review</u></b> Independent Consultant</p> <p><b><u>Independent Auditor</u></b> Independent financial consultant</p>	Annual review of the financial provision, and reporting of the findings to the Department of Mineral Resources and Energy	Should the review of the financial provision indicate a shortfall the holder of the right will increase the financial provision to meet the audited financial provision within 90 days from the date of the signature on the auditor's report.
<b>Health and Safety Auditing</b>	Health and Safety Manager	<p>Monthly auditing of health and safety aspects on-site.</p> <p>Monthly reporting to the Mine Health and Safety division of the Department of Mineral Resources and Energy.</p>	Depending on the significance of the findings site management has a maximum of 48 hours to address and close out auditing results.
<b>MONITORING</b>			
<b>Dust Monitoring</b>	<p>Site Management.</p> <p>Compliance checked by Independent Consultant.</p>	Monthly Dust Monitoring	Site management has a maximum of two weeks to improve the dust management measures should the dust level of the site to be excessive.
<b>Invader Plant Monitoring</b>	<p>Site Management.</p> <p>Compliance checked by Independent Consultant.</p>	Monthly Monitoring	Site management has a maximum of two weeks to eradicate Category 1a and b plants in terms of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004) that germinate on-site.
<b>Storm Water Monitoring</b>	<p>Site Management.</p> <p>Compliance checked by Independent Consultant.</p>	Monthly Monitoring	Site management has a maximum of two weeks to improve the storm water control measures on site should signs of erosion occur.

## Schedule of reporting requirements providing an outline of internal and external reporting including disclosure of updates of the plan to stakeholders

The following table stipulates the reporting requirements and how document updating will be handled:

*Table 4: Reporting requirements*

<b>REPORTING REQUIREMENTS</b>			
<b>AUDIT</b>	<b>LEGISLATION</b>	<b>REPORTING REQUIREMENTS</b>	<b>UPDATE DISCLOSURE</b>
<b>Environmental Auditing</b>	NEMA; EIA Regulations, 2014 (as amended 2017)	Annual reporting on the environmental compliance of the prospecting area will be in accordance with Regulation 34 of the NEMA EIA Regulations, 2014 (as amended 2017). The environmental audit report will contain the information set out in Appendix 7 of the said Regulation.	The environmental audit report will indicate the ability of the EMPr and Closure Plan to adequately manage the activity. Should the reports not be sufficient, amendment will be proposed.
<b>Financial Provision Review</b>	NEMA Amendment Act, 2014 (Act No 25 of 2014)  Financial Provision Regulations, 2015	Annual reporting on the financial provision for closure of the prospecting area will be in accordance with Section 24P of the NEMA Amendment Act, 2014 (Act No 25 of 2014) read with the Financial Provision Regulations 2015.	The auditor will report on the adequacy of the financial provision and any adjustments that need to be made to the financial provision.
<b>Health and Safety Auditing</b>	Occupational Health and Safety Act, 1993  Mine Health and Safety Act, 1996	Reporting on the health and safety compliance of the prospecting area will be in accordance with the Mine Health and Safety Act, 1996.	The safety manager will quarterly report on the safety aspects at the mine, and annually update the Code of Practices applicable to the site.



## Monitoring Plan and Compliance Assessment

The following list presents the monitoring programs to be implemented on site for the duration of the decommissioning phase:

Table 5: Monitoring programme

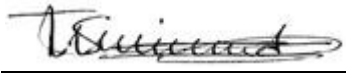
MONITORING PROGRAMME	
MONITORING UNIT	FREQUENCY
<b>DUST MONITORING</b>	
<p><b>Dust Monitoring:</b></p> <p>Dust control through the implementation of good housekeeping and site management is the key method of controlling dust emissions. It is proposed that monthly fallout dust monitoring be implemented at the prospecting area in order to record the dust conditions of the site. The dust monitoring must be conducted by a qualified specialist and dust results must monthly be populated and filed in the environmental site file and be available for auditing purposes. The environmental control officer must inspect the fallout dust results during the environmental performance audit. Should the ECO find that the dust levels of the prospecting area are excessive and impacting on the surrounding land use, the dust management plan of the Applicant must be amended and additional dust control measures must be instigated.</p>	<p>Monthly until final closure of the site</p>
<p><b>Gravimetric Dust Monitoring:</b></p> <p>Gravimetric sampling of dust is the internationally acceptable method to determine respirable dust concentrations of a site. This monitoring is implemented to determine the level of exposure employees are subjected to during each shift as prolonged exposure to atmospheric dust can give rise to a number of lung disorders or diseases. Personal and/or static monitoring is done by a qualified Occupational Hygienist in accordance with the guidelines for gravimetric sampling published under the auspices of the Department of Mineral Resources – Guidelines for the Compilation of a Mandatory Code of Practice – No. 1 Personal Exposure to Airborne Pollutants.</p>	<p>Quarterly until final closure of the site</p>
<b>NOISE MONITORING</b>	
<p><b>Personal Noise Monitoring:</b></p> <p>Personal noise exposure monitoring is done to determine the noise levels employees are exposed to during an eight-hour shift. Excessive noise exposure can lead to hearing loss and therefore continuous monitoring and demarcation of noise zones are of the utmost importance. This monitoring is conducted by a qualified Occupational Hygienist who has to submit his findings on</p>	<p>Quarterly until final closure of the site</p>

<b>MONITORING PROGRAMME</b>	
<b>MONITORING UNIT</b>	<b>FREQUENCY</b>
Form 21.9(2)(e) prescribed by the Department of Mineral Resources in terms of the National Environmental Management: Air Quality Act, 2004 (Act No 39. of 2004).	
<b>SOIL EROSION MONITORING</b>	
<p><b>Soil Erosion:</b></p> <p>The definition for erosion is defined in the Conservation of Agricultural Resources Act, 1983 (Act No 43 of 1983) as the loss of soil through the action of water, wind, ice or other agents including the subsidence of soil. Soil erosion monitoring has to be implemented by site management to prevent the loss of exposed soil as a result of the prospecting activities. If the replaced topsoil stay exposed it is especially vulnerable to soil erosion. It is therefore proposed that a cover crop be planted on reinstated topsoil and topsoil heaps to be stored for more than six months.</p>	<p>Weekly monitoring for the first 6 months or until the first cover crop has established, where after the prospecting areas must be monitored monthly through at least one wet and one dry season.</p>
<b>INVASIVE PLANT SPECIES MONITORING</b>	
<p><b>Management of Invasive Plant Species:</b></p> <p>All species listed in terms of the Alien and Invader Species (AIS) regulations published in terms of section 97(1) of NEM:BA as amended 2016, are deemed to be declared invasive species, and should be managed accordingly. When identifying invasive plant species that need to be eradicated from the site the plants listed in the AIS regulations are used as guideline. Control of invasive plant species is an important aspect after topsoil replacement and seeding has been done in an area. Site management must implement an invasive plant species management plan (attached as Appendix J to the BAR &amp; EMPR) during the 12 months aftercare period to address germination of problem plants in the area.</p>	<p>Monthly monitoring for the duration of the decommissioning phase and a 12-months aftercare period.</p>
<b>STORM WATER MONITORING</b>	
<p><b>Storm Water Monitoring:</b></p> <p>The risk of erosion or loss of topsoil due to uncontrolled storm water flowing through the decommissioning area can be reduced through proper monitoring and implementation of effective storm water infrastructure. Site management must implement a storm water management plan for the duration of the operational- and decommissioning phases. Monitoring needs to continue during the 12 months aftercare period.</p>	<p>Monthly monitoring for the duration of the decommissioning phase and a 12-months aftercare period.</p>

MONITORING PROGRAMME	
MONITORING UNIT	FREQUENCY
<b>HEALTH AND SAFETY MONITORING</b>	
<p style="text-align: center;"><b><i>Management of Health and Safety Risks</i></b></p> <p>All operations must comply with the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) as well as the Mine Health and Safety Act, 1996 (Act No 29 of 1996).</p>	<p>Daily monitoring for the duration of the decommissioning phase.</p>

#### 14. MOTIVATION FOR AMENDMENTS MADE TO FINAL REHABILITATION, DECOMMISSIONING AND MINE CLOSURE PLAN

Not yet applicable.



Mr. T. Mulaudzi. (Consultant)

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