Case ID: 1889

mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

Private Bag X6093, Kimberley, 8300, Tel: (053) 807 1700, Fax: (053) 8325 631
First Floor, Liberty Corner, 29-31 Curry Street, Kimberley 8301

From: Directorate: Mineral Regulation: Northern Cape **Date:** 13 June 2011
Enquiries: Mr H.D Mashau Email:Humbulani.Mashau@dmr.gov.za

Ref: NC 30/5/1/3/3/2/1/2039 EM

The Director
South African Heritage Resources Agency
PO Box 4637
CAPE TOWN
8000

Attention: Nonofho Ndobochani

CONSULTATION IN TERMS OF SECTION 40 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT 2002, (ACT 28 OF 2002) FOR THE APPROVAL OF AN ENVIRONMENTAL MANAGEMENT PLAN FOR MINING PERMIT OF MANGANESE AND IRON ORE ON THE PART OF UNALIENATED STATE GROUND, SITUATED IN THE MAGISTERIAL DISTRICT OF CARNARVON.

APPLICANT: GLEN DOUGLAS DOLOMITE (PTY) LTD.

Attached herewith, please find a copy of an EMP received from the above-mentioned applicant, for your comments.

It would be appreciated if you could forward any comments or requirements your Department may have to this office and to the applicant before **12 August 2011** as required by the Act.

Consultation in this regard has also been initiated with other relevant State Departments. In an attempt to expedite the consultation process please contact **Mr. Humbulani Mashau** of this office to make arrangements for a site inspection or for any other enquiries with regard to this application.

Your co-operation will be appreciated.

pp .....
REGIONAL MANAGER: MINERAL REGULATION
NORTHERN CAPE REGION

SA HERITAGE RESOURCES AGENCY
RECEIVED
24 JUN 2011

File number: NC 30/5/1/3/2/2039MP

DEPARTMENT OF MINERALS AND ENERGY

ENVIRONMENTAL MANAGEMENT PLAN

Submitted in support of application for a mining permit.
Section 39 and Regulation 52 of the Minerals and Petroleum Resources Development Act, 2002
(Act 28 of 2002)

Application for a:		
	Prospecting Right	
	Mining Permit	X

Applicant: Glen Douglas Dolomite (Pty) Ltd

Area: A Portion of unalienated state land

District: Postmasburg, Hay Division

Mineral: Iron ore, Manganese ore

Date: 6 June 2011

TABLE OF CONTENTS

SECTION A

A.1 INTRODUCTION

This document aims to provide a simplified national standard for applicants for mining permits to comply with the relevant legislation and environmental regulations as apply to their respective applications in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002)(MPRDA).

Applicants in this sector of the mining industry typically disturb smaller surface areas of land, whether drilling boreholes, small trenches, or mining on a small area, less than 1,5 hectares of land, under a mining permit as contemplated in Section 27 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002).

A.2 SCOPE

This document is intended for use by applicants for mining permits and prospecting rights. Typically, operations in this sector of the mining industry:

- Use little or no chemicals to extract mineral from ore,
- Work on portions of land of 1,5 hectares in size or smaller,
- Disturb the topography of an area somewhat but have no significant impact on the geology

A.3 PURPOSE

This document aims to :

- Provide a national standard for the submission of Environmental Management Plans for the types of applications mentioned above.
- Ensure compliance with Regulation 52 of the MPRDA.
- Assist applicants by providing the information that the Department of Mineral Resources (DMR) requires in a simple language and in a structured, prescribed format, as contemplated in Regulation 52(2) of the (MPRDA).
- Assist regional offices of the DMR to obtain enough information about a proposed prospecting/reconnaissance or mining permit operation to assess the possible environmental impacts from that operation and to determine corrective action even before such right is granted and the operation commences.

This document aims both to provide the DMR regional offices with enough information about applicants for mining permits and applicants with guidance on environmental management matters pertaining to the mitigation of environmental impacts arising from their operations. Given this dual focus and the generic nature of the document, it might not be sufficient for all types of operations under various circumstances. The document may therefore be altered or added to as the particular circumstances of the application in question may require.

A.4 USE OF THE DOCUMENT:

An EIA is contained in Section C of this document and was designed specifically with the target sectors of the mining industry (described in A.2 above) in mind.

The aim is ultimately to (a) gather information from applicants themselves; (b) to assess the impact of the operation based on that information and them (c) to guide the applicant to mitigate environmental impacts to limit damage to the environment.

Section B of the document gathers demographic information about the applicant. Section C gathers the information that will be used in the Environmental Impact Assessment. The applicant must complete the relevant sections of this document, but the regional office of the DMR will do the scoring of these for the impact assessment rating in Section D.

Section F (the Environmental Management Plan) of the document is prescriptive and gives guidance to the miner or prospector on how to limit the damage of the operation on the environment. This part may be added to by the regional manager, who has the prerogative to decide whether this Environmental Management Plan will adequately address the environmental impacts expected from the operation or whether additional requirements for proper environmental management need to be set. Where these additional requirements are set, they will appear in Section G of this document. The Environmental Management Plan (Section F) of the document is legally binding once approved and, in the undertaking contained in Section H, the applicant effectively agrees to implement all the measures outlined in this Environmental Management Plan.

A.5 LEGISLATION/REGULATIONS

The relevant sections of Mineral and Petroleum Resources Development Act and its supporting Regulations are summarised below for the information of applicants. The onus is on the applicant to familiarise him/herself with the provisions of the full version of the Mineral and Petroleum Resources Development Act and its Regulations.

Section of Act	Legislated Activity/Instruction/Responsibility or failure to comply	Penalty in terms of Section 99
5(4)	No person may prospect, mine, or undertake reconnaissance operations or any other activity without an approved EMP, right, permit or permission or without notifying land owner.	R100 000 or two years Imprisonment or both
19	Holder of a Prospecting right must: lodge right with Mining Titles Office within 30 days; commence with prospecting within 120 days, comply with terms and conditions or prospecting right, continuously and actively conduct prospecting operations; comply with requirements of approved EMP, pay prospecting fees and royalties.	R100 000 or two years Imprisonment or both
20(2)	Holder of prospecting right must obtain Minister's permission to remove any mineral or bulk samples.	R100 000 or two years Imprisonment or both
26(3)	A person who intends to beneficiate any mineral mined in SA outside the borders of SA may only do so after notifying the Minister in writing and after consultation with the Minister.	R500 000 for each day of contravention.

Section Of Act	Legislated Activity/Instruction/Responsibility or failure to comply	Penalty in terms of Section 99
28	Holder of a mining right or permit must keep records of operations and financial records AND must submit to the DG: monthly returns, annual financial report and a report detailing compliance with social & labour plan and charter	R100 000 or two years imprisonment or both
29	Minister may direct owner of land or holder/applicant of permit/right to submit data or information	R 10 000
38(1)(c)	Holder of permission/permit/right MUST manage environmental impacts according to EMP and as ongoing part of the operations	R500 000 or ten years imprisonment or both.
42(1)	Residue stockpiles must be managed in prescribed manner on a site demarcated in the EMP	A fine or imprisonment of up to six months or both
42(2)	No person may temporarily or permanently deposit residue on any other site than that demarcated and indicated in the EMP	A fine or imprisonment of up to six months or both
44	When any permit/right/permission lapses, the holder may not remove or demolish buildings, which may not be demolished in terms of any other law, which has been identified by the Minister or which is to be retained by agreement with the landowner.	Penalty that may be imposed by Magistrate's Court for similar offence
92	Authorised persons may enter mining sites and require holder of permit to produce documents/reports/or any material deemed necessary for inspection	Penalty as may be imposed for perjury
94	No person may obstruct or hinder an authorised person in the performance of their duties or powers under the Act.	Penalty as may be imposed for perjury
05	Holder of a permit/right may not subject employees to occupational detriment on account of employee disclosing evidence or information to authorised person (official).	Penalty as may be imposed for perjury
All sections	Inaccurate, incorrect or misleading information	A fine or imprisonment of up to six months or both
All sections	Failure to comply with any directive, notice, suspension, order, instruction, or condition issued	A fine or imprisonment of up to six months or both

A.6 OTHER RELEVANT LEGISLATION

Compliance with the provisions of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) and its Regulations does not necessarily guarantee that the applicant is in compliance with other Regulations and legislation. Other legislation that may be immediately applicable includes, but are not limited to:

- National Monuments Act, 1969 (Act 28 of 1969)
- National Parks Act, 1976 (Act 57 of 1976)
- Environmental Conservation Act, 1989 (Act 73 of 1989)
- National Environmental Management Act, 1998 (Act No. 107 of 1998)
- Atmospheric Pollution Prevention Act, 1965 (Act 45 of 1965)
- The National Water Act, 1998 (Act 36 of 1998)
- Mine Safety and Health Act, 1996 (Act 29 of 1996)
- The Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983).

A.7 WORD DEFINITIONS

In this document, unless otherwise indicated, the following words will have the meanings as indicated here:

Act (The Act)	Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002)
Borehole	A hole drilled for the purposes of prospecting i.e. extracting a sample of soil or rock ships by pneumatic, reverse air circulation percussion drilling, or any other type of probe entering the surface of the soil.
CARA	The Conservation of Agricultural Resources Act
EIA	An Environmental Impact Assessment as contemplated in Section 38(1)(B) of the Act
EMP	An Environmental Management Plan as contemplated in Section 39 of the Act
Fauna	All living biological creatures, usually capable of motion, including insects and predominantly of protein-based consistency.
Flora	All living plants, grasses, shrubs, trees, etc., usually incapable of easy natural motion and capable of photosynthesis.
Fence	A physical barrier in the form of posts and barbed wire and/or "Silex" or any other concrete construction, ("palisade"- type fencing included), constructed with the purpose of keeping humans and animals within or out of defined boundaries.
House	Any residential dwelling of any type, style or description that is used as a residence by any human being
NDA	National Department of Agriculture
NWA	National Water Act, Act 36 of 1998
Pit	Any open excavation
"Porrel"	The term used for the sludge created at alluvial diamond diggings where the alluvial gravels are washed and the diamonds separated in a water-and-sand medium.
Topsoil	The layer of soil covering the earth which- (a) Provides a suitable environment for the termination of seed; (b) Allows the penetration of water; (c) Is a source of micro-organisms, plant nutrients and in some cases seed; and (d) Is not of a depth of more than 0,5 metres or such depth as the Minister may prescribe for a specific prospecting or exploration area or mining area.
Trench	A type of excavation usually made by digging in a line towards a mechanical excavator and not pivoting the boom – a large, U-shaped hole in the ground, with vertical sides and about 6 – 8 metres in length. Also a prospecting trench.
Vegetation	Any and all forms of plants, see also Fauna
DWAF	The Department of Water Affairs and Forestry – both national office and their various regional offices, which are divided across the country on the basis of water catchment areas.
MPRDA	The Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002)
EMPlan	An Environmental Management Plan as contemplated in Regulation 52 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) – this document.

SECTION B:

B.1: BIOGRAPHIC DETAILS OF THE APPLICANT

B1.1	Full name (and surname) of person or company applying for the permit or right	**Glen Douglas Dolomite (Pty) Ltd**
B1.2	ID number of person or company/CC registration number	Co Reg No: 1934/005306/07
B1.3	Postal address	P O Box 768, Bellville 7535
B1.4	Physical/residential address	Tyger Valley Office Park No.2 Cnr Old Oak Road and Willie van Schoor Avenue, Tyger Valley, Bellville
B1.5	Applicant's telephone number	021 917 8840 (Mr Louis Loubser)
B1.6	Applicant's cellular phone number	083 660 7070
B1.7	Alternative contact's name	Joe Kalo
B1.8	Alternative contact's telephone/cell phone numbers	083 273 6918
B2.1	Full name of the property on which mining operations will be conducted	A portion of un-alienated state ground
B2.2	Name of the Subdivision	Hay Division
B2.3	Approximate center of mining area	
	- Latitude	S 28°15'29.45 "
	- Longitude	E 23°06'39.99 "
B2.4	Magisterial district	Northern Cape Province
B2.5	Name of the registered owner of the property	**State owned property**
B2.6	His/Her telephone number	n.a
B2.7	His/her Postal address	n.a
B2.8	Current uses of surrounding areas	A farm compound can be found about 2,4 km from the proposed mining site. No significant agricultural activities can be Identified in the surrounding areas of the proposed mining site.
B2.9	Are there any other existing land uses that impact on the environment in the proposed mining area?	No
B2.10	What is the name of the nearest town?	Postmasburg
	SEE MAPS IN ANNEXURES A - D	

SECTION C. ENVIRONMENTAL IMPACT ASSESSMENT:

Schedule of Activities:

The proposed mining schedule will comprise the following (from the date of approval) as shown in the chart below:

			Months											
			1	2	3	4	5	6	7	8	9	10-12	13+	24 +
Phase 1: CONSTRUCTION STAGE	1a	Approval												
		Environmental Assessment, Site Establishment and field mapping												
		Demarcate mining area(beacons) / fence												
		Construction of offices, ablutions, storage areas												
		Employee appointments and training(health and safety/environmental)												
	1b	Locate and mark access routes to the site												
	1c	Relocation of machinery/ equipment												
Phase 2 : OPERATIONAL STAGE	2	Start of mining/ analysis activities / blasting of raw material												
		Positive results: continue with mining of the area												
		Negative results: rehabilitate area and apply for Closure Certificate												
		Continuous monitoring and evaluation of Environmental Impacts												
		Blasting of raw material 1-2 per month												
		Positive results: continue with mining as Permit states												
Phase 3 : DECOMMISSIONING STAGE	3	Continuous monitoring and evaluation of Environmental Impacts												
		Environmental Risk Assessments / Reapply for Mine Right												
		Start of Rehabilitation / Further mining activities												
		Completion Rehabilitation / Continue mining activities as per Mine Right												
		In all events, provide reporting to DMR as required by the DMR												

The information provided in this section will enable officials to determine how serious the impact of the mining operation will be.

DESCRIBE THE ENVIRONMENT THAT WILL BE AFFECTED BY THE PROPOSED MINING OPERATIONS UNDER THE FOLLOWING HEADINGS:

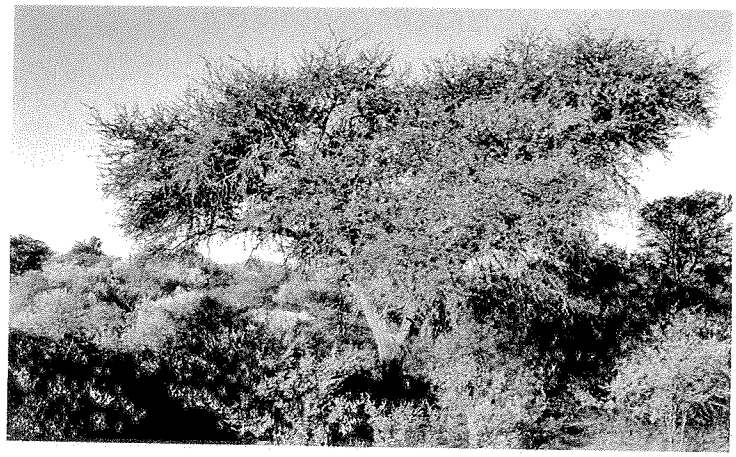


Figure 9.79 SVk 9 Kuruman Thornveld: *Acacia erioloba* trees and the overwhelmingly dominant shrub *Tarchonanthus camphoratus* immediately south of Kuruman at an altitude of 1 415 m.

C.1	**DESCRIPTION OF THE ENVIRONMENT LIKELY TO BE AFFECTED BY PROPOSED MINING OPERATIONS: (REGULATION 52(2)(2)) SEE MAP: ANNEXURE E**			
C1.1	What does the landscape surrounding the proposed operation look like? (Open veldt / valley / flowing landscape / steep slopes)			
	Flat rocky plains and some sloping hills with very well-developed, closed shrub layer and well-developed open tree stratum consisting of *Acacia erioloba*.			
C1.2	Describe the type of soil found on the surface of the site			
	Some Campbell Group dolomite and chert and mostly younger, superficial Kalahari Group sediments, with red wind-blown (0.3-1.2 m deep) sand. Locally, rocky pavements are formed in places.			
		VALUE	TICK	OFFICE USE
C1.3	How deep is the topsoil?	0 – 300mm		8
		300 – 600mm	√	4
		600mm +		2
C1.4	What *plants, trees and grasses* grow naturally in the area around the site?			

The entire study area consists of 1 vegetation group as defined by Mucina and Rutherford in their 2004 Vegetation Map of South Africa, Lesotho and Swaziland, being the Kuruman Thornveld (SVk9). This vegetation type has the following statistics regarding their classification, presence and ecosystem status: See photo above

Vegetation Name	Original Area (ha)	Remaining Area (ha)	% Remaining	% Protected	Target (%)	Ecosystem Status	Protection Level
Kuruman Thornveld	579 438	568 374	98	0	16	LT	Not Protected

Least threatened. Target 16%. None conserved in statutory conservation areas. Only 2% already transformed. Erosion is very low.

Source: Mucina, L & Rutherford, M (Editors) 2006. The vegetation of South Africa, Lesotho and Swaziland, Strelitzia 19, SANBI, Pretoria.

C1.5	What *animals* naturally occur in the area?

It is known that a variety of buck (Springbok, Steenbok etc) inhabit the Northern Cape area. On this specific terrain, no large mammals could be found, and the only inhabitants are a variety of rodents (meerkat, moles), reptiles (lizards and snakes) and birds With the small scale of the proposed activities, no significant impact is expected in this regard.

C1.6	Are there any *protected areas* (game parks/nature reserves, monuments, etc) close to the proposed operation?	Yes		
		No	√	0
	No national or provincial parks or reserves are located within 10 km of the proposed mining area.			
C1.7	What mineral are you going to prospect or mine for?	Manganese Ore and Iron Ore		
C1.8	Describe the type of equipment that will be used:			
Crushing and screening equipment will be used for the mining activity.				

C.2 HOW WILL THE PROPOSED OPERATION IMPACT ON THE *NATURAL* ENVIRONMENT? (REGULATION 52(2)(b)) SEE MAP ANNEXURE E

	ENVIRONMENTAL ELEMENT/IMPACTOR	VALUE	TICK	OFFICE USE
C2.1	What will the ultimate depth of the proposed mining operations be?	0 – 5m		2
		6 – 10m		4
		10 – 25m	√	8
		25m+		10
C2.2	How large will the *total* area of all excavations be?	**1 HA**		
C2.3	How large will each excavation be before it is filled up? **Not Applicable**	<10x10m		2
		<20x20m		4
		>20x20m		8
C2.4	How many *prospecting* boreholes or trenches will there be? **Not applicable**			
The mining method that will be employed is the bench method, with the use of drilling and explosives. Subsequent to drilling, usable rock is loaded by front-end loader and transported using articulated dump trucks to a mobile crusher. Secondary and tertiary crushing, washing and classification are carried out on ground level.				

Access to the site:

Access will be gained by use of the R325 and the existing farm tracks. Given the possible location and the extent of existing tracks on site, it will not be necessary for the applicant to develop any new roads but simply use "tracks" in previously disturbed areas. Given the absolute minimal traffic, these tracks will not require topsoil removal.

C2.5	Will employees prepare food on the site and collect firewood?	Yes		4
		No	√	0
C2.6	Will water be extracted from a river, stream, dam or pan for use by the proposed operation?	Yes		4
		No	√	2
C2.7	If so, what is the name of this water body?			
C2.8	If water will not be extracted from an open surface source, where will it be obtained?			
	Process water will be purchased from the land owner whilst potable water will be purchased from Postmasburg.			
C2.9	How much water per day will the *mineral processing* operation require? **Mineral processing will take place on site, tailings dams will be used, thus water used in processing will be**	1 000 – 10 000		2
		20 000 – 40 000		3
		40 000 – 60 000		5
		60 000 – 100000	√	8
		More		10

	recycled.			
C2.10	How far is the proposed operation from open water ---- (dam, river, pan, lake)?	0 – 15m	√	8
		16 – 30m		6
		31 – 60m		4
		More than 60m		2
C2.11	What is the estimated depth of the water table/borehole?	**Reported by Farmer as min 30m**		
C2.12	How much water per day will the proposed operation utilize for *employees?*			**100 lt**
C2.13	What toilet facilities will be made available to workers? **One mobile trailer type chemical toilet will be provided at the working site**	None		8
		Pit latrine		4
		Chemical toilet	√	2
C2.14	Would it be necessary to construct roads to access the proposed operations? **Refer para C2.4**	Yes		4
		No	√	0
C2.15	How long will these access road(s) be (from a public road to the proposed operations)	0 – 0,5km		4
		0,6 – 1,5 km		2
		1,6 – 3 km	√	4
C2.16	Will trees be uprooted to construct these access road(s)?	Yes		4
		No	√	0
C2.17	Will any foreign material, like crushed stone, limestone, or any material other than the naturally ---- occurring topsoil be placed on the road surface?	Yes		4
		No	√	0

C.3 TIME FACTOR

C3.1	For what time period will mining operations be conducted on this particular site?	0 – 6 months		2
		6 – 12 months		4
		12 – 18 months		6
		18 – 24 months	√	8
		>24 months		10

C.4 HOW WILL THE PROPOSED OPERATION IMPACT ON THE *SOCIA-ECONOMIC ENVIRONMENT* (REGULATION 52(2)(B))

	ELEMENT/IMPACTOR	VALUE	TICK	OFFICE USE
C4.1	How many people will be employed?	**16 persons**	√	
C4.2	How many men?	**Unknown**		
C4.3	How many women?	**Unknown**		
C4.4	Where will employees be obtained? (Own or employed from local communities?)	Own		2
		Local	√	4
C4.5	How many hours per day will employees work?	Sunrise to Sunset		4
		Less	√	2
		More		8
C4.6	Will operations be conducted within 1 kilometer from a residential area	Yes		6
		No	√	1
C4.7	How far will the proposed operation be from the	0 – 50m		8

	nearest fence / windmill / house / dam / built structure?	51 – 100m	√	4
		150m or more		2

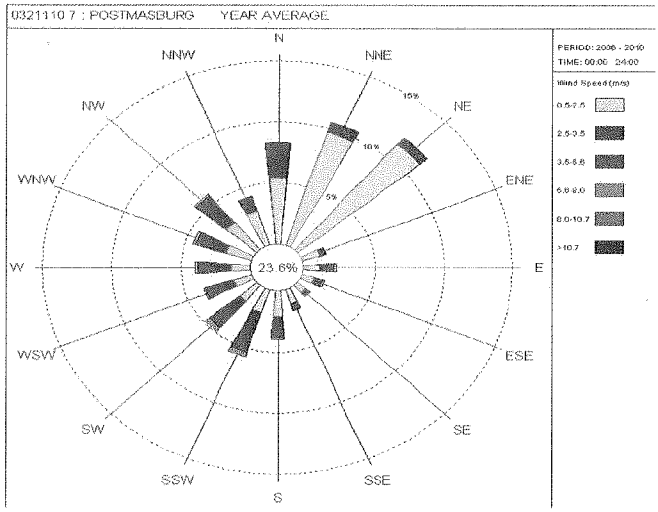
C.5 HOW WILL THE PROPOSED OPERATION IMPACT ON THE *CULTURAL HERITAGE OF* THE SURROUNDING ENVIRONMENT? REGULATION 52(2)(b)

	ELEMENT/IMPACTOR	VALUE	TICK	OFFICE USE
C5.1	Are there any graveyards or old houses or sites of historic significance within 1 kilometer of the area? **None known**	Yes		8
		No	√	0

C.6 SPECIFIC REGULATORY REQUIREMENTS

C.6.1 Air quality Management and Control (Regulation 64)

Describe how the operation will impact on the quality of the air, taking into account predominant wind direction and other affected parties in the downwind zone:



Source: Weather SA, 2010

The average windspeed over the past 5 years (2006-2010) ranges from 5 – 15 km p/h, with the predominant wind being North Easterly. With the limited dust generated by the mining activity, and the wind blowing in a North Easterly direction, the impact on Air quality will be less than minimal, and the surrounding areas will not be adversely affected.

Existing dust sources in the area:

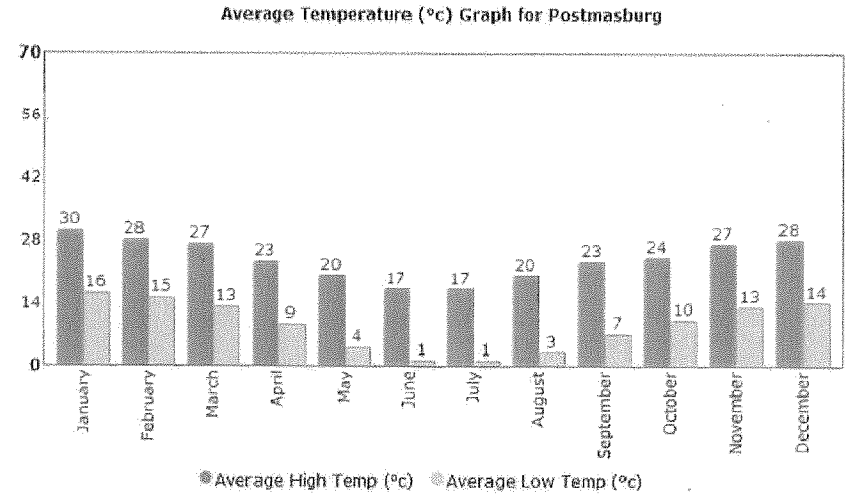
- Vehicle generated dust on unsurfaced road to the West
- Regionally generated dust from denuded areas

Impacts arising from the proposed operation with regard to dust generation (and the proposed attenuation measures) are as follows:

- The only (very minor) dust will be generated by vehicles using unsurfaced roadways.
- Dust must however be minimised in terms of employee health and masks must be available at all times and the applicants must comply with the prescriptions of the Mine Health & Safety Act.
- Water trucks will also be used to wet the roads periodically as deemed necessary.

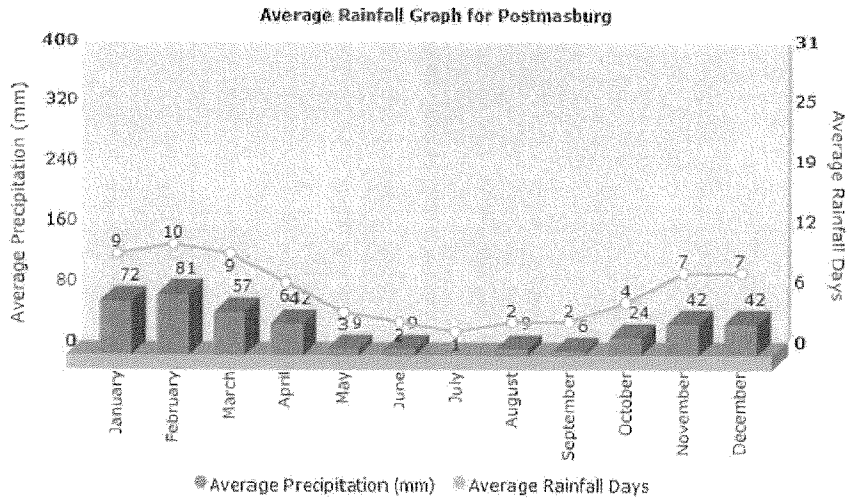
Average weather and Temperature of Postmasburg Area
See following Graphs.

Average High/Low Temperature for Postmasburg, South Africa



Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
30°c	28°c	27°c	23°c	20°c	17°c	17°c	20°c	23°c	24°c	27°c	28°c
16°c	15°c	13°c	9°c	4°c	1°c	1°c	3°c	7°c	10°c	13°c	14°c

Average Rainfall for Postmasburg, South Africa



The area has predominantly warm summers and cool to cold winters. Rainfall is however in the warm summer months and not during winter. The average High temperature for Postmasburg is 23°C and the average Low temperature is 8°C.

C6.2 Fire Prevention (Regulation 65)

Applicants for permits, rights or permissions involving **coal or bituminous rock** must:
Indicate on a plan where the coal or rock discard dump will be located. (If applied for a permit to mine or prospect for coal or bituminous rock, indicate the exact location of the discard dump on the plan and write "EMPlan C6.2" next to it) **Not applicable**

C6.3 Noise control (Regulation 66)

Indicate how much noise the operation will generate, and how it will impact on the surrounding environment, who might be influenced by noise from your operation.

The operation will result in low level noise generation but the only affected parties will be the employees at the site. Noise will be generated by the following activities:

- Vehicles accessing the site
- Crushing and screening machinery and equipment

The site is situated 4,5km from the closest residential area, and it is unforeseen that the noise generated by the mining activities will reach this settlement.

No attenuation measures will be necessary given:

- The extremely small scale of the operation and
- The isolation of the site.

Noise must however be minimized to limit disturbance in terms of employee health and HPD's must be available to employees at all times and the applicants must comply with the prescriptions of the Mine Health & Safety Act.

C6.4 Blasting, vibration and shock (Regulation 67)

Please indicate whether any blasting operation is / will be conducted.

Blasting

Blasting will be done to generate the raw product to be reworked. The frequency of the blasts will defer from 1 to 2 times per month. The amount of raw material produced from each blast will be ± 10 000m^3, meaning that the blast will be very small, thus only minimal vibration and noise will be generated. No disturbance of surrounding areas.

C6.5 Disposal of waste material (Regulation 69)

Indicate on your plan *where waste will be dumped in relation to the beneficiation works / washing pans. Also indicate below how domestic waste material will be managed.*
SEE MAP ANNEXURE D

Tailings Dams:

Construction of 2 tailings dams will take place. A process of "jigging" will be used to separate the soil and sediment from the Iron and Manganese ore. This means that water will be flushed over the mined particles to separate the ore from the waste material, and the water will be recycled through the tailings dams to be used again for the separation process.
The waste materials, which consist of soil and rock particles, are not hazardous in any aspect and will cause no detrimental effect on the environment. The map in Annexure D shows the location of the dams as well as the stockpile area for waste material and the location of the mined product. Regulation 73 of the MPRDA requires certain management criteria for tailings dams, we will adhere to and follow set specifications and requirements.

Plant Residue:
No plant residue.

Domestic Waste: (Section 24(2)(d) Item 1(f) of Listed Activities in NEMA)
Domestic Waste will consist of lunch wrappers, cool drink cans, cigarette packets and the like. The staff must be instructed to put all domestic waste into a bin to be provided on the drill site at which they are busy. Such waste is to be taken daily and disposed of at a Municipal Site. Waste volumes will be minor, and we do not forsee the volumes ever reaching that which is mentioned in the Listed Activity.

Waste Water
Waste water generated by the lavatory will be removed and disposed of in the subscribed manor of the Local Municipality. There will be no creation of affluent material or other waste water. The tailing dams will be isolated and made to specification of Regulation 73 of the MPRDA. The water used here will be recycled through the mining activities.

C6.6 Soil pollution and erosion control (Regulation 70)

6.6.1 Indicate how topsoil will be handled on the area
No Topsoil will be removed.

6.6.2 Describe how spills of oil, grease, diesel, acid or hydraulic fluid will be dealt with
(Section 24(2)(a)(d) Item 7and 1(c) of Listed Activities in NEMA)

Fuel receipt, storage and dispensing:
Fuel will be purchased from Postmasburg and transported by small bowser towed behind a bakkie on a daily basis to the drill sites. Once at the recipient machine, the diesel will be dispensed via pump through funnels to the drilling machine and water pump at the site.

Vehicle / drill / pump leaks:
Drip trays will collect any identified dripping of used oil which will then be collected in a drum for transport to an Oilkol facility for recycling.

On-site repairs:
No workshop will be required and all scheduled mobile plant servicing will take place in terms of the contractor's own schedules (but not on site).

Emergency repairs on site:
In the event of a breakdown repair being required in the field, the staff should be trained in use of drip trays and suitable funnels (not to drain oil into the sand) for filling and draining of lubricants and the staff shall be provided with such equipment to prevent oil contamination.

In addition:

- Used/replaced filters, hoses, belts, cloths, etc. are to be placed in a bin for return to Postmasburg and eventual disposal at a suitable facility. Used filters are not to be buried at the site of repair (nor discarded in the excavation to be backfilled).
- In the event of soil contamination, the soils contaminated soils are to be removed and placed in black bags for disposal at a suitable facility.

All staff involved in mobile plant operation and maintenance is to be made aware of these oil and lubricant procedures. Staff will require instruction in the:

- Deleterious effects of oil / fuel on the environment
- Handling of oil leaks onto soil

General provisions

- All operators are to check their equipment for leaks and report such leaks on a daily basis.
- No used oils are to be used as dust suppressants on maneuvering areas. Used oils collected in the drums are to be collected by oil recycling company (such as Oilkol)
- All staff to be instructed to report oil spills immediately and be trained in fire fighting.

6.6.3 *Briefly describe the storage facilities available for the above fluids:*

None required on site. Any fuel / oil required will be transported from Postmasburg commercial supply as required.

C6.7 If significant impacts on any element of the environment mentioned in Section C1 to C6.6 above have been identified, summarise them all here: (Regulation 52(2)(c) -	**C6.8** How will the negative impacts on the environment be mitigated or managed (as described in C6.11 (7?) to the left? (Regulation 57 (2)(c))
No SIGNIFICANT impacts were identified – noise prevention and level of dust production will be monitored. Blasting activities will be minimal and there will be no impact on the surrounding areas.	

C.7 Financial provision: (Regulation 54)

The amount that is necessary for the rehabilitation of damage caused by the operation, both sudden closure during the normal operation of the project and at final, planned closure will be estimated by the regional office of the DMR, based on the information supplied in this document. This amount will reflect how much will it cost the Department to rehabilitate the area disturbed in case of liquidation or abscondence.

The table below shows the calculation used in deriving the rehabilitation fund guarantee.

REHABILITATION FUND REQUIREMENTS			
Roads & Tracks			
Assume 2km tracks to be rehabilitated			
Raking 2km @ 3m wide	*6,000 m² @*	*R 2.40 /m²*	*R14 000*
SUB-TOTAL			***R14 000***
Plus Contingency Fees at 5%			*R 0,600*
Plus Management Fee at 10%			*R 1,400*
Plus V.A.T. @ 14%			*R 2,240*
GRAND TOTAL			***R18 240***

- Assume a team of 10 workers can rake 50m in 1 hour and they are each paid at a rate of R30/hr
  Thus it costs R150 to cover 25m or 62.5m²
  Therefore 1m² = R150/62.5m² or R2.40/m²

Enter the amount of financial provision required here: R20 000

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

Cash deposit	
Bank guarantee	√
Trust Fund	
Other: (specify) (Note: other methods must be approved by the Minister)	

C8.1 Monitoring and performance assessment

Regulation 55 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) clearly describes the process and procedure as well as requirements for monitoring and auditing of the performance of this plan to adequately address environmental impacts from the operation. The following information must be provided:

C8.2 Please describe how the adequacy of this programme will be assessed and how any inadequacies will be addressed. (Regulations 55(a) and 52(2)(e))
The applicant will ensure the following activities / functions take place to ensure implementation of this EMPlan's prescriptions: • **Copies of the EMPlan will be made available to the site manager. At least one copy must be available at short notice.** • **The applicant will ensure that the site manager is fully au fait with the prescriptions of this EMPlan.** • **Environmental Performance Assessments will be done by either the site manager or duly appointed consultant every 2 years of operations.** • **Environmental Risk Report as describe in Regulation 60 of the MPRDA Regu;lations will be done on a regular basis by the site manager. Find attached in ANNEXURE F an example of the sheet to be used by the site manager. This information will make it possible to identify and rectify any environmental issue as soon as it appears.** • **The site manager will be responsible for ensuring that labour / operators are aware of their environmental responsibilities related to their activities.** • **The site manager will continuously (whilst on site) conduct monitoring of activities taking place on site. He/she must ensure that all activities comply with the prescriptions of the EMPlan.** • **Any shortcomings must be remedied immediately and if required the site manager must explain the required actions and reasons for them to the applicable person.**

C.9 Closure and Environmental objectives: (Regulation 52(2)(f))

Note: The proposed end-state of your area must be consulted with interested and affected parties in terms of Regulation 52(2)(g). Details of the acceptability of the end-state must appear in the section C11 below. Clearly state the intended end use for the area mined after closing of operations.

After mining the area, rehabilitation will ensure that the area be reverted to the state it was previously found. The current site has a grazing rating.

C9.1 Describe, in brief terms, what the environment will look like after a closure certificate has been obtained.

Should closure be applied for after mining, then the site will be returned to its grazing rating.

C.10 CLOSURE

Regulations 56 to 62 outline the entire process of mine closure, and these are copied in Section F of this document, both as a guide to applicants on the process to be followed for mine closure, and also to address the legal responsibility of the applicant with regard to the proper closure of his operation. In terms of Section 37 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002), the holder of a permit is liable for any and all environmental damage or degradation emanating from his/her operation, until a closure certificate is issued in terms of Section 43 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002).

C.11 PUBLIC PARTICIPATION: (Regulation 52(2)(9))

In terms of the above regulation consultation with interested and affected person or persons must take place prior to the approval of the environmental management plan. This regulation is quoted below for ease of reference.

"a record of the public participation undertaken and the results thereof"

C11.1 Any comments lodged by an interested and affected person or persons in terms of section 10(1)(b) of the Act, must be in writing and addressed to the relevant Regional Manager.

C11.2 Any objections lodged by an interested and affected person or persons against the application for a right or permit in terms of the Act, must set out clearly and concisely the facts upon which it is based and must be addressed to the relevant Regional Manager in writing.

C11.3 The Regional Manager must make known by way of publication in a local newspaper or at the office of the Regional Manager, that an application for a right or permit in terms of the Act has been received.

In the table below, please list the names of people or organizations likely to be influenced by the proposed operations (these might include neighbours, other water users, etc.). Kindly indicate how these people were consulted (e.g. by letter or by phone) *and provide proof* of that consultation. What were the main concerns / objections raised by the interested and affected parties to the proposed operation?

SEE ANNEXURE G FOR CONSULTATIONS AND COMMENTS

Name of Interested/ affected party	Contact details: Address & Telephone number	How did Consultation take Place?	What were his/her main concerns about the operation?

SECTION D

D. SCORING OF EIA – FOR OFFICIAL USE ONLY

Instructions for officials:
In this table, complete the totals of each section indicated below and do the calculation. ***Remember to first add all the values of sections C1,2,4 and 5 and then multiply it by the time factor in Section C3.*** Note that the value for the time factor element of the impact rating appears in Section C3. This is the total amount of time that the operation is expected to impact on the environment and all other factors are MULTIPLIED by this value. Compare the score (impact rating) with the table below to help you make a decision on the total impact of the operation and also on the sufficiency of this programme to address all expected impacts from the operation on the environment.

D1.1 CALCULATION TABLE

Section C 1 Total	+	Section C 2 Total	+	Section C 4 Total	+	Section C 5 Total	=	Subtotal	X	Time factor Section C 3	=	Score (Impact Rating)
4	+	40	+	11	+	0	=	55	X	8	=	440

D1.2 IMPACT RATING SCALE

SCORE ATTAINED	IMPACT RATING	REMARKS
46 – 300	Low	No additional objectives needed – this programme is sufficient.
301 – 800	Medium	Some specific additional objectives to address focal areas of concern may be set.
801 – 1160	High	Major revision of Environmental Management Plan for adequacy and full revision of objectives.

Additional Objectives:

Based on the information provided by the applicant and the regional office's assessment thereof, combined with the interpretation of the scoring and impact rating attained for the particular operation above, the Regional Manager of the regional office of the DMR may now determine additional objectives / requirements for the mine owner/manager to comply with. *These measures will be specific and will address specific issues of concern that are not adequately covered in the standard version of this document.* These requirements are not listed here, but are specified under Section G of this document, so as to form part of the legally binding part of this Environmental Management Plan.

SECTION E

E. UNDERTAKING:

I, J.M. KALO, the applicant for a mining permit hereby declare that the above information is true, complete and correct. I undertake to implement the measures as described in Sections F and G hereof. I understand that this undertaking is legally binding and that failure to give effect hereto will render me liable for prosecution in terms of Section 98(b) and 99(1)(g) of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002). I am also aware that the Regional Manager may, at any time but after consultation with me, make such changes to this plan as he/she may deem necessary.

Signed on this 2nd day of JUNE 2011 at BELLVILLE (Place)

.....

Signature of applicant

F. ENVIRONMENTAL MANAGEMENT PLAN:

INTRODUCTION

This Environmental Management Plan contains further guidelines, operating procedures and rehabilitation/ pollution control requirements which will be binding on the holder of the mining permit after approval of the Environmental Management Plan. The possible impactors on the environment was identified and quantified in section C1 – C6, and monitoring measures where set out in section C8 of this document. Possible control measures as well as rehabilitation steps were also set out. It is essential that this portion be carefully studied, understood, implemented and adhered to at all times.

F1 GENERAL REQUIREMENTS

F1.1 MAPPING AND SETTING OUT

F1.1.1 LAYOUT PLAN

- A copy of the layout plan as provided for in Regulation 2.2 must be available at the prospecting/mining site for scrutiny when required.
- The plan must be updated on a regular basis with regard to the actual progress of the establishment of surface infrastructure, mining operations and rehabilitation (a copy of the updated plan shall be forwarded to the Regional Manager on a regular basis).
- A final layout plan must be submitted at closure of the mine or when operations have ceased.

NOTE: Regulation 2.2 of the regulations promulgated in terms of the Act requires:

"An application contemplated in sub-regulation (1) must be accompanied by a plan that must contain –

(a) The co-ordinates of the land or area applied for;
(b) The north point;
(c) The scale to which the plan has been drawn;
(d) The name, number and location of the land or area comprising the subject of the application concerned;
(e) In relation to farm boundaries and surveyed points-
  (a) The size and shape of the proposed area;
  (b) The boundaries of the land or area comprising the subject of the application concerned;
  (c) The layout of the proposed reconnaissance, prospecting, exploration, mining or production operations;
  (d) Survace structures and servitudes;
  (e) The topography of the land or area;"

F1.1.2 DEMARCATING THE MINING/PROSPECTING AREA

- The mining/prospecting area must be clearly demarcated by means of beacons at its corners, and along its boundaries if there is no visibility between the corner beacons.
- Permanent beacons as indicated on the layout plan or as prescribed by the Regional Manager must be firmly erected and maintained in their correct position throughout the life of the operation.
- Mining/Prospecting and resultant operations shall only take place within this demarcated area.

F1.1.3 DEMARCATING THE RIVER CHANNEL AND RIVERINE ENVIRONMENT

The following is applicable if operations are conducted within the riverine environment (See F3.2):

- Beacons as indicated on the layout plan or as prescribed by the Regional Manager must be erected and maintained in their correct position throughout the life of the operation.
- These beacons must be of a permanent nature during the operations and must not be easily removable, especially those in a river channel. The beacons must, however, be removed at the end of the operations.
- The mining of and prospecting for any mineral shall only take place within this demarcated mining area.
- If riverine vegetation is present in the form of reeds or wetland vegetation, the presence of these areas must be entered in Part C 1.45 of the EMPlan and indicated on the layout plan.
- The holder of the mining permit/prospecting right will also be required to permanently demarcate the areas as specified in F1.1.2.

F1.2 RESTRICTIONS ON MINING/PROSPECTING

- On assessment of the application, the Regional Manager may prohibit the conducting of mining or prospecting operations in vegetated areas or over portions of these areas.
- In the case of areas that are excluded from mining or prospecting, no operations shall be conducted within 5m of these areas.

F1.3 RESPONSIBILITY

- The environment affected by the mining/prospecting operations shall be rehabilitated by the holder, as far as is practicable, to its natural state or to a predetermined and agreed to standard or land use which conforms with the concept of sustainable development. The affected environment shall be maintained in a stable condition that will not be detrimental to the safety and health of humans and animals and that will not pollute the environment or lead to the degradation thereof.
- It is the responsibility of the holder of the mining permit/prospecting right to ensure that the manager on the site and the employees are capable of complying with all the statutory requirements which must be met in order to mine, which includes the implementation of this EMP.
- If operations are to be conducted in an area that has already been disturbed, the holder must reach specific agreement with the Regional Manager concerning the responsibilities imposed upon himself/herself pertaining to the rehabilitation of the area and the pollution control measures to be implemented.

F2 INFRASTRUCTURAL REQUIREMENTS

F2.1 TOPSOIL

- Topsoil shall be removed from all areas where physical disturbance of the surface will occur.
- All available topsoil shall be removed after consultation with the Regional Manager prior to the commencement of any operations.
- The topsoil removed, shall be stored in a bund wall on the high ground side of the mining/ prospecting area outside the 1:50 flood level within the boundaries of the mining area/prospecting.

- Topsoil shall be kept separate from overburden and shall not be used for building or maintenance of access roads.
- The topsoil stored in the bund wall shall be adequately protected from being blown away or being eroded.

F2.2 ACCESS TO THE SITE

F2.2.1 Establishing access roads on the site

- The access road to the mining/prospecting area and the camp-site/site office must be established in consultation with the landowner/tenant and existing roads shall be used as far as practicable.
- Should a portion of the access road be newly constructed the following must be adhered to:

    - The route shall be selected that a minimum number of bushes or trees are felled and existing fence lines shall be followed as far as possible.
    - Water courses and steep gradients shall be avoided as far as is practicable.
    - Adequate drainage and erosion protection in the form of cut-off berms or trenches shall be provided where necessary.

- If imported material is used in the construction or upgrading of the access road this must be listed in C2.17.
- The erection of gates in fence lines and the open or closed status of gates in new and existing positions shall be clarified in consultation with the landowner/tenant and maintained throughout the operational period.
- No other routes will be used by vehicles or personnel for the purpose of gaining access to the site.

NOTE: The design, construction and location of access to provincial roads must be in accordance with the requirements laid down by the Provincial or controlling authority.

F2.2.2 Maintenance of access roads

- In the case of dual or multiple use of access roads by other users, arrangements for multiple responsibility must be made with the other users. If not, the maintenance of access roads will be the responsibility of the holder of the mining permit/prospecting right.
- Newly constructed access roads shall be adequately maintained so as to minimise dust, erosion or undue surface damage.

F2.2.3 Dust control on the access and haul roads

- The liberation of dust into the surrounding environment shall be effectively controlled by the use of, inter alia, water spraying and/or other dust-allaying agents. The speed of haul trucks and other vehicles must be strictly controlled to avoid dangerous conditions, excessive dust or excessive deterioration of the road being used.

F2.2.4 Rehabilitation of access roads

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

F2.3 OFFICE/CAMP SITES

F2.3.1 Establishing office / camp sites

- Office and camp sites shall be established, as far as is practicable, outside the flood plain, above the 1 in 50 flood level mark within the boundaries of the mining/prospecting area.
- The area chosen for these purposes shall be the minimum reasonably required and which will involve the least disturbance to vegetation. Topsoil shall be handled as described in F2.1 above.
- No camp or office site shall be located closer than 100 metres from a stream, river, spring, dam or pan.
- No trees or shrubs will be felled or damaged for the purpose of obtaining firewood, unless agreed to by the landowner/tenant.
- Fires will only be allowed in facilities or equipment specially constructed for this purpose. If required by applicable legislation, a fire-break shall be cleared around the perimeter of the camp and office sites.
- Lighting and noise disturbance or any other form of disturbance that may have an effect on the landowner/tenant/persons lawfully living in the vicinity shall be kept to a minimum.

F2.3.2 Toilet facilities, waste water and refuse disposal

- As a minimum requirement, the holder of a mining permit/prospecting right shall, at least, provide pit latrines for employees and proper hygiene measures shall be established.
- Chemical toilet facilities or other approved toilet facilities such as a septic drain shall preferably be used and sited on the camp site in such a way that they do not cause water or other pollution.
- The use of existing facilities must take place in consultation with the landowner/tenant.
- In cases where facilities are linked to existing sewerage structures, all necessary regulatory requirements concerning construction and maintenance should be adhered to.
- All effluent water from the camp washing facility shall be disposed of in a properly constructed French drain, suitable as far as possible, but not less than 200 metres, from any stream, river, pan, dam or borehole.

- Only domestic type was water shall be allowed to enter this drain and any effluents containing oil, grease or other industrial substances must be collected in a suitable receptacle and removed from the site, either for resale or for appropriate disposal at a recognised facility.
- Spills should be cleaned up immediately to the satisfaction of the Regional Manager by removing the spillage together with the polluted soil and by disposing of them at a recognised facility.
- Non-biodegradable refuse such as glass bottles, plastic bags, metal scrap, etc., shall be stored in a container at a collecting point and collected on a regular basis and disposed of at a recognised disposal facility. Specific precautions shall be taken to prevent refuse from being dumped on or in the vicinity of the camp site.
- Biodegradable refuse generated from the office/camp site, processing areas vehicle yard, storage area or any other area shall either be handled as indicated above or be buried in a pit excavated for that purpose and covered with layers of soil, incorporating a final 0,5 metre thick layer of topsoil (where practicable). Provision should be made for future subsidence of the covering.

F2.3.3 Rehabilitation of the office/camp site

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

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

     1) *which may not be demolished in terms of any other law;*
     2) *which has been identified in writing by the Minister for purposes of this section;*
        or
     3) *which is to be retained in terms of an agreement between the holder and the owner or occupier of the land, which agreement has been approved by the Minister in writing.*

  2) *The provision of subsection (1) does not apply to bona fide mining equipment which may be removed.*

- Where office/camp sites have been rendered devoid of vegetation/grass or where soils have been compacted owing to traffic, the surface shall be scarified or ripped.
- Areas containing French drains shall be compacted and covered with a final layer of topsoil to a height of 10cm above the surrounding ground surface.
- The site shall be seeded with a vegetation seed mix adapted to reflect the local indigenous flora.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analysed and any deleterious effects on the soil arising from the mining/prospecting operation be corrected and the area be seeded with a vegetation seed mix to his or her specification.
- Photographs of the camp and office sites, before and during the mining / prospecting operation and after rehabilitation, shall be taken at selected fixed points and kept on record for the information of the Regional Manager.

SEE ANNEXURE B FOR PHOTOGRAPHS OF PROPOSED MINING AREA

F2.4 VEHICLE MAINTENANCE YARD AND SECURED STORAGE AREAS

F2.4.1 Establishing the vehicle maintenance yard and secured storage areas

- The vehicle maintenance yard and secured storage area will be established as far as is practicable, outside the flood plain, above the 1 in 50 flood level mark within the boundaries of the mining/prospecting area.
- The area chosen for these purposes shall be the minimum reasonably required and involve the least disturbance to tree and plant life. Topsoil shall be handled as described in F2.1 above.
- The storage area shall be securely fenced and all hazardous substances and stocks such as diesel, oils, detergents, etc., shall be stored therein. Drip pans, a thin concrete slab or a facility with PVC lining, shall be installed in such storage areas with a view to prevent soil and water pollution.
- The location of both the vehicle maintenance yard and the storage areas are to be indicated on the layout plan.
- No vehicle may be extensively repaired in any place other than in the maintenance yard.

F2.4.2 Maintenance of vehicles and equipment

- The maintenance of vehicles and equipment used for any purpose during the mining/prospecting operation will take place only in the maintenance yard area.
- Equipment used in the mining/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 mining/prospecting area must not constitute a pollution hazard in respect of the above substances. The Regional Manager shall order such equipment to be repaired or withdrawn from use if he or she considers the equipment or machinery to be polluting and irreparable.

F2.4.3 Waste disposal

- Suitable covered receptacles shall be available at all times and conveniently placed for the disposal of waste.
- All used oils, grease or hydraulic fluids shall be placed therein and these receptacles will be removed from the site on a regular basis for disposal at a registered or licensed disposal facility.
- All spills should be cleaned up immediately to the satisfaction of the Regional Manager by removing the spillage together with the polluted soil and by disposing of them at a recognised facility.

F2.4.4 Rehabilitation of vehicle maintenance yard and secured storages areas

- On completion of mining/prospecting operations, the above areas shall be cleared of any contaminated soil, which must be dumped as referred to in section F2.4.3 above.
- All buildings, structures or objects on the vehicle maintenance yard and secured storage areas shall be dealt with in accordance with section 44 of the Mineral and Petroleum Resources Development Act. 2002.
- The surface shall then be ripped or ploughed to a depth of at least 300mm and the topsoil previously stored adjacent the site, shall be spread evenly to its original depth over the whole area. The area shall then be fertilised if necessary (based on a soil analysis).
- The site shall be seeded with a vegetation seed mix adapted to reflect the local indigenous flora.

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

F3 OPERATING PROCEDURES IN THE MINING AREA

F3.1 Limitations on mining/prospecting

- The mining of or prospecting for precious stones shall take place only within the approved demarcated mining or prospecting area.
- Mining/prospecting may be limited to the areas indicated by the Regional Manager on assessment of the application.
- The holder of the mining permit/prospecting right shall ensure that operations take place only in the demarcated areas as described in section F1.1.2 above.
- Operations will not be conducted closer than one and a half times the height of the bank from the edge of the river channel and in such manner that the stability of the bank of the river is affected.
- Precautions shall also be taken to ensure that the bank of the river is adequately protected from scouring or erosion. Damage to the bank of the river caused by the operations, shall be rehabilitated to a condition acceptable to the Regional Manager at the expense of the holder.
- Restrictions on the disturbance of riverine vegetation in the form of reeds or wetland vegetation must be adhered to. The presence of these areas must be entered in Part of the programme and indicated on the layout plan.

F3.2 Mining/prospecting operations within the riverine environment

NOTE: The Department of Water Affairs and Forestry may impose additional conditions which must be attached to this EMP. In this regard, please see the Best Practice Guideline for small scale mining developed by DWAF (BPG 2.1)

(available from http://www.dwaf.gov.za)

- The mining of or prospecting for precious stones in the river or the banks of the river will be undertaken only after the Regional Manager has consulted with the Department of Water Affairs and Forestry.
- The canalisation of the river will not be undertaken unless the necessary permission has been obtained from the Department of Water Affairs and Forestry. Over and above the conditions imposed by the said Department, which conditions shall form part of this EMPlan, the following will also apply:

    - ❖ The canalisation of the flow of the river over different parts of the river bed shall be constructed in such a manner that the following are adhered to at all times:

        - The flow of the river may not be impeded in any way and damming upstream may not occur.
        - The canalisation of the flow may not result in scouring or erosion of the river-bank.
        - Well points or extraction pumps in use by other riparian users may not be interfered with and canalisation may not impede the extraction of water at these points.

- Access to the riverbed for the purpose of conducting excavations in the river-bed, shall be through the use of only one access at a time. The location of the access to the river channel across the river-bank shall be at a point of the river-bank where the least excavation and damage to vegetation will occur and shall not be wider than is reasonably required. The position of the river access together with all planned future access points, must be indicated on the layout plan.

F3.2.1 Rehabilitation of access to river-bed

- When rehabilitating the access point, the original profile of the river-bank will be re-established by backfilling the access point with the original material excavated or other suitable material.
- The topsoil shall then be returned over the whole area to its original depth and if necessary fertilised and the vegetation allowed to grow.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analysed and any deleterious effects on the soil arising from the mining/prospecting operation be corrected and the area be seeded with a seed mix to his or her specification.
- In the event of damage from an occurrence where high flood water scour and erode access points in the process of rehabilitation over the river-bank or an access point currently in use, repair or such damage shall be the sole responsibility of the holder of the mining permit or prospecting right.
- Repair of the river-bank to reinstate its original profile to the satisfaction of the Regional Manager must take place immediately after such event has occurred and the river has subsided to a point where repairs can be undertaken.
- Final acceptance of rehabilitated river access points will be awarded only after the vegetation has re-established to a point where the Regional Manager is satisfied that the river-bank is stable and that the measures installed are of durable nature and able to withstand high river-flow conditions.

F3.2.2 Rehabilitation of mining/prospecting area in the bed of the river

- The goal of rehabilitation with respect to the area where mining/prospecting has taken place in the river-bed is to leave the area level and even, and in a natural state containing no foreign debris or other materials and to ensure the hydrological integrity of the river by not attenuating or diverting any of the natural flow.
- All scrap and other foreign materials will be removed from the bed of the river and disposed of as in the case of other refuse (see section F2.3.2 above), whether these accrue directly from the mining/prospecting operation or are washed on to the site from upstream.
- Removal of these materials shall be done on a continuous basis and not only at the start of rehabilitation.
- Where reeds or other riverine vegetation have been removed from areas, these shall be re-established systematically in the approximate areas where they occurred before mining/prospecting.
- An effective control programme for the eradication of invader species and other exotic plants, shall be instituted on a regular basis over the entire mining/prospecting area under the control of the holder of the mining permit/prospecting right, both during mining/prospecting and at the stage of final rehabilitation.

2. THE WATER USE LICENSE

The National Water Act, (Act 36 of 1998), is based on the principles of sustainability, efficiency and equity, meaning that the protection of water resources must be balanced with their development and use.

In addition to being issued with a prospecting right or mining permit a small-scale miner may also need to get a **water use license** for the proposed water uses that will take place, except in certain cases.

NOTE: The Department of Water Affairs and Forestry (DWAF) developed specific Best Practice Guideline for small scale mining that relates to stormwater management, erosion and sediment control and waste management. Copies of these guidelines can be obtained from the regional office of DME or DWAF.

Applications for a water use license must be made in good time, such that approval can be granted before a water use activity can begin. The appropriate license forms for each kind of expected water use should be completed together with supporting documentation. The main supporting document required is a technical report. To make the technical report easier, you can refer to sections in this EMPlan, as most of what the technical report requires has already been done in the EMPlan. If you refer to the EMPlan it must be attached to the technical report.

F3.3 EXCAVATIONS

F3.3.1 Establishing the excavation areas

- Whenever any excavation is undertaken for the purpose of locating and/or extracting ore bodies of all types of minerals, including precious stone-bearing gravels, the following operating procedures shall be adhered to:

  - ❖ Topsoil shall, in all cases (except when excavations are made in the river-bed), be handled as described in F2.1 above.
  - ❖ Excavations shall take place only within the approved demarcated mining/prospecting area.
  - ❖ Overburden rocks and coarse material shall be placed concurrently in the excavations or stored adjacent to the excavation, if practicable, to be used as backfill material once the ore or gravel has been excavated.
  - ❖ Trenches shall be backfilled immediately if no ore or precious stone-bearing gravel can be located.

F3.3.2 Rehabilitation of excavation areas

The following operating procedures shall be adhered to:

- The excavated area must serve as a final depositing area for the placement of tailings during processing.
- Rocks and coarse material removed from the excavation must be dumped into the excavation simultaneously with the tailings.
- Waste, as described in paragraph F2.3.2 above will not be permitted to be deposited in the excavations.
- Once excavations have been refilled with overburden, rocks and coarse natural materials and profiled with acceptable contours and erosion control measures, the topsoil previously stored, shall be returned to its original depth over the area.
- The area shall be fertilised if necessary to allow vegetation to establish rapidly. The site shall be seeded with a local or adapted indigenous seed mix in order to propagate the locally or regionally occurring flora.

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

F3.4 PROCESSING AREAS AND WASTE PILES (DUMPS)

F3.4.1 Establishing processing areas and waste piles

- Processing areas and waste piles shall not be established within 100 metres of the edge of any river channel or other water bodies.
- Processing areas should be established, as far as practicable, near the edge of excavations to allow the waste, gravel and coarse material to be processed therein.
- The areas chosen for this purpose shall be the minimum reasonably required and involve the least disturbance to vegetation.
- Prior to development of these areas, the topsoil shall be removed and stored as described in paragraph F2.1 above.
- The location and dimensions of the areas are to be indicated on the layout plan and once established, the processing of ore containing precious stones shall be confined to these areas and no stockpiling or processing will be permitted on areas not correctly prepared.
- Tailings from the extraction process must be so treated and/or deposited that it will in no way prevent or delay the rehabilitation process.

F3.4.2 Rehabilitation of processing areas

- Coarse natural material used for the construction of ramps must be removed and dumped into the excavations.
- On completion of mining/prospecting operations, the surface of the processing areas especially if compacted due to hauling and dumping operations, shall be scarified to a depth of at least 300mm and graded to an even surface condition and the previously stored topsoil will be returned to its original depth over the area.
- Prior to replacing the topsoil the material that was removed from the processing area will be replaced in the same order as it originally occurred.
- The area shall then be fertilised if necessary to allow vegetation to establish rapidly. The site shall be seeded with a local adapted indigenous seed mix.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analysed and any deleterious effects on the soil arising from the mining/prospecting operation be corrected and the area be seeded with a seed mix to his or her specification.

F3.5 TAILING DAM(S) (SLIMES DAM)

The permission of the Regional Manager must be obtained should a tailings dam be constructed for the purpose of handling the tailings of the mining/prospecting operations. The construction, care and maintenance of tailings dams have been regulated and the relevant regulation is copied herewith, both for your information and as a guideline to the commissioning, management, operation, closing and aftercare of a tailings deposition facility.

Regulation 73 promulgated under the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) requires the following:

Management of residue stockpiles and deposits

56. ***(1)*** *The assessment of impacts relating to the management of residue stockpiles and deposits, where appropriate, must form part of the environmental impact assessment report and environmental management programme or the environmental management plan.*

(2) *Residue stockpiles and deposits must be characterised in terms of its-*

(i) *physical characteristics, which may include –*

(aa) *the size distribution of the principal constituents;*
(bb) *the permeability of the compacted material;*
(cc) *void ratios of the compacted material;*
(dd) *the consolidation or settling characteristics of the material under its own weight and that of Any overburden;*
(ee) *the strength of compacted material;*
(ff) *the specific gravity of the solid constituents; and*
(gg) *the water content of the material at the time of deposition, after compaction, and at other Phases in the life of the deposit.*

(ii) *chemical characteristics, which may include –*

(aa) *the toxicity;*
(bb) *the propensity to oxidize and/or decompose;*
(cc) *the propensity to undergo spontaneous combustion;*
(dd) *the pH and chemical composition of the water separated from the solids;*
(ee) *stability and reactivity and the rate thereof; and*
(ff) *neutralising potential.*

(iii) *mineral content, which include the specific gravity of the residue particles and its impact on partical segregation and consolidation;*

(3) *Classification of residue stockpiles and deposits*

(a) *All residue stockpiles and deposits must be classified into one or a combination of the following categories-*

(i) *The safety classification to differentiate between residue stockpiles and deposits of high, medium and low hazard on the basis of their potential to cause harm to life or property; and*
(ii) *The environmental classification to differentiate between residue stockpiles and deposits with:*

(aa) *a potentially significant impact on the environment due to its spatial extent, duration and intensity of potential impacts; or*
(bb) *no potentially significant impact on the environment.*

(b) *All mine residue stockpiles and deposits must be classified by a suitably qualified person(s).*

(c) *The classification of residue stockpiles and deposits shall determine the –*

(i) *level of investigation and assessment required;*
(ii) *requirements for design, construction, operation, decommissioning, closure and post closure maintenance; and*
(iii) *Qualifications and expertise required of persons undertaking the investigations, assessments, design, construction thereof.*

(d) *The safety classification of residue stockpiles and deposits shall be based on the following criteria:*

Number of residents in zone of influence	*Number of workers in zone of influence*	*Value of third party propert in zone of influence*	*Depth to underground mine workings*	*Classification*
0	*< 10*	*0 – R2 m*	*>200m*	*Low hazard*
1 – 10	*11 – 100*	*R2m – R20m*	*50m – 200m*	*Medium hazard*
> 10	*> 100*	*> R20 m*	*< 50m*	*High hazard*

(e) A risk analysis must be carried out and documented on all high hazard residue stockpiles and Deposits.

(f) The environment classification of residue stockpile and deposits must be undertaken on the basis of-
- *(i) The characteristics of the residue;*
- *(ii) The location and dimensions of the deposit (height, surface area);*
- *(iii) The importance and vulnerability of the environmental components that are at risk; and*
- *(iv) The spatial extent, duration and intensity of potential impacts.*

(g) An assessment of the environmental impacts shall be done on all environmental components which are significantly affected.

(h) The assessment of impacts and analyses of risks shall form part of the environmental assessment and management programme.

(4) Site selection and investigation:

(a) The process of investigation and selection of a site must entail –
- *(i) the identification of a sufficient number of possible candidate sites to ensure adequate consideration of alternative sites;*
- *(ii) qualitative evaluation and ranking of all alternative sites;*
- *(iii) qualitative investigation of the top ranking sites to review the ranking done in (ii);*
- *(iv) a feasibility study to be carried out on the highest ranking site(s), involving -*
  - *(aa) a preliminary safety classification;*
  - *(bb) an environmental classification;*
  - *(cc) geotechnical investigations; and*
  - *(dd) groundwater investigations.*

(b) The geotechnical investigations may include-
- *(i) the characterization of the soil profile over the entire area to be covered by the residue facility and associated infrastructure to define the spatial extent and depth of the different soil horizons;*
- *(ii) the characterization of the relevant engineering properties of foundations soils and the assessment of strength and drainage characteristics.*

(c) The groundwater investigations may include-
- *(i) the potential rate of seepage from the residue facility;*
- *(ii) the quality of such seepage;*
- *(iii) the geohydrological properties of the strata within the zone that could potentially be affected by the quality of seepage;*
- *(iv) the vulnerability and existing potential use of the groundwater resource within the zone that could potentially be affected by the residue facility.*

(d) From these investigations, a preferred site must be identified.

(e) Further investigation on the preferred site, shall include -
- *(i) land use;*
- *(ii) topography and surface drainage;*
- *(iii) infrastructure and man-made features;*
- *(iv) climate;*
- *(v) flora and fauna;*
- *(vi) soils;*
- *(vii) ground water morphology, flow, quality and usage; and*
- *(viii) surface water*

(f) *The investigations, laboratory test work, interpretation of data and recommendations for the identification and selection of the most appropriate and suitable site for the disposal of all residue that have the potential to generate leachate that could have a significant impact on the environment and groundwater must be carried out by a suitably qualified person.*

(5) *Design of residue stockpile and deposit*

(a) *The design of the residue stockpile and deposit shall be undertaken by a suitably qualified person.*

(b) *An assessment of the typical soil profile on the site is required for residue stockpiles and deposits which*

(i) *Have a low hazard potential; and*
(ii) *Have no significant impact on the environment.*

(c) *The design of the residue stockpile and deposit must take into account all phases of the life cycle of the stockpile and deposit, from construction through to closure and must include -*

(i) *The characteristics of the mine residue;*
(ii) *The characteristics of the site and the receiving environment;*
(iii) *The general layout of the stockpile or deposit, whether it is a natural valley, ring dyke, impoundment or a combination thereof and its 3-dimensional geometry at appropriate intervals throughout the planned incremental growth of the stockpile or deposit;*
(iv) *The type of deposition method used; and*
(v) *The rate of rise of the stockpile or deposit.*

(d) *Other design considerations, a appropriate to the particular type of stockpile and deposit must be incorporated –*

(i) *The control of storm water on and around the residue stockpile or deposit by making provision for the maximum precipitation to be expected over a period of 24 hours with a frequency of once in a 100 years, in accordance with the regulations made under section 8 of the National Water Act, 1998;*
(ii) *The provision, throughout the system, of a freeboard of at least 0.5m above the expected maximum water level, in accordance with regulations made under the National Water Act, 1998, to prevent overtopping;*
(iii) *Keeping the pool away from the walls; where there are valid technical reasons for deviating from this, adequate motivation must be provided and the design must be reviewed by a qualified person as required in terms of sections 9(6) or 9(7) of the Mine Health and Safety Act, 1996;*
(iv) *The control of decanting of excess water under normal and storm conditions;*
(aa) *the retension of polluted water in terms of GN R991(9),where measures may be required to prevent water from the residue deposit from leaving the residue management system unless it meets prescribed requirements;*
(bb) *the design of the penstock, outfall pipe, under-drainage system and return water dams;*
(cc) *the height of the phreatic surface, slope angles and method of construction of the outer walls and their effects on shear stability;*
(dd) *the erosion of slopes by wind and water, and its control by (ee) vegetation, berms or carchment paddocks; and*
(ee) *the potential for pollution.*

(e) *A design report and operating manual shall be drawn up for all residue stockpiles and deposits which -*
(i) *Have a medium to high hazard; and*
(ii) *Have a potentially significant impact on the environment*

(f) *Relevant information must be included in the draft environmental management programme or environmental management plan.*

(6) *Construction and operation of residue deposits:*

(a) *The holder of any right or permit in terms of the Act, must ensure that-*
(i) *the residue deposits, including any surrounding catchment paddocks, is constructed and operated in accordance with the approved environmental management programme or environmental management plan;*

(ii) the design of the residue deposit is followed implicitly throughout the construction thereof, and that any deviations from the design be approved by the Regional Manager and the environmental management programme and environmental management plan be amended accordingly;
(iii) as part of the monitoring system, measurements of all residues transported to the site and of all surplus water removed from the site are recorded;
(iv) the provision for appropriate security measures be implemented to limit unauthorised access to the site and infusion into the residue deposit;
(v specific action be taken in respect of any sign of pollution;
(vi) adequate measures be implemented to control dust pollution and erosion of the slopes; and
(vii) details of rehabilitation of the residue deposit be provided in the draft environmental management programme or environmental management plan.

(b) A system of routine maintenance and repair in respect of the residue deposit must be implemented to ensure the ongoing control of pollution, the integrity of rehabilitation and health and safety matters at the site.

(7) Monitoring of residue stockpiles and deposits:

(a) A monitoring system for residue stockpiles and deposits with respect to potentially significant impacts as identified in the environmental assessment must be included in the environmental management programme or environmental management plan.

(b) In the design of a monitoring system for a residue stockpile or deposit, consideration must be given to-

(i) Baseline and background conditions with regard to air, surface and groundwater quality;
(ii) The air, surface and groundwater quality objectives;
(iii) Residue characteristics;
(iv) The degree and nature of residue containment;
(v) The receiving environment and specifically the climatic, local geological, hydrogeological and geochemical conditions;
(vi) Potential migration pathways;
(vii) Potential impacts of leachate;
(viii) The location of monitoring points and the prescribed monitoring protocols; and
(ix) The reporting frequency and procedures.

(8) Decommissioning, closure and aftercare:

(a) The decommissioning, closure and post closure management of residue deposits must be addressed in the closure plan, which must contain the following-
(I) the environmental classification, including assumptions on which the classification were based;
(ii) the closure objectives, final land use or capability;
(iii) conceptual description and details for closure and post closure management;
(iv) cost estimates and financial provision for closure and post-closure management; and
(v) residual impacts, monitoring and requirements to obtain mine closure in terms of the Act.

F3.6 FINAL REHABILITATION

- All infrastructure, equipment, plant, temporary housing and other items used during the mining period will be removed from the site (section 44 of the MPRDA)
- Waste material of any description, including receptacles, scrap, rubble and tyres, will be removed entirely from the mining area and disposed of at a recognised landfill facility. It will not be permitted to be buried or burned on the site.
- Final rehabilitation shall be completed within a period specified by the Regional Manager.

F4 MONITORING AND REPORTING

F4.1 Inspections and monitoring

- Regular monitoring of all the environmental management measures and components shall be carried out by the holder of the prospecting right, mining permit or reconnaissance permission in order to ensure that the provisions of this programme are adhered to.
- Ongoing and regular reporting of the progress of implementation of this programme will be done.
- Various points of compliance will be identified with regard to the various impacts that the operations will have on the environment.
- Inspections and monitoring shall be carried out on both the implementation of the programme and the impact on plant and animal life.
- Visual inspections on erosion and physical pollution shall be carried out on a regular basis.

Regulation 55 promulgated in terms of the MPRDA requires the following:

Monitoring and performance assessments of environmental management programme or plan

1) *As part of the general terms and conditions for a prospecting right, mining right or mining permit and in order to ensure compliance with the approved environmental management programme or plan and to assess the continued appropriateness and adequacy of the environmental management programme or plan, the holder of such right must-*
   - *(a) Conduct monitoring on a continuous basis;*
   - *(b) Conduct performance assessments of the environmental management programme or plan as required; and*
   - *(c) Compile and submit a performance assessment report to the Minister to demonstrate adherence to sub-regulation (b)*

2) *The frequency of performance assessment reporting shall be-*
   - *(a) In accordance with the period specified in the approved environmental management programme or plan, or, if not so specified;*
   - *(b) As agreed to in writing by the Minister; or*
   - *(c) Biennially (every two years).*

3) *The performance assessment report, shall be in the format provided in guidelines that will from time to time be published by the Department and shall as a minimum contain-*
   - *(a) Information regarding the period that applies to the performance assessment;*
   - *(b) The scope of the assessment;*
   - *(c) The procedure used for the assessment;*
   - *(d) The interpreted information gained from monitoring the approved environmental management programme or plan;*
   - *(e) The evaluation criteria used during the assessment;*
   - *(f) The results of the assessment; and*
   - *(g) Recommendations on how and when deficiencies that are identified and/or aspects of non-compliance will be rectified.*

4) *The holder of a prospecting right, mining right or mining permit may appoint an independent qualified person(s) to conduct the performance assessment and compile the performance assessment report provided that no such appointment shall relieve the holder of the responsibilities in terms of these regulations.*

5) *Subject to section 30(2) of the Act, the performance assessment report submitted by the holder shall be made available by the Minister to any person on request.*

6) *If upon consideration by the Minister, the performance assessment executed by the holder is not satisfactory or the report submitted by the holder is found to be unacceptable, the holder must-*

(a) Repeat the whole or relevant parts of the performance assessment and revise and resunmit the report; and/or
(b) Submit relevant supporting information; and/or
(c) Appoint an independent competent person(s) to conduct the whole or part of the performance assessment and to compile the report.

7) *If a reasonable assessment indicates that the performance assessment cannot be executed satisfactorily by the holder or a competent person(s) appointed by the holder, the Minister may appoint an independent performance assessment person(s) to conduct such performance assessment. Such appointment and execution shall be for the cost of the holder.*

8) *When the holder of a prospecting right, mining right or mining permit intends closing such operation, a final performance assessment shall be conducted and a report submitted to the Minister to ensure that –*
(a) The requirements of the relevant legislation have been complied with;
(b) The closure objectives as described in the environmental management programme or plan have been met; and
(c) All residual environmental impacts resulting from the holder's operations have been identified and the risks of latent impacts which may occur have been identified, quantified and arrangements for the management thereof have been assessed.

9) *The final performance assessment report shall either precede or accompany the application for a closure certificate in terms of the Act.*

F4.2 Compliance reporting / submission of information

- Layout plans will be updated on a regular basis and updated copies will be submitted on a biennial basis to the Regional Manager.
- Reports confirming compliance with various points identified in the environmental management programme will be submitted to the Regional Manager on a regular basis and as decided by the said manager.
- Any emergency or unforeseen impact will be reported as soon as possible.
- An assessment of environmental impacts that were not properly addressed or were unknown when the programme was compiled shall be carried out and added as a corrective action.

F5.1 ENVIRONMENTAL RISK REPORT

"An application for a closure certificate must be accompanied by an environmental risk report which must include-
(a) the undertaking of a screening level environmental risk assessment where -
(i) all possible environmental risks are identified, including those which appear to be insignificant;
(ii) the process is based on the input from existing data;
(iii) the issues that are considered are qualitatively ranked as -
(aa) a potential significant risk; and/or
(bb) a uncertain risk; and/or
(cc) an insignificant risk.
(b) the undertaking of a second level risk assessment on issues classified as potential significant risks where -
(I) appropriate sampling, data collection and monitoring be carried out;
(ii) more realistic assumptions and actual measurements be made; and
(iii) a more quantitative risk assessment is undertaken, again classifying issues as posing a potential significant risk or insignificant risk.
(c) assessing whether issues classified as posing potential significant risks are acceptable without further mitigation;
(d) issues classified as uncertain risks be re-classified as either posing potential significant risks or insignificant risks;
(e) documenting the status of insignificant risks and agree with interested and affected persons;
(f) Identifying alternative risk prevention or management strategies for potential significant risks which have been identified, quantified and qualified in the second level risk assessment;

(g) agreeing on management measures to be implemented for the potential significant risks which must include-

(i) a description of the management measures to be applied;
(ii) a predicted long-term result of the applied management measures;
(iii) the residual and latent impact after successful implementation of the management measures;
(iv) time frames and schedule for the implementation of the management measures;
(v) responsibilities for implementation and long-term maintenance of the management measures;
(vi) financial provision for long-term maintenance; and
(vii) monitoring programmes to be implemented."

F5.2 CLOSURE OBJECTIVES

Closure objectives form part of this EMPlan and must-

(a) a description of the closure objectives and how these relate to the prospecting or mine operation and its environmental and social setting;
(b) a plan contemplated in Regulation 2(2), coordinated according to generally accepted standards, showing the land or area under closure;
(c) a summary of the regulatory requirements and conditions for closure negotiated and documented in the environmental management programme or plan;
(d) a summary of the results of the environmental risk report and details of identified residual and latent impacts;
(e) a summary of the results of progressive rehabilitation undertaken;
(f) a description of the methods to decommission each prospecting or mining component and the mitigation or management strategy proposed to avoid, minimize and manage residual or latent impacts;
(g) details of any long-term management and maintenance expected;
(h) details of financial provision for monitoring, maintenance and post closure management, if required;
(i) a plan or sketch at an appropriate scale describing the final land use proposal and arrangements for the site;
(j) a record of interested and affected persons consulted; and
(k) technical appendices, if any.

F5.4 TRANSFER OF ENVIRONMENTAL LIABILITIES TO A COMPETENT PERSON

Should the holder of a prospecting right, mining permit or reconnaissance permission wish to transfer any environmental liabilities and responsibilities to another person or persons, the following will pertain:

(1) An application to transfer environmental liabilities to a competent person in terms of section 48) of the Act, must be completed on Form O as set out in Annexure 1 to the Regulations and be lodged to the Minister for consideration.
(2) The holder of the prospecting right, mining right or mining permit may transfer liabilities and responsibilities as identified in the environmental management plan and the required closure plan to a competent person as contemplated in Regulation 58.
(3) When considering the transfer of environmental liabilities and responsibilities in terms of section 48) of the Act, the Minister must consult with any State department which administers any law relating to matters affecting the environment.
(4) No transfer of environmental liabilities and responsibilities to a competent person may be made unless the Chief Inspector of Mines and the Department of Water Affairs and Forestry have confirmed in writing that the person to whom the liabilities and safety and management of potential pollution of water resources.

F5.5 NOTES ON LEGAL PROVISIONS

NOTE: The holder of a prospecting right, mining permit or reconnaissance permission must also take cognisance of the provisions of other legislation dealing with matters relating to conservation, and which include, *inter alia,* the following:

- National Monuments Act, 1969 (Act 28 of 1969)
- National Parks Act, 1976 (Act 57 of 1976)
- Environmental Conservation Act, 1989 (Act 73 of 1989)
- National Environmental Management Act, 1998 (Act No 107 of 1998)
- Atmospheric Pollution Prevention Act, 1965 (Act 45 of 1965)
- The National Water Act, 1998 (Act 36 of 1998)
- Mine Safety and Health Act, 1996 (Act 29 of 1996)
- The Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983)

SECTION G

G. SPECIFIC ADDITIONAL REQUIREMENTS DETERMINED BY THE REGIONAL MANAGER

Officials in regional offices may use the following matrix to determine the necessity for additional objectives to be included in this Section of the document:

POTENTIAL ENVIRONMENTAL IMPACTS OF MINING										
Activity	Disturbance					Pollution				Visual
	Landform	Soil	Flora	Fauna	Heritage	Land	Water	Air	Noise	
Mining										
Access										
Topsoil removal										
Overburden removal										
Mineral Extraction										
Tailings disposal										
Water Abstraction										
Pipeline route										
Transport										
Accommodation										
Waste Disposal										
Electricity										
Hydrocarbon storage										
Workforce										

Please indicate VL, L, M, H and VH for Very Low, Low, Medium, High and Very High in each column to determine the main area and severity of impact.

G. This section outlines the specific additional requirements that may be set for the operation by the Regional Manager. Additional requirements will only have been set if the Regional Manager is of the opinion that there are specific impacts on the environment which will not be adequately mitigated by the provisions set within the standard version of the Environmental Management Plan. These requirements form part of the Environmental Management Plan and all elements and instructions contained herein must be complied with by the applicant.

SECTION H

H. UNDERTAKING

I, ... J. M. KALO ..... the undersigned and duly authorised thereto by **GLEN DOUGLAS DOLOMITE (PTY) LTD** have studied and understand the contents of this document in it's entirely and hereby duly undertake to adhere to the conditions as set out therein including the amendment(s) agreed to by the Regional Manager in Section G and approved on .....

Signed at ..... BELLVILLE ..... this ..... 2nd ..... day of ..... JUNE 2011

..... Kalo .....
Signature of applicant

..... DIRECTOR .....
Designation

SECTION J

J. APPROVAL

Approved in terms of Section 39(4) of the Mineral and Petroleum Resources Development Act, 2002 (Act 29 of 2002)

Signed at ..... This ..... Day of 2011

.....
REGIONAL MANAGER

REGION: .....

This document has been compiled by the Directorate: Mine Environmental Management of the Department of Minerals and Energy at their Head Office in Pretoria. Any comments, suggestions or inputs will be sincerely appreciated. If you have any comments or suggestions regarding this document or its application, please forward your contribution to:

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Private Bag X59
PRETORIA
0001

Tel: 012 317 9288
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E-mail: Dorothy@mepta.pwv.gov.za

ANNEXURES

ANNEXURE A: Topographical map 1: 250 000

ANNEXURE B: Photographs of proposed mining area

ANNEXURE C: Locality map

ANNEXURE D: Geographical Map 1: 250 000

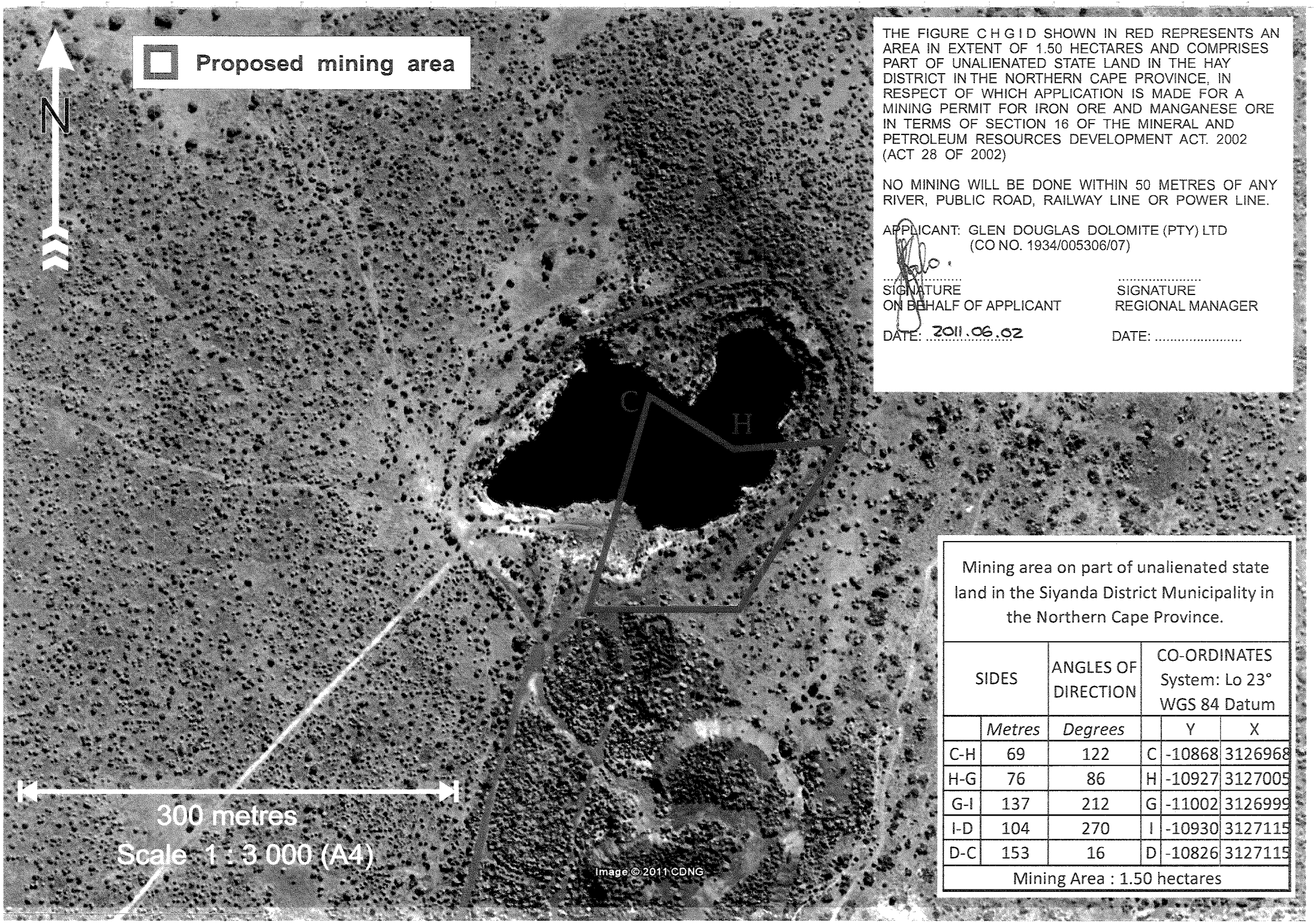
ANNEXURE E: Mine layout

ANNEXURE F: Environmental Risk Report : Assessment Sheet

ANNEXURE G: Consultations and comments of I&AP's

ANNEXURE A: Topographical map 1: 250 000

ANNEXURE E: Mine layout



THE FIGURE C H G I D SHOWN IN RED REPRESENTS AN AREA IN EXTENT OF 1.50 HECTARES AND COMPRISES PART OF UNALIENATED STATE LAND IN THE HAY DISTRICT IN THE NORTHERN CAPE PROVINCE, IN RESPECT OF WHICH APPLICATION IS MADE FOR A MINING PERMIT FOR IRON ORE AND MANGANESE ORE IN TERMS OF SECTION 16 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT. 2002 (ACT 28 OF 2002)

NO MINING WILL BE DONE WITHIN 50 METRES OF ANY RIVER, PUBLIC ROAD, RAILWAY LINE OR POWER LINE.

APPLICANT: GLEN DOUGLAS DOLOMITE (PTY) LTD
(CO NO. 1934/005306/07)

.....
SIGNATURE
ON BEHALF OF APPLICANT

DATE: 2011.06.02

.....
SIGNATURE
REGIONAL MANAGER

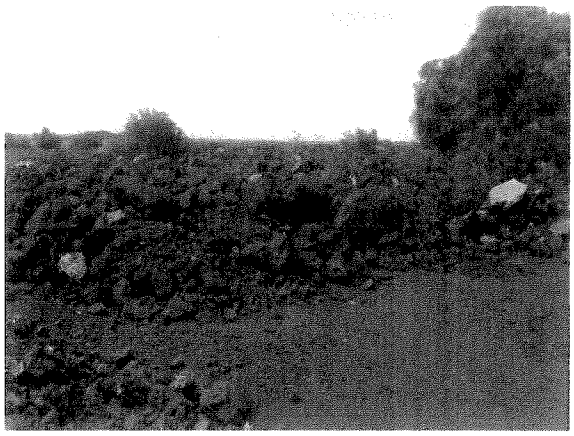
DATE: .....

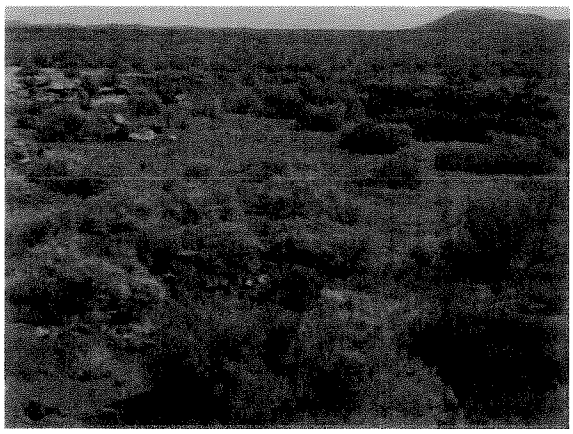
Mining area on part of unalienated state land in the Siyanda District Municipality in the Northern Cape Province.

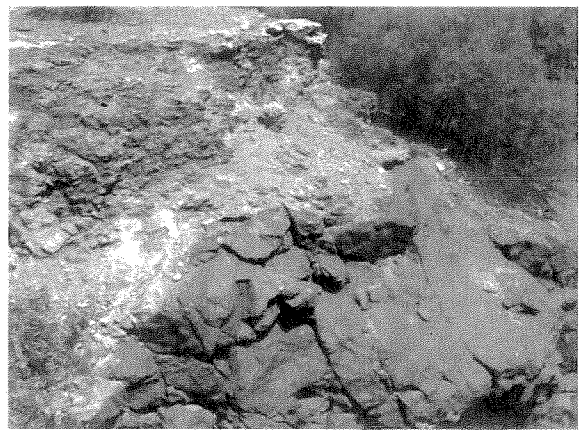
SIDES		ANGLES OF DIRECTION	CO-ORDINATES System: Lo 23° WGS 84 Datum		
	Metres	*Degrees*		Y	X
C-H	69	122	C	-10868	3126968
H-G	76	86	H	-10927	3127005
G-I	137	212	G	-11002	3126999
I-D	104	270	I	-10930	3127115
D-C	153	16	D	-10826	3127115
Mining Area : 1.50 hectares					

ANNEXURE B: Photographs of proposed mining area

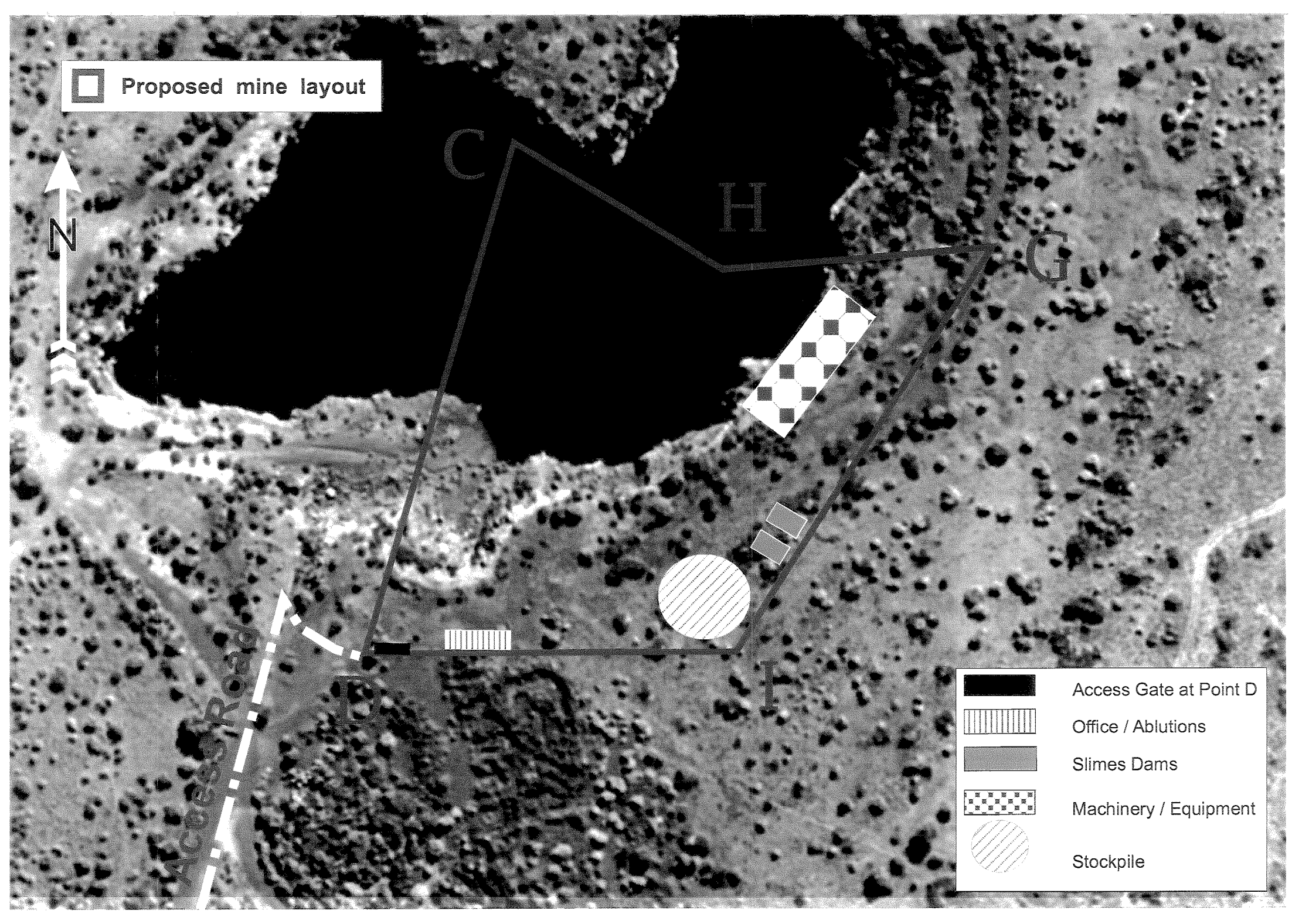
PHOTOGRAPHS OF PROPOSED MINING AREA: GLEN DOUGLAS DOLOMITE (PTY) LTD







ANNEXURE C: Locality map


Proposed mine layout
N
C
H
G
Access Gate at Point D
Office / Ablutions
Slimes Dams
Machinery / Equipment
Stockpile

ANNEXURE F: Environmental Risk Report : Assessment Sheet

Glen Douglas Dolomite (Pty) Ltd

Reg. No. 1934/005306/07

P.O. Box 3
Henley-on-Klip 1962
Republic of South Africa

Tel. (016) 366-0321
Fax (016) 366-1220

ENVIRONMENTAL RISK REPORT : ASSESSMENT SHEET

The stipulated contents of the Environmental Risk Report are copied here from regulation 60, to serve as background and reference. The Mine / Site Manager are responsible for compiling information and regular assessment on the risks identified for the specific mining activity and area. This information will ultimately lead to the compilation of the Final Risk Assessment that is required for a Closure Application.

Regulation 60, Mineral and Resources Development Regulations

(a) *The undertaking of a screening level environmental risk assessment where-*
- *(i) All possible environmental risks are identified, including those which appear to be insignificant;*
- *(ii) The process is based on the input from existing data;*
- *(iii) The risks that are considered are qualitatively ranked as –*
  - *(aa) A potential significant risk;*
  - *(bb) An uncertain risk;*
  - *(cc) An insignificant risk;*

(b) The undertaking of a second level risk assessment on issues classified as potential significant risks where-
- *(i) Appropriate sampling, data collection and monitoring be carried out;*
- *(ii) More realistic assumptions and actual measurements be made; and*
- *(iii) A more quantitative risk assessment is undertaken, again classifying risks as posing a potential significant risk or insignificant risk.*
- (iv) *An assessment of whether risks classified as posing potential significant risks are acceptable without further mitigation;*

(c) *Risks classified as uncertain risks be re-evaluated and re-classified as either posing potential significant risks or insignificant risks;*

(d) *Identifying alternative risk prevention or management strategies for potential significant risks that have been identified, quantified and qualified in the second level risk assessment;*

(e) *Agreeing on management measures to be implemented for the potential significant risks that must include:*
- *(i) A description of the management measures to be applied;*
- *(ii) A predicted long-term result of the applied management measures;*
- *(iii) The residual and latent impact after successful implementation of the management measures;*
- *(iv) Time frames and schedule for the implementation of the management measures;*
- *(v) Responsibilities for implementation and long-term maintenance of the management measures;*
- *(vi) Financial provision for long-term maintenance; and*
- *(vii) Monitoring programmes to be implemented*

POTENTIAL RISK ASSESSMENT

	Possible risk factor	*Qualitative risk level* *Potential significant, Uncertian, Insignificant*	*If insignificant, why?*
1	*Topography:*		
2	*Land:*		
3	*Land use:*		
4	*Land Capability:*		
5	*Vegetation:*		
6	*Fauna:*		
7	*Surface water:*		
8	*Groundwater:*		
9	*Air Quality:*		
10	*Noise:*		
11	*Archaeology:*		
12	*Visual Impact:*		
13	*Socio-economic structure:*		
14	*Interested and affected parties:*		

After identification and summation of the potential risks and their assessments, the Site/Mine Manager must follow the procedure as set out in Section 60 (b)-(c). If he/she feels that further investigation is necessary, they must contact the appointed department and let them know of existing or possible future situations that will occur. The appointed party will then follow up on Section 60 (d)-(e), seeking involvement of an independent consultant if and when deemed necessary. All information and assessments will be made available to the Department of Mineral Resources if they should request it.

ANNEXURE G: Consultations and comments of I&AP's

NOTICE:

MINING FOR IRON ORE AND MANGANESE ORE ON A PORTION OF UNALIENTATED STATE GROUND DISTRICT POSTMASBURG, NORTHERN CAPE PROVINCE

Afrimat Aggregates (Trading)(Pty) Ltd has lodged an application with the Department of Mineral Resources for a Mining Permit on a portion of unalienated state ground, District Postmasburg.

Activity:	Mining of iron ore and manganese ore
Size of area:	1,5 Ha
Current Land Use:	Agriculture
Access Road:	R325
Duration of activity on site:	Approximately 2 years
Methodology:	Opencast, haul & load, crushing & screening, Excavator or Front-end loader

We hereby invite those who wish to be registered as interested and affected parties (I&AP's) or wish to raise issues, to participate. As per the requirements of the MPRDA, a report describing the public participation process and consultation with I & AP's will be forwarded to the DMR by the 6th of May 2011. All comments received before this date will be included in the scoping report. All issues raised during the application process will also be addressed in the Environmental Management Plan (EMPlan). Registered I&AP's will be informed of the date of availability of the EMPlan for scrutiny at the Tsantsabane Local and Siyanda District Municipalities. Registered I&AP's will also be kept informed with regards to relevant issues pertaining to the application.

The application is in support of supplying iron ore and or manganese ore to the local and/or export markets.

Please address your written comments to: Afrimat Aggregates (Trading) (Pty) Ltd., P O Box 768, Bellville 7535 or email: mining@afrimat.co.za or fax to 086 617 7910.

For further information contact Mr L Loubser at 021 917 8840 or 083 660 7070.

The closing date for comments is 5 May 2011.

NOTICE:

MINING FOR IRON ORE AND MANGANESE ORE ON A PORTION OF UNALIENTATED STATE GROUND DISTRICT POSTMASBURG, NORTHERN CAPE PROVINCE

Glen Douglas Dolomite (Pty) Ltd has lodged an application with the Department of Mineral Resources for a Mining Permit on a part of unalienated state ground, District Postmasburg.

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Size of area:	1,5 Ha
Current Land Use:	Agriculture
Access Road:	R325
Duration of activity on site:	Approximately 2 years
Methodology:	Opencast, haul & load, crushing & screening, Excavator or Front-end loader

We hereby invite those who wish to be registered as interested and affected parties (I&AP's) or wish to raise issues, to participate. As per the requirements of the MPRDA, a report describing the public participation process and consultation with I & AP's will be forwarded to the DMR by the 6th of May 2011. All comments received before this date will be included in the scoping report. All issues raised during the application process will also be addressed in the Environmental Management Plan (EMPlan). Registered I&AP's will be informed of the date of availability of the EMPlan for scrutiny at the Tsantsabane Local and Siyanda District Municipalities. Registered I&AP's will also be kept informed with regards to relevant issues pertaining to the application.

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Please address your written comments to: Glen Douglas Dolomite (Pty) Ltd., P O Box 768, Bellville 7535 or email: mining@afrimat.co.za or fax to 086 617 7910.

For further information contact Mr L Loubser at 021 917 8840 or 083 660 7070.

The closing date for comments is 5 May 2011.

karien.botha@afrimat.co.za

TAX INVOICE / BELASTINGFAKTUUR 43.84

KATHU GAZETTE
PO Box 270 Kathu 8446
Tel 087 805 7686 / 053 723 2000
Fax 053 723 2000 / 086 531 7686
VAT no 4840230397

From / Van

Date / Datum 12/04/2011

V.A.T. Reg. No./B.T.W. Gereg. Nr.

To / Aan Afrimat Aggregates (Trading) (Pty) Ltd
P.O. Box 768
Bellville 7535

V.A.T. Reg. No. 4500101797
B.T.W. Gereg. Nr.

Quantity Hoev.	Description Beskrywing	Unit Price Eenheidsprys	Amount Bedrag	
1	13x3 Display Ad BIW		780	00

Date of Publication:
16/04/2011

BANK ACCOUNT DETAILS
Sapphire Dawn Trading 24 CC t/a KATHU GAZETTE
FNB Kathu Branch Code 230502
Current Account no 62109702309
Reference Invoice number

Subtotaal	780 00
VAT inclusive / % B.T.W. inbegrip	14 109 20
TOTAL TOTAAL	889 20

TERMS / TERME Cash

Glen Douglas Dolomite (Pty) Ltd

Reg. No. 1934/005306/07

P.O. Box 3
Henley-on-Klip 1962
Republic of South Africa

Tel. (016) 366-0321
Fax (016) 366-1220

6 May 2011

Department Mineral Resources
Private Bag X6093
KIMBERLEY
8300

FAX: 053 832 ~~5621~~ 6527

REF: (NC) 30/5/1/3/2/2039MP

Dear Sir/Madam

RE: ACCEPTANCE OF AN APPLICATION FOR A MINING PERMIT ON PART OF UNALIENATED STATE GROUND, HAY DISTRICT

Attached, proof of consultations with Land Claims Commissioner as well as Local Municipality.

Yours faithfully

K Botha

Karien Botha
MINERAL RESOURCES ADMINISTRATOR

Total pages faxed (including cover page): 10

WorkCentre 7345

Transmission Report

G3 ID 0219178821

Date/Time:06/05/2011:09:32
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Reg. No. 1934/005306/07

P.O. Box 3
Henley-on-Klip 1962
Republic of South Africa

Tel. (016) 366-0321
Fax (016) 366-1220

6 May 2011

Department Mineral Resources
Private Bag X6093
KIMBERLEY
8300

FAX: 053 832 8831 5927

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dBotha

Karlien Botha
MINERAL RESOURCES ADMINISTRATOR

Total pages faxed (including cover page): 10

Total Pages Scanned: 13 Total Pages Sent : 13

No.	Doc.	Remote Station	Start Time	Duration	Pages	Mode	Contents	Status
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Note:
RE: Resend MB: Send to Mailbox BC: Broadcast MP: Multi Po ling RV: Remote Service
PG: Polling RB: Relay Broadcast RS: Relay Send BF: Box Fax Forward CP: Completed
SA: Send Again EN: Engaged AS: Auto Send TM: Terminated

Glen Douglas Dolomite (Pty) Ltd

Reg. No. 1934/005306/07

P.O. Box 3
Henley-on-Klip 1962
Republic of South Africa

Tel. (016) 366-0321
Fax (016) 366-1220

14 April 2011

Department of Land Affairs
Private Bag X5007
KIMBERLEY
8300

FAX: 053 831 4095

Dear Sir/Madam

APPLICATIONG FOR A MINE PERMIT TO MINE MANGANESE AND IRON ORE IN TERMS OF SECTION 27 (1) OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (ACT 28 OF 2002) ON PART OF UNALIENATED STATE LAND SITUATED IN THE TSANTSABANE LOCAL AND SIYANDA DISTRICT MUNICIPALITIES IN THE NORTHERN CAPE PROVINCE

Attached, letter from Department of Mineral Resources confirming our acceptance of a mining permit on the above and wish to consult with the Department of Land Affairs on the state owned land as described above and if the land is subject to land restitution.

Your comments please. Fax to 086 617 7910 or email to mining@afrimat.co.za

Yours faithfully

KBotha

Karien Botha
MINERAL RESOURCES ADMINISTRATOR

(Total pages : 4).
- Acceptance letter from DMR
- Map

WorkCentre 7345

Transmission Report

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Glen Douglas Dolomite (Pty) Ltd

Reg. No. 1934/005306/07

P.O. Box 3
Henley-on-Klip 1962
Republic of South Africa

Tel. (016) 366-0321
Fax (016) 366-1220

14 April 2011

Department of Land Affairs
Private Bag X5007
KIMBERLEY
8300

FAX: 053 831 4095

Dear Sir/Madam

APPLICATIONG FOR A MINE PERMIT TO MINE MANGANESE AND IRON ORE IN TERMS OF SECTION 27 (1) OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (ACT 28 OF 2002) ON PART OF UNALIENATED STATE LAND SITUATED IN THE TSANTSABANE LOCAL AND SIYANDA DISTRICT MUNICIPALITIES IN THE NORTHERN CAPE PROVINCE

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KBotha

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(Total pages : 4).

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SA: Send Again EN: Engaged AS: Auto Send TM: Terminated

Glen Douglas Dolomite (Pty) Ltd

Reg. No. 1934/005306/07
P.O. Box 3
Henley-on-Klip 1962
Republic of South Africa

Tel. (016) 366-0321
Fax (016) 366-1220

13 April 2011

Tsantsabane Local Municipality
Northern Cape
Att: Mr Moselane

FAX: 053 3131602

Dear Sir

APPLICATION FOR A MINING PERMIT TO MINE FOR IRON ORE AND MANGANESE ORE ON PART OF UNALIENATED STATE GROUND, POSTMASBURG DISTRICT (SEE ATTACHED MAP)

According to subsections 3(1&2) of the Minerals and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002)(MPRDA), which came into effect on 1 May 2004, the State is the custodian of the nation's minerals. The minister, acting on behalf of the State may grant the right to mine a resource to an applicant from an area where the resource has been identified. The applicant must, however, follow all the correct procedures and adhere to all the laws and regulations as prescribed by the MPRDA.

In March 2011, Afrimat Aggregates (Trading) (Pty) Ltd applied for a permit to mine iron ore and manganese ore on part of unalienated state ground, Postmasburg Distict. Notification is made in terms of subsection 5(4)(c) as well as subsection 27(5)(b) of the Act, which requires consultation with the landowner or lawful occupier of the land as well as notifying interested and affected parties (IAPs) of the intended operation.

As part of this initial public participation exercise that takes place in accordance with the MPRDA, this letter and attached background document serves as a formal notification that the application has been submitted to the Department of Mineral Resources, Northern Cape Region. The attached Background Information Document provides a summary of the proposed activity, which basically serves to introduce the proposed activity. More detailed information will be provided in the Environmental Management Plan (EMP). The latter document will be made available to IAPs for scrutiny when it becomes available.

During this first round of public participation you are invited as an interested and affected party (IAP). Registered IAPs are kept informed of future activities, meetings and documents. IAPs will be given the opportunity to comment on the EMP in a subsequently round of public participation. The date and location of placement of the EMP will be communicated to registered IAP's. We would appreciate any reference to IAPs you feel should be contacted (e.g. legal occupiers of the land which are not the landowners, agricultural or other forums or associations, etc.). For your convenience a form is attached that will allow you to register as an IAP. Alternatively contact us by email or SMS. Registration must take place on or before 13rd February. Please forward your written response to contact details provided above.

Yours faithfully
KBotha
Karien Botha
MINERAL RESOURCES ADMINISTRATOR

BACKGROUND INFORMATION DOCUMENT FOR A MINING PERMIT APPLICATION FOR IRON ORE AND MANGANESE ORE ON PART OF UNALIENATED STATE GROUND, POSTMASBURG DISTRICT

1. INTRODUCTION

According to section 3(1&2) of the Minerals and Petroleum Resource Development Act of 2002, Act No. 28 of 2002 (MPRDA), which came into effect on 1 May 2004, the State is the custodian of the nation's minerals, and the Minister, acting on behalf of the State, may grant the right to an applicant to remove a mineral from an area where it has been identified. The applicant must, however, follow all the correct procedures and adhere to all the regulations and laws of the MPRDA of 2002.

Glen Douglas Dolomite (Pty) Ltd lodged a Mine Permit Application with the Department of Mineral Resources (DMR): Kimberley for the excavation of iron ore and manganese ore on part of Unalienated State Ground, District of Postmasburg. In terms of Section 5(4)(c) and Section 27(5)(b) of the MPRDA, interested and affected parties (IAPs) must be notified of the proposed activity. The background document introduces the project that will be discussed in more detail in the Environmental Management Plan (EMP) that consists of an environmental impact assessment and environmental management plan scaled to the specific project. The latter report will be compiled after the environmental impact process has been completed.

2. BACKGROUND

Postmasburg Municipality is the registered owner of the farm on which mining is proposed and the owners of the property is hereby being notified and consulted via registered mail. We trust to prove to the landowner that our operation will have a minimal effect on current activities. Most of the area has been transformed by mining activities. The mine area is located in old mine area and the land is currently used for grazing. The area selected for mining was identified because of its quality and quantity of resource. The soil report will be provided in the EMP to present information on the agricultural capability of the selected area.

The area is located approximately 11km north-east of Postmasburg. The proposed project falls in the Tsantsabane Local and Siyanda District Municipalities in the Northern Cape Province.

3. PUBLIC PARTICIPATION

A public participation process forms part of the EIA process and is being undertaken throughout this study, to give IAPs opportunity to participate and to ensure that issues of importance to them are addressed and the results reported in the EIA/EMP document.

The public participation includes the following:

- Advertisement in a local newspaper (Afrikaans and English), the District Mail
- Notifying, in writing, the landowner, lawful occupiers of the land in question, local authority, NGOs', direct neighbours and other parties that will be directly affected by the proposed activity.
- Notice board on the fence of the proposed site.
- Personal communication, telephonic conversations/communications.

- A public meeting with at least the lawful occupiers of the land and if necessary the direct neighbours can be arranged depending on the demand thereof. Alternatively, problems will be dealt with in a one-on-one case.

Details of all persons and organizations that are contracted or who received the BID are included in the IAP database (See Appendix). All IAPs are asked to register if they felt inclined to do so. Those who return the response sheet are automatically registered as IAPs and will receive all further information regarding the project.

4. PROPOSED MINING METHOD and OPERATING PROCEDURES IN THE MINING AREA

Mining method: Excavations of iron ore and manganese ore.

The maximum size allowable for a mining permit is 1.5 hectares (Ha). The footprint of the mine will therefore not exceed the 1.5 Ha area. The topsoil, about 300 mm in depth, will be removed and stored away from the excavation area. After mining, the topsoil will be replaced. The entire area will normally be cleared in full.

The subsoil will be excavated in an open cast mine and loaded onto trucks that transport the soil to stockpiles for future works. The quarry pit will be excavated in 3 different depth stages, each between 8 – 12m deep with safety benches at such intervals. A dedicated ramp will lead out of the quarry to the processing site.

Associated activity:

- **Electricity**

Electrical power will be required.

- **Firewood**

Firewood will not be collected on or off site without permission from the landowner.

- **Access roads**

Existing farm roads to the south will be used to cart materials to the provincial road and from there to the R325. Roads will be maintained and repaired, which would be advantageous to the landowner.

- **Sanitation**

Chemical toilets will be provided and the toilets will be replaced before full.

- **Workshop**

General maintenance and repairs will not take place on site but will take place at the landowner's workshop or at the applicants workshop, both are off site. Where emergency repairs are required, refuelling is necessary or lubricants are applied to prevent friction between mechanical parts, the EMP will address the mitigation and management of the potential environmental impacts to ensure waste are properly dealt with.

- **Fuel tank**

A fuel tank will be required on site. Full building for such tank as described in the EMP will be installed to contain any fuel and carbon products spillage.

- **Accommodation**

Accommodation for the workers will not be required on site.

- **Waste Management**

The management of waste will be dealt with in detail in the waste management plan in the EMP. All waste will be removed from site on a regular basis.

➧ **Administration**
A performance assessment will be handed in on an annual basis.

5. THE AFFECTED ENVIRONMENT

Potential impacts on the environment, which include the area around the mine area, will be addressed in the EMP. The potential impacts that will be considered are the following:
(a) Dust, wind-blown sand and air pollution
(b) Noise
(c) Groundwater and water quality
(d) Surface water (includes sub-surface water above any impermeable layer and water quality
(e) Topography
(f) Geology
(g) Agricultural potential
(h) Fauna and Flora
(i) Pollution: solid and toxic waste management
(j) Visual impact
(k) Possible sensitive landscape
(l) Archaeological and cultural
(m) Socio-economic conditions
(n) Access roads and traffic
(o) Land-use and land capability

Once all the potential impacts have been identified and assessed the required specialist studies (relevant to the type and scale of the operation) will be completed and the results produced in the EMP. This document will propose mitigation and management measures and will include a mine and Rehabilitation Plan and Schedule to ensure that the least environmental and negative socio-economic impact result. Furthermore, emergency procedures will be provided and a monitoring programme will also be included in the EMP. Once the draft EMP has been compiled, the document will be made available to interested and affected parties (IAPs) at the Public Library in Volksrust. In accordance with Section 40(1) of the MPRDA, the EMPlan will be forwarded by the DME to the relevant government authorities. All the comments received will be assessed are then addressed in the final EMPlan that will be forwarded to the DME for final approval.

6. SPECIALIST STUDIES

Since the area identified for the selected site is on old mining area, the specialist studies are limited to:
- Fauna and flora to be disturbed will be that affected by mining and will not have a larger impact than anticipated by the current agricultural activities.
- Dust and noise is not expected to be an issue.
- Other issues will be addressed in the EMP.

7. WAY FORWARD

During the EIA, at least the following will occur:

(a) Assess and address the comments or issues raised by IAPs, non-governmental organizations (NGOs) and governmental organizations (GOs) during the public participation process.
(b) Conduct a public meeting if and when required (depend on the responses received.) At this stage the impacts are not expected to impact on the neighbours if considering mining has previously occurred on the site and there was no impact on the neighbours.
(c) Commission further the specialist studies if and when required.
(d) Compile the EIA/EMP and include all the details to adhere to the legal requirements of the MPRDA and the DME.
(e) Submit the EMP to the DMR who will distribute the documents to the relevant authorities for commenting.
(f) Place a copy of the EMP in the library at Postmasburg.
(g) Await feedback, assess comments and issues raised by IAPs, NGOs and GOs and address these in the final EMP to be submitted to the DMR or as an addendum to the EMP already submitted for decision making purposes.
(h) Assess and address the comments or issues raised by the IAPs, NGOs and GOs during the Public participation and scoping process.

Included is a locality map of the farms in question and a response sheet.

8. CONTACT DETAILS

Please send all written comments to:
Afrimat Aggregates (Trading) (Pty) Ltd
P O Box 768
BELLVILLE
7535

Or
Fax: 086 617 7910
Or
E-mail: mining@afrimat.co.za

Should information be required from the applicant please contact Mr. Louis Loubser at 083 660 7070.

RESPONSE SHEET

CONSULTATION WITH LANDOWNER, LAWFUL OCCUPIER OF THE LAND AND OTHER AFFECTED PARTIES SECTION 27(5)(A)

LOCATION:	Part of Unalienated State Ground				
APPLICANT:	Glen Douglas Dolomite (Pty) Ltd	Tel.	021 917 8840	Fax	086 617 7910
CONTACT PERSON:	Mr Louis Loubser	Tel.	021 917 8840	Cell	083 660 7070
ADDRESS	P O Box 768, Bellville 7535				
RETURN COMMENTS TO:	On or before ***6th May 2011*** to mining@afrimat.co.za or fax			Fax	086 617 7910

DETAILS OF INTERESTED AND AFFECTED PARTY		
Name	Tsantsabane Local Municipality	
Address	P O Box 5	
	Postmasburg	
	8420	
Contact Details	Tel	053 3137300
	Fax	053 3131602
	Cell	
	Email	

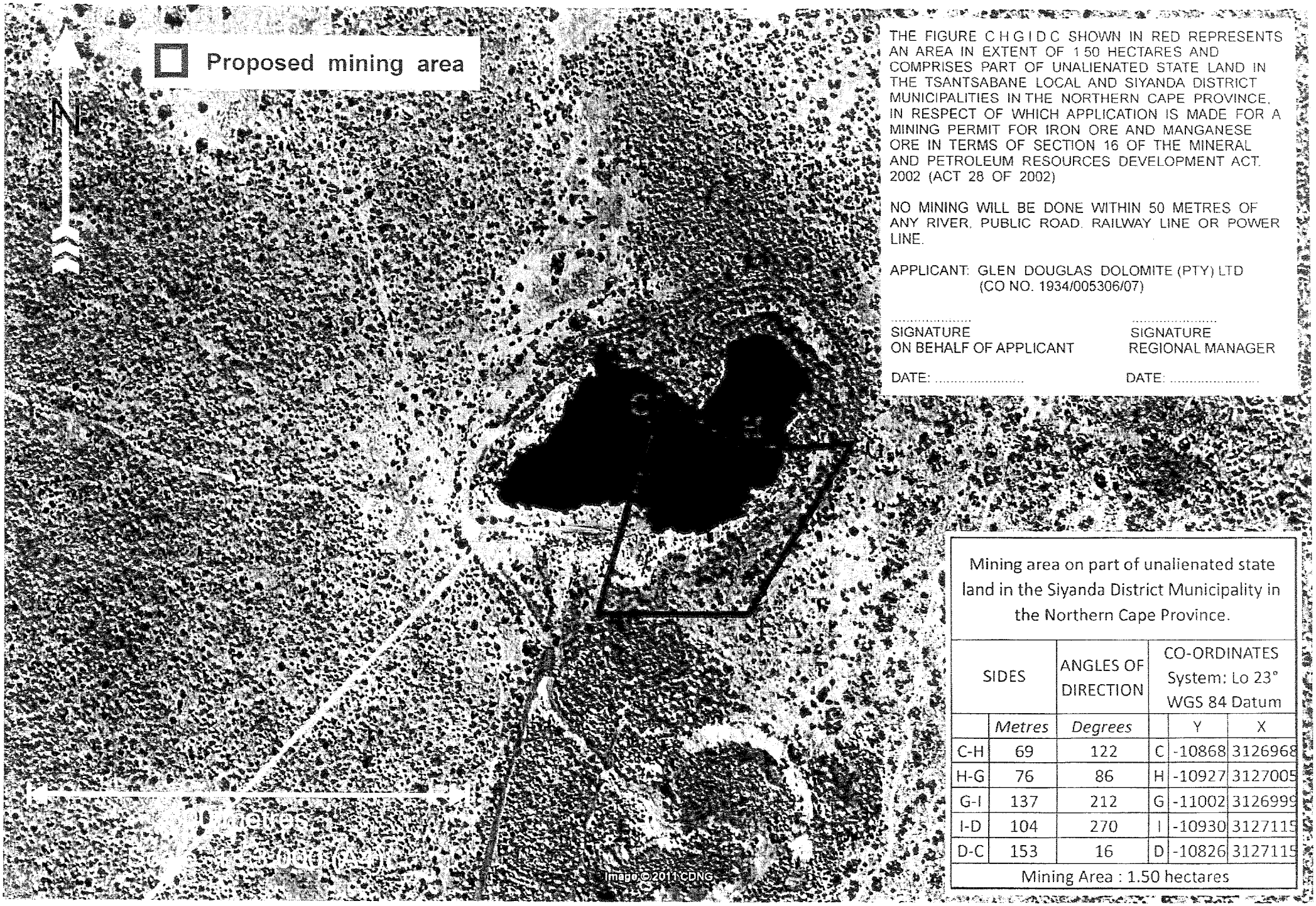
Comments/issues/objections regarding the proposed mining activity. ***Please tick one of the following***

I have no objection		I have no objections but like to be further investigated		I object for the following reasons	

I have read the information and understood the contents

Signature:

Date:



THE FIGURE C H G I D C SHOWN IN RED REPRESENTS AN AREA IN EXTENT OF 1 50 HECTARES AND COMPRISES PART OF UNALIENATED STATE LAND IN THE TSANTSABANE LOCAL AND SIYANDA DISTRICT MUNICIPALITIES IN THE NORTHERN CAPE PROVINCE, IN RESPECT OF WHICH APPLICATION IS MADE FOR A MINING PERMIT FOR IRON ORE AND MANGANESE ORE IN TERMS OF SECTION 16 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT. 2002 (ACT 28 OF 2002)

NO MINING WILL BE DONE WITHIN 50 METRES OF ANY RIVER, PUBLIC ROAD, RAILWAY LINE OR POWER LINE.

APPLICANT: GLEN DOUGLAS DOLOMITE (PTY) LTD
(CO NO. 1934/005306/07)

....

SIGNATURE
ON BEHALF OF APPLICANT

SIGNATURE
REGIONAL MANAGER

DATE: .....

DATE: .....

Mining area on part of unalienated state land in the Siyanda District Municipality in the Northern Cape Province.

SIDES		ANGLES OF DIRECTION	CO-ORDINATES System: Lo 23° WGS 84 Datum		
	Metres	*Degrees*		Y	X
C-H	69	122	C	-10868	3126968
H-G	76	86	H	-10927	3127005
G-I	137	212	G	-11002	3126999
I-D	104	270	I	-10930	3127115
D-C	153	16	D	-10826	3127115
Mining Area : 1.50 hectares					

WorkCentre 7345

Transmission Report

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Glen Douglas Dolomite (Pty) Ltd

Reg. No. 1934/005306/07
P.O. Box 3
Henley-on-Klip 1962
Republic of South Africa

Tel. (016) 366-0321
Fax (016) 366-1220

13 April 2011

Tsantsabane Local Municipality
Northern Cape
Att: Mr Moselane FAX: 053 3131602

Dear Sir

APPLICATION FOR A MINING PERMIT TO MINE FOR IRON ORE AND MANGANESE ORE ON PART OF UNALIENATED STATE GROUND, POSTMASBURG DISTRICT (SEE ATTACHED MAP)

According to subsections 3(1&2) of the Minerals and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002)(MPRDA), which came into effect on 1 May 2004, the State is the custodian of the nation's minerals. The minister, acting on behalf of the State may grant the right to mine a resource to an applicant from an area where the resource has been identified. The applicant must, however, follow all the correct procedures and adhere to all the laws and regulations as prescribed by the MPRDA.

In March 2011, Afrimat Aggregates (Trading) (Pty) Ltd applied for a permit to mine iron ore and manganese ore on part of unalienated state ground, Postmasburg Distict. Notification is made in terms of subsection 5(4)(c) as well as subsection 27(5)(b) of the Act, which requires consultation with the landowner or lawful occupier of the land as well as notifying interested and affected parties (IAPs) of the intended operation.

As part of this initial public participation exercise that takes place in accordance with the MPRDA, this latter and attached background document serves as a formal notification that the application has been submitted to the Department of Mineral Resources, Northern Cape Region. The attached Background Information Document provides a summary of the proposed activity, which basically serves to introduce the proposed activity. More detailed information will be provided in the Environmental Management Plan (EMP). The latter document will be made available to IAPs for scrutiny when it becomes available.

During this first round of public participation you are invited as an interested and affected party (IAP). Registered IAPs are kept informed of future activities, meetings and documents. IAPs will be given the opportunity to comment on the EMP in a subsequently round of public participation. The date and location of placement of the EMP will be communicated to registered IAP's. We would appreciate any reference to IAPs you feel should be contacted (e.g. legal occupiers of the land which are not the landowners, agricultural or other forums or associations, etc.). For your convenience a form is attached that will allow you to register as an IAP. Alternatively contact us by email or SMS. Registration must take place on or before 13th February. Please forward your written response to contact details provided above.

Yours faithfully
KBotha
Karien Botha
MINERAL RESOURCES ADMINISTRATOR

Directors: HP Verreynne & J Kalo

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