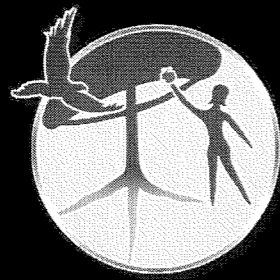


Case 10:1760



MYEZO ENVIRONMENTAL MANAGEMENT SERVICES

Environmental Stewardship

**PROSPECTING RIGHT FOR FARMS HABITAT 477 KQ; WITWAL 523 KQ; VAALWAL 525
KQ; FAUNA 521 KQ; KWAGGAFONTEIN 546 KQ; MOGENZON 533 KQ;
KWAGGAFONTEIN 596 LQ (LAMARIE); KNOPPIESKRAAL 537 KQ; BLAUWBANK 605
KQ; NIEWPOORT 516 KQ; HARTBEESPOORT 522 KQ; RHEEBOKRAND 481 KQ;
OLENENBOSCH 506 KQ; WEYNEK 505 KQ; DOORNDRAAI 488 KQ AND ONVERWACHT
486 KQ.**

**Environmental management plan: May 2011 | Project: African Exploration,
Mining and Finance Corporation
(Pty) Ltd -EMP**

Ref No.: LP 30/5/1/1/2/2690 PR

File number: LP 30/5/1/1/2/2690 PR

DEPARTMENT OF MINERAL RESOURCES

ENVIRONMENTAL MANAGEMENT PLAN

Submitted in support of application for a prospecting right or 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	X
	Mining Permit	

Applicant : African Exploration, Mining and Finance Corporation (Pty) Ltd.

Farm : Habitat 477 KQ; Witwal 523 KQ; Vaalwal 525 KQ; Fauna 521 KQ;
Kwaggafontein 546 KQ; Mogenzon 533 KQ; Kwaggafontein 596 LQ (Lamarie);
Knoppieskraal 537 KQ; Blauwbank 605 KQ; Niewpoort 516 KQ; Hartbeespoort
522 KQ; Rheebokrand 481 KQ; Olenenbosch 506 KQ; Weynek 505 KQ;
Doomdraai 488 KQ and Onverwacht 486 KQ.

District : Thabazimbi

Mineral : Fluospar, Rare Earth Metals, Tin, Zinc Ore, Lithium Ore, Copper Ore and Iron
Ore

Date : May 2011

Environmental Management Plan

RECEIVED
MINERAL RESOURCES
DEPARTMENT OF MINERAL RESOURCES
JOHANNESBURG
REGIONAL MANAGER
LIMPOPO REGION

DATE: 31/05/11
NAME OF OFFICIAL: CEAGA

Contents

Section A:

A.1	Introduction	Page 3
A.2	Scope	Page 3
A.3	Purpose	Page 3
A.4	Use of the document	Page 4
A.5	Legislation/ Regulations	Page 4
A.6	Other relevant legislation	Page 5
A.7	Word definitions	Page 6

Section B:

B.1	Biographical information about the applicant	Page 7
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Section C:

C 1 - 5	Environmental Impact Assessment/ information about the environment	Page 8
C 6	Specific Regulatory requirements	Page 12

Section D:

D	Scoring of the EIA	Page 18
---	--------------------	---------

Section E:

E	Undertaking by applicant	Page 19
---	--------------------------	---------

Section F:

F	Environmental Management Plan	Page 20
---	-------------------------------	---------

Section G:

G	Specific additional requirements determined by the Regional Manager and agreed to by the Applicant	Page 41
---	--	---------

Section H:

H	Undertaking	Page 42
---	-------------	---------

Section J:

J	Approval	Page 43
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A.1 INTRODUCTION

Myezo Environmental Management Services..... was appointed by African Exploration Mining and Finance Corporation (Pty) Ltd (hereafter AEMFC) to compile and submit an Prospecting Right, Environmental Management Plan for undertaking prospecting activities for Fluospar, Rare Earth Metals, Tin, Zinc, Lithium, Copper, Manganese and Feldspar on the Farm Habitat 477 KQ; Witwal 523 KQ; Vaalwal 525 KQ; Fauna 521 KQ; Kwaggafontein 546 KQ; Mogenzon 533 KQ; Kwaggafontein 596 LQ (Lamarie); Knoppieskraal 537 KQ; Blauwbank 605 KQ; Niewpoort 516 KQ; Hartbeespoort 522 KQ; Rheeboekrand 481 KQ; Olenenbosch 506 KQ; Weynek 505 KQ; Doorndraai 488 KQ and Onverwacht 486 KQ., Thabazimbi, Limpopo. This document serves as the Environmental Management Plan (EMPlan), and has been completed in accordance with Section 27 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002)(MPRDA). The EMPlan has been completed in the standard format as provided by Department of Mineral Resources (DMR).

This document aims to provide a simplified national standard for applicants for prospecting rights and 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 Minerals and Energy (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:

This document is designed for use by non-professionals and newcomers to the environmental management industry and it incorporates a *very simple* Environmental Impact Assessment (EIA). The 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 then (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	R 100 000 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 of prospecting right, continuously and actively conduct prospecting operations; comply with requirements of approved EMP, pay prospecting fees and royalties	R 100 000 or two years imprisonment or both
20(2)	Holder of prospecting right must obtain Minister's permission to remove any mineral or bulk samples	R 100 000 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.	R 500 000 for each day of contravention
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	R 100 000 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	R 500 000 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
95	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	Inaccurate, incorrect or misleading information	A fine or imprisonment of

sections		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) some sections subsequently repealed by National Environmental Management Act, 1998 (Act No. 107 of 1998)
- Atmospheric Pollution Prevention Act, 1965 (Act 45 of 1965) , repealed by National Environmental Management : Air Quality Act, 2004 (Act 39 of 2004)
- 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).
- Hazardous Substances Act, 1973 (Act 15 of 1973)
- National Environmental Management: Biodiversity Act (10 of 2004
- National Heritage Resources Act, 1999 (Act 25 of 1999) (NHRA)
- Constitution of the Republic of South Africa Act (Act.108 of 1996, Section 24)
- National Environmental Management Act, 1998 (Act 107 of 1998)
- Mine Health and Safety Act, 1996 (Act 29 of 1996)

There are several Acts, which have bearing on environmental management in South Africa. For the purpose of this report, this section of legal requirements does not deal with all these statutes, but rather focuses on those that have compliance implications for this application. This section focuses on those pieces of legislation, which require authorisation or permits. However, various statutes, whose provisions have to be complied with, irrespective of whether a permit is required or not, are listed. The provided statutes are applicable to prospecting operations and promotes concepts such as social responsibility, responsibility for latent environmental impacts; the polluter pays principle, the precautionary principle, the involvement of stakeholders and rehabilitation.

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 chips 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
ENPAT	Environmental Potential Atlas of South Africa.
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 germination 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.

B. BIOGRAPHIC DETAILS OF THE APPLICANT:

B 1.1 Full name (and surname) of person or company applying for permit or right	African Exploration, Mining and Finance Corporation (Pty) Ltd c/o Madondo Sizwe
B 1.2 ID number of person or company/ CC registration number	1944/018018/07
B 1.3 Postal address	P.O. Box 786141 Sandton

	2146
B 1.4 Physical/ residential address	Block C Upper Grayston Office Park 152 Ann Crescent Sandton Johannesburg
B 1.5 Applicant's telephone number	(010) 201 4777
B 1.6 Applicant's cellular phone number	082 374 9777
B 1.7 Alternative contact's name	Mr Mpfariseni Mudau (Geologist)
B 1.8 Alternative contact's telephone/cell phone numbers	(010) 201 4747 (Office) 072 776 8397 (Cellular)
B 2.1 Full name of the property on which mining/ prospecting operations will be conducted	Habitat 477 KQ; Witwal 523 KQ; Vaalwal 525 KQ; Fauna 521 KQ; Kwaggafontein 546 KQ; Mogenzon 533 KQ; Kwaggafontein 596 LQ (Lamarie); Knoppieskraal 537 KQ; Blauwbank 605 KQ; Niewpoort 516 KQ; Hartbeespoort 522 KQ; Rheebostrand 481 KQ; Olenenbosch 506 KQ; Weynek 505 KQ; Doorndraai 488 KQ and Onverwacht 486 KQ.
B 2.2 Name of the subdivision	Farms
B 2.3 Approximate center of mining/prospecting area: Latitude	27 ° 46 min 08.29 ^{sec} East
Longitude	24 ° 47 min 48.85 ^{sec} South
B 2.4 Magisterial district	Thabazimbi, Limpopo
B 2.5 Name of the registered owner of the property	See attached
B 2.6 His/her Telephone number	See attached
B 2.7 His/ her Postal address	See attached
B 2.8 Current uses of surrounding areas	

With reference to the land use map in Appendix A, it can be seen that the entire site of the farm Morgenzon 533 KQ, Kwaggafontein 546 KQ, Kwaggafontein 520 KQ, Boekenhoutplaat 519 KQ, Lumarie 596 KQ, Hartbeestpoort 523 KQ, Nieuwpoort 516 KQ, Witwal 523 KQ, Fauna 521 KQ, Vaalwal 534 KQ, Vaalwal 525 KQ and Habitat 477 KQ is used for conservation purposes, i.e. the Mabula Game Reserve; Mokaikai Game Reserve and Kunkuru Game reserve.

Furthermore, Rooiberg Tin Mine next to the farm Olievenbosch 506 KQ and there is a mine in almost +/-8 Km on the east of the farm Morgenzon 533 KQ for the proposed project area and the other surrounding land use is shown to be vacant/unspecified. However, upon visiting the site and surrounding areas it was observed that the majority of the surrounding land uses were also utilised for conservation purposes.

B 2.9 Are there any other, existing land uses that impact on the environment in the proposed mining/ prospecting area?

No other land uses exist that have a negative impact on the environment. The farm and adjacent properties are actively managed according to environmental management plans (conservation areas). Human impact on the site is negligible and has an estimated population of less than 10 people on the site.

B 2.10 What is the name of the nearest town?

The area of interest is situated between Bela Bela and Thabazimbi in Limpopo Province. Thabazimbi, approximately 50 km North West of the site and Rooiberg is about a kilometre from the area (Rooiberg was once the residence of employees of the Rooiberg Tin Mine).

C. ENVIRONMENTAL IMPACT ASSESSMENT:

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

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

C.1 DESCRIPTION OF THE ENVIRONMENT LIKELY TO BE AFFECTED BY PROPOSED PROSPECTING/MINING OPERATIONS: (REGULATION 52(2)(a))			
ENVIRONMENTAL ELEMENT/ IMPACTOR	VALUE	TICK	OFFICE USE
C 1.1 What does the landscape surrounding the proposed operation look like? (Open veldt/ valley/ flowing landscape/ steep slopes)			

The northern half is comprised mainly of low mountains with a steep slope. This terrain type stretches out in a northern direction from the site. The southern half is mainly comprised of plains with open high hills or ridges. This terrain type stretches in a western direction from the site. To the immediate north of the farms the terrain changes from low mountains and plains with open high hills or ridges to plains with open low hills or ridges. The site elevation ranges from approximately 950 m above mean sea level (amsl) to 1253 m amsl.

C 1.2 Describe the type of soil found on the surface of the site

The northern half of the farm contains miscellaneous land classes and rocky areas with miscellaneous soils. On the southern half of the farm, soils of red-yellow apedal and freely drained soils occur. The soils on the southern half of the farm can also be described as red and yellow, dystrophic and/or mesotrophic. To the east of the farm, soils of plinthic catena (dystrophic and/or mesotrophic) occur with red soils having a limited distribution and upland duplex and marginal soils being rare. Further south, soils of red-yellow apedal and freely drained soils occur. These soils are also yellow, dystrophic and/or mesotrophic.

	VALUE	TICK	OFFICE USE
C 1.3 How deep is the topsoil?	0 – 300mm	<input type="checkbox"/>	8
	300 – 600mm	<input checked="" type="checkbox"/>	4
	600mm +	<input type="checkbox"/>	2

Please note that the depth of the soils was determined from the ENPAT data. The scale of this information makes it difficult to identify the site specific soil depths. Based on the receiving terrain it is however anticipated that the soil depth will vary significantly depending on the specific terrain type and location.

C 1.4 What *plants, trees and grasses* grow naturally in the area around the site?

Two main vegetation units occur on the farms i.e. the Waterberg Mountain Bushveld and the Central Sandy Bushveld.

Mucina and Rutherford (2006) describe the Waterberg Mountain Bushveld as being least threatened (conservation status) and occurring in rugged mountains with vegetation grading from *Faurea saligna-Protea caffra* bushveld on higher slopes through broad-leaved deciduous bushveld (dominated by *Diplorhynchus condylocarpon*) on rocky mid- and footslopes to *Burkea Africana-Terminalia sericea* savanna in the lower-lying valleys as well as on deeper sands of the plateaus. The grass layer is moderately or well developed. Taxa endemic to the vegetation unit include *Grewia rogersii*, *Pachystigma triflorum*, *Oxygonum dregeanum* subsp. *canescens* var. *pilosum*.

Mucina and Rutherford (2006) describe the Central Sandy Bushveld as being vulnerable (conservation status) and occurring in low undulating areas, sometimes between mountains, and sandy plains and catenas supporting tall, deciduous *Terminalia sericea* and *Burkea africana* woodland on deep sandy soils and low, broad leaved *Combretum* woodland on shallow rocky or gravelly soils. Species of *Acacia*, *Ziziphus* and *Euclea* are found on flats and lower slopes on eutrophic sands and some less sand soils. *Acacia tortilis* may dominate some areas along valleys. This vegetation unit has a grass dominated herbaceous layer with relatively low basal cover on dystrophic soils.

There exists a strong possibility that Red Data species may occur on site and therefore it is recommended that where vegetation is cleared or removed, a qualified floral ecologist/taxonomist should be present in order to ensure that no vulnerable or sensitive or red data species are removed/damaged. Should red data species/other sensitive flora be encountered all efforts should be made to ensure that these species are not damaged.

C 1.5 What *animals* naturally occur in the area?

The farms contain a large amount of different game and wildlife. During a visit to the farm the following animals were noted: Zebra, Buffalos, a variety of lizards, Crocodile and Eagle. It should further be noted that this farms are completely within an area which according to the ENPAT, is a special habitat location for leopard. It is anticipated that the fact that this properties are managed as a conservation area contributes significantly to the existing biodiversity.

	VALUE	TICK	OFFICE USE
C 1.6 Are there any <i>protected areas</i> (game parks/nature reserves, monuments, etc) close to the proposed operation?	Yes	<input checked="" type="checkbox"/>	4
	No	<input type="checkbox"/>	0

Mabula Game Reserve; Mokaikai Game Reserve and Kunkuru Game reserve are within and close to the proposed area.

C 1.7 What mineral are you going to prospect or mine for?	Fluospar, Rare Earth Metals, Tin, Zinc, Lithium, Copper, Manganese and Feldspar
--	---

C 1.8 Describe the type of equipment that will be used:

Prospecting is proposed to be conducted via drilling methods. Drilling will involve a combination of percussion, tricone and diamond drilling with mud and casing to support holes through sand cover. A drilling machine and truck will transport the drilling equipment.

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

ENVIRONMENTAL ELEMENT/ IMPACTOR	VALUE	TICK	OFFICE USE
C 2.1 What will the ultimate depth of the proposed prospecting/mining operations be?	0 – 5m		2
	6 – 10m		4
	10 – 25m		8
	25m +	<input checked="" type="checkbox"/>	10

It is anticipated that prospecting boreholes will be approximately 1000 m deep.

C 2.2 How large will the <i>total</i> area of all excavations be?	Unknown. With reference to the Prospecting Works Programme provision has been made for 20 drill holes. Each site will require space to place a drill machine and ancillary equipment (approximately 20mx20m).		ha
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C 2.3 How large will each excavation be before it is filled up?	<10 X 10m	<input checked="" type="checkbox"/>	2
	<20 X 20m		4
	>20 X 20m		8

C 2.4 How many <i>prospecting</i> boreholes or trenches will there be?			
--	--	--	--

Initially, at least 20 boreholes at an anticipated depth of 1000 m each will be required for target testing (total 20 000 m). Thereafter, it is envisaged that an additional 10 000 m would be required and will depend on many factors such as deposit type, size, depth, etc.

	VALUE	TICK	OFFICE USE
C 2.5 Will employees prepare food on the site and collect firewood?	Yes		4
	No	<input checked="" type="checkbox"/>	0
C 2.6 Will water be extracted from a river, stream, dam or pan for use by the proposed operation?	Yes		4
	No	<input checked="" type="checkbox"/>	2

Water will not be extracted from any un-licensed or -approved river, stream, dam or pan for use by the proposed operation.

The standard practice will be to obtain water from existing approved/licensed sources. This may include landowner's dams and/or boreholes. Any abstraction will be undertaken within the parameters of any relevant abstraction permit/license requirements. The use of local water sources must be negotiated and agreed with the relevant landowners prior to use.

C 2.7 If so, what is the name of this water body? Vaalwaterspruit and Toospruit Rivers

C 2.8 If water will not be extracted from an open surface source, where will it be obtained? N/A

	VALUE	TICK	OFFICE USE
C 2.9 How much water per day will the <i>mineral processing</i> operation require?	1000 – 10 000 Liters	<input checked="" type="checkbox"/>	2
	20 000 – 40 000 L	<input type="checkbox"/>	3
	40 000 – 60 000 L	<input type="checkbox"/>	5
	60 000 – 100 000L	<input type="checkbox"/>	8
	More	<input type="checkbox"/>	10

It is anticipated that there will be no need for mineral processing

C 2.10 How far is the proposed operation from open water (dam, river, pan, lake)?	0 – 15m	<input checked="" type="checkbox"/>	8
	16 – 30m	<input type="checkbox"/>	6
	31 – 60m	<input type="checkbox"/>	4
	More than 60 metres	<input type="checkbox"/>	2

The Vaalwaterspruit River across the northern boundary of the site and the with several non-perennial streams joining the Vaalwaterspruit River from the western and eastern of the site. Please refer to Appendix A for Maps indicating the extent of these rivers and streams. The Toospruit River is as well crossing the eastern part of the application.

The distance of the operation to any open water source will depend on the exact location of the prospecting drilling. The regulations relating to the restrictions of locality of prospecting activities, as required by the GNR704 (promulgated under the National Water Act) will be adhered to- no prospecting activities to be undertaken under or within the 1:50 year floodline or within 100m form a water resource.

C 2.11 What is the estimate depth of the water table/ borehole? Approx. 60 metres

C 2.12 How much water per day will the proposed operation utilize for employees? 30 Liters

C 2.13 What toilet facilities will be made available to workers? None 8

	Pit latrine (longdrop)		4
	Chemical toilet	<input checked="" type="checkbox"/>	2
C 2.14	Would it be necessary to construct roads to access the proposed operations?	Yes	<input checked="" type="checkbox"/> 4
		No	<input type="checkbox"/> 0
<p>Very few internal roads exist and it is anticipated that new internal (temporary) roads may need to be provided. However, the extent of any access roads would depend on the location of the identified drill sites. The use of existing access roads should be utilised wherever possible. In the event that new access roads are required (i.e. wider than 4m or have a road reserve wider than 6m, and is longer than 30m or where bridges need to be constructed to cross rivers or streams) then the Limpopo Department of Economic Development, Environment and Tourism must be consulted and the necessary NEMA Environmental Authorisation obtained prior to commencement.</p> <p>These roads will be located on private properties and must be delineated in consultation with the landowner and heritage and ecological specialists.</p>			
		VALUE	TICK
C 2.15	How long will these access road(s) be (from a public road to the proposed operations)	0 – 0,5 km	<input type="checkbox"/> 4
		0,6 – 1,5 km	<input type="checkbox"/> 2
		1,6 – 3 km	<input checked="" type="checkbox"/> 4
<p>It is anticipated that the access roads to the site may be longer than 3km depending of the location of the specific identified drill sites.</p>			
C 2.16	Will trees be uprooted to construct these access road(s)?	Yes	<input checked="" type="checkbox"/> 4
		No	<input type="checkbox"/> 0
C 2.17	Will any foreign material, like crushed stone, limestone, or any material other than the naturally occurring topsoil be placed on the road surface?	Yes	<input checked="" type="checkbox"/> 4
		No	<input type="checkbox"/> 0
<p>Materials and methods required for any access road construction will be dependant on the specific locality of the identified drill sites.</p>			
C.3 TIME FACTOR			
C 3.1	For what time period will prospecting/mining operations be conducted on this particular site?	0 – 6 months	<input checked="" type="checkbox"/> 2
		6 – 12 months	<input type="checkbox"/> 4
		12 – 18 months	<input type="checkbox"/> 6
		18 – 24 months	<input type="checkbox"/> 8
		>24 months	<input type="checkbox"/> 10
<p>It is anticipated that the time period required for drilling will not exceed 6 months at any particular site. The prospecting works programme predicts that the site activities will endure approximately 60 months.</p>			

C.4 HOW WILL THE PROPOSED OPERATION IMPACT ON THE SOCIO-ECONOMIC ENVIRONMENT? (REGULATION 52(2)(b))			
ELEMENT/ IMPACTOR	VALUE	TICK	OFFICE USE
C 4.1 How many people will be employed?	• 6		
C 4.2 How many men?	• 5		
C 4.3 How many women?	• 1		
C 4.4 Where will employees be obtained? (Own or employed from local communities?)	Own	<input checked="" type="checkbox"/>	2
	Local		4
The core prospecting team will not be locally based. In the event that local circumstances required additional labour then local sources will be given preference.			
C 4.5 How many hours per day will employees work?	Sunrise → Sunset	<input checked="" type="checkbox"/>	4
	Less		2
	More		8
	VALUE	TICK	OFFICE USE
C 4.6 Will operations be conducted within 1 kilometer from a residential area	Yes	<input checked="" type="checkbox"/>	6
	No		1
The distance to residential areas and houses will depend on the exact location of the identified drill/site investigation sites. It is recommended that all residential areas are subjected to a buffer of 1km in which prospecting works should not be carried out. Should it be imperative that prospecting occur within this buffer zone private consultation with, and written approval from, the landowner should be obtained.			
C 4.7 How far will the proposed operation be from the nearest fence/windmill/house/dam/built structure?	0 – 50 metres	<input checked="" type="checkbox"/>	8
	51 – 100 metres		4
	150 or more metres		2
The distance to any existing structures will depend on the exact location of the identified drill/site investigation sites. In certain cases it may be preferable to locate these sites close to fence lines etc in order to reduce the direct environmental impact/ disturbed area (i.e. fence lines may have existing firebreak or monitoring roads which should be utilised). Where possible a distance of at least 50 m will be provided between the prospecting operations and any fence, windmill, house, dam, or built structure. In the event that it is preferable to be located			

closer than this then written consent must be obtained from the relevant owner. The site contains existing dams, fences, built structures.

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
C 5.1 Are there any graveyards or old houses or sites of historic significance within 1 kilometer of the area?	Yes	<input checked="" type="checkbox"/>	8
	No	<input type="checkbox"/>	0

Although no heritage features were observed during a site visit, it is understood from the landowner that heritage features (graves and bushmen drawings) exist on site. It is recommended that if any sites of heritage value or graves are uncovered during the prospecting activity that the prospecting activities be stopped immediately and that the local police and heritage specialist be contacted immediately.

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:

It is anticipated that the proposed prospecting activities will contribute to dust emissions within the immediate surroundings from where the prospecting boreholes will be drilled. Dust is likely to arise from vehicle traffic movements as well as the site investigations themselves. Other than large game animals present on site, there are no sensitive receptors on or near to the site. It is therefore anticipated that dust emissions would not be a significant impact. It is anticipated that when excessive dust is noted on site that the necessary dust control methods (dust suppression via spraying of water) will be implemented, including but not limited to:

1. Retention of vegetation where possible will reduce dust travel
2. Damping down of all exposed soil surfaces with a water bowser or sprinklers when necessary to reduce dust.
3. Prospecting and other clearing activities must only be done during agreed working times and permitting weather conditions to avoid drifting of sand and dust into neighbouring areas.

C.6.2 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)

N/A

C.6.3 Noise control (Regulation 66)

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

The farm has game lodges, of which one is used for recreational purposes and weekend getaways. Excessive noise within close proximity to these lodges will disrupt the peaceful environment created on these farms and detract from the reason for visiting the farms in the first place.

Apart from the abovementioned, there were no sensitive receptors noted on or near to the site.

Noise is only likely to be generated from the drilling equipment during travel to the site and during the drilling of the boreholes (limited duration). As a result of the remote location of the proposed site, it is anticipated that the noise generated during the prospecting operations will have a minimal impact on the surrounding environment. The following mitigation measures are recommended for reduction of noise:

1. All efforts should be made to avoid prospecting activities close to the lodges located on the farms. The landowner should be consulted regarding the times of exploration.
2. Noisy activities should be limited to normal working hours only.
3. Noise from labourers must be controlled.
4. The contractor must take measures to discourage labourers from loitering in the area and causing noise disturbance. Where possible labour shall be transported to and from the site by the contractor or his Sub-Contractors by the contractors own transport.

C.6.4 Blasting, vibration and shock (Regulation 67)

Please indicate whether any blasting operations will be conducted.

Blasting: Yes/ No: **NO** How often?

No blasting activities will take place during prospecting.

C.6.5 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.

It is anticipated that a very small amount of domestic waste will be generated by the labourers on site. This domestic waste will be collected in bins of adequate size and disposed of at a registered waste disposal site.

Excess rock cores resulting from the drilling process will be collected on a pick-up truck and disposed of site, at a suitably registered waste disposal site.

Where possible drilling fluids must be stored in closed above ground containers and settlement wastes must be disposed of at a suitably licenced facility. A closed circuit system must be used for the drilling so as to reduce waste water.

C.6.6 Soil pollution and erosion control (Regulation 70)

6.6.1 Indicate how topsoil will be handled on the area.

Soil pollution and Topsoil

1. Before prospecting can commence, the drill team should determine the depth of the topsoil at the area where drilling is to take place. Thereafter, the full depth of topsoil should be stripped from areas affected by the prospecting activity and related activities prior to the commencement of these activities and stockpiled in a designated area (e.g. site where drilling machinery will be placed). Topsoil must be reused where possible to rehabilitate disturbed areas.
2. Care must be taken not to mix topsoil and subsoil during stripping.
3. Topsoil should not be stockpiled higher than 1.5 meters.
4. Topsoil should be stockpiled for the shortest period possible.
5. The biological, chemical and physical properties of the top soil must not be changed by introducing detrimental foreign material, gravel, rock, rubble or mine residue to such soil (MPRDA Regulation 70(7))
6. Should any topsoil become polluted the polluted soil should be removed to the full depth of pollution and replaced with topsoil which should be at least equal to Department of Agriculture approved topsoil specifications.
7. Removed polluted topsoil should be transported to a registered waste disposal facility.

Erosion control

1. Wind screening and stormwater control should be undertaken to prevent loss of topsoil from the site.
2. All erosion control mechanisms need to be regularly maintained.
3. Vegetation should be retained where possible to avoid soil erosion.
4. Vegetation clearance should be phased to ensure that the minimum area of soil is exposed to potential erosion at any one time.
5. Re-vegetation of disturbed surfaces should occur immediately after prospecting activities are completed at each borehole site on the farm.
6. To prevent stormwater damage, the increase in stormwater run-off resulting from prospecting activities must be estimated and the drainage system assessed accordingly, to prevent downstream impacts on water resources (including but not limited to: scouring, sedimentation, erosion and undercutting).
7. Due to the steep slopes and perennial and non-perennial streams on site, it is recommended that no prospecting take place on steep slopes (gradient greater than 1:10) or within 100 m of any water course or resource.

6.6.2 Describe how spills of oil, grease, diesel, acid or hydraulic fluid will be dealt with.

It is anticipated that only minor spills of oil, grease, diesel or hydraulic fluid may occur during the prospecting activities. However, due to the difficult terrain and the fact that there are no access roads, it is anticipated that vehicle breakdowns will occur on this site. It is recommended that the following measures be implemented in order to limit the impact of these spills on the environment:

1. Any spillage, which may occur, shall be investigated and immediate action must be taken. All spills must be recorded and reported to the DMR where necessary.
2. Depending on the nature and extent of the spill, contaminated soil must be removed and disposed of in a waste deposit receptacle for final disposal at a licensed facility.
3. Removal of contaminated soil must be done with appropriate tools/machinery to storage containers until treated or disposed of at a licensed hazardous waste disposal site.
4. The person taking responsibility for the implementation of the EMPlan must determine the precise method of treatment of polluted soil where relevant. This could involve the application of soil absorbent materials as well as oil-digestive powders to the contaminated soil.
5. If necessary, oil absorbent sheets or pads or similar alternatives must be attached to leaky machinery or infrastructure.
6. Materials used for the remediation of petrochemical spills must be used according to product specifications and guidance for use.
7. Contaminated remediation materials must be carefully removed from the area of the spill so as to prevent further release of hazardous substances to the environment, and stored in adequate containers until it can be disposed of adequately.

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

No storage of fuel has been proposed on site. The fuel storage site should be approved by the DMR. All measures should be taken to ensure that the fuel storage and transportation equipment is in good working condition at all times. The provisions and requirements of the NEMA must also be considered when storing fuels and dangerous/ hazardous substances.

PLS INSERT THE IMPACT RATING CRITERIA

	C.6.7 If significant impacts on any element of the environment mentioned in Section C 1 to C 6.6 above have been identified, summarise all of them here: (Regulation 52(2)(c))	Status	Significance rating ¹					C.6.8 How will the negative impacts on the environment be mitigated or managed (as described in C 6.11 to the left?) (Regulation 57(2)(c))	Status	Significance rating				
			E	D	S	F	B							
	<p>Example: Section C 6.4 Blasting. I have identified that the people living on the neighbouring property are sensitive to loud noises as they have children that must study during the afternoons</p> <p>Section C1.1. Landscape It is anticipated that the landscape will be impact upon by the prospecting activities due to the need for construction of roads and drilling activities.</p>	+	2	2	2	2	12	+	2	2	2	2	2	12
1.	Section C1.1. Landscape It is anticipated that the landscape will be impact upon by the prospecting activities due to the need for construction of roads and drilling activities.	-	2	2	6	4	40	-	1	2	4	4	28	
2.	Section C1.2, C1.3 and C6.6 Soil disturbance and pollution It is anticipated that the prospecting activities will lead to a disruption of the topsoil and possibly lead to erosion through wind and water.	-	2	2	6	4	40	-	2	2	4	3	24	

¹ Please refer to the Impact Significance Rating in Appendix D

C.6.7 If significant impacts on any element of the environment mentioned in Section C 1 to C 6.6 above have been identified, summarise all of them here: (Regulation 52(2)(c))	Status	Significance rating ¹			C.6.8 How will the negative impacts on the environment be mitigated or managed (as described in C 6.11 to the left?) (Regulation 57(2)(c))	Status	Significance rating						
		SE	D	M			P	B	SE	D	M	P	B
					<ul style="list-style-type: none"> • Topsoil should be stockpiled for the shortest period possible. • The biological, chemical and physical properties of the top soil must not be changed by introducing detrimental foreign material, gravel, rock, rubble or mine residue to such soil (MPRDA Regulation 70(7)) • Should any topsoil become polluted the polluted soil should be removed to the full depth of pollution and replaced with topsoil which should be at least equal to Department of Agriculture approved topsoil specifications. • Removed polluted topsoil should be transported to a registered waste disposal facility. • Erosion measures should also be implemented as per Section C6.6 above. • Any spillage, which may occur, shall be investigated and immediate action must be taken. All spills must be recorded and reported to the DMR where necessary. • Depending on the nature and extent of the spill, contaminated soil must be removed and disposed of in a waste deposit receptacle for final disposal at a licensed facility. • Removal of contaminated soil must be done with appropriate tools/machinery to storage containers until treated or disposed 								

C.6.7 If significant impacts on any element of the environment mentioned in Section C 1 to C 6.6 above have been identified, summarise all of them here. (Regulation 52(2)(c))	Status	Significance rating ¹					C.6.8 How will the negative impacts on the environment be mitigated or managed (as described in C 6.11 to the left?) (Regulation 57(2)(c))	Status	Significance rating							
		S	M	L	P	F			S	M	L	P	F			
							<ul style="list-style-type: none"> of at a licensed hazardous waste disposal site. The person taking responsibility for the implementation of the EMPlan must determine the precise method of treatment of polluted soil where relevant. This could involve the application of soil absorbent materials as well as oil-digestive powders to the contaminated soil. Any spillage, which may occur, shall be investigated and immediate action must be taken. All spills must be recorded and reported to the DMR where necessary. Depending on the nature and extent of the spill, contaminated soil must be removed and disposed of in a waste deposit receptacle for final disposal at a licensed facility. Removal of contaminated soil must be done with appropriate tools/machinery to storage containers until treated or disposed of at a licensed hazardous waste disposal site. The person taking responsibility for the implementation of the EMPlan must determine the precise method of treatment of polluted soil where relevant. This could involve the application of soil absorbent materials as well as oil-digestive powders to the contaminated soil. If necessary, oil absorbent sheets or pads 									

C.6.7 If significant impacts on any element of the environment mentioned in Section C 1 to C 6.6 above have been identified, summarise all of them here: (Regulation 52(2)(c))	Significance rating ¹					C.6.8 How will the negative impacts on the environment be mitigated or managed (as described in C 6.11 to the left? (Regulation 57(2)(c))	Status	Significance rating												
	E	D	H	P	S			1	2	3	4									
3. Section C1.4. Vegetation The Central Sandy Bushveld has been identified as a vulnerable vegetation unit. Prospecting activities (clearing of vegetation for access roads and drilling) could lead to a disturbance of this vegetation and introduce weeds and alien vegetation to those sites.							-	2	3	6	4	44								
						<ul style="list-style-type: none"> or similar alternatives must be attached to leaky machinery or infrastructure. Materials used for the remediation of petrochemical spills must be used according to product specifications and guidance for use. Contaminated remediation materials must be carefully removed from the area of the spill so as to prevent further release of hazardous substances to the environment, and stored in adequate containers until it can be disposed of adequately. Materials used for the remediation of petrochemical spills must be used according to product specifications and guidance for use. Contaminated remediation materials must be carefully removed from the area of the spill so as to prevent further release of hazardous substances to the environment, and stored in adequate containers until it can be disposed of adequately. 						2								
						<ul style="list-style-type: none"> No vegetation should be cleared unnecessarily and large trees should remain intact and not damaged. Where vegetation is cleared or removed, a qualified floral ecologist should be present in order to ensure that no vulnerable or sensitive or red data species are removed/damaged. Should red data species/other sensitive flora be encountered all efforts should be 														

	C.6.7 If significant impacts on any element of the environment mentioned in Section C 1 to C 6.6 above have been identified, summarise all of them here: (Regulation 52(2)(c))	Status	Significance rating ¹					C.6.8 How will the negative impacts on the environment be mitigated or managed (as described in C 6.11 to the left? (Regulation 57(2)(c))	Status	Significance rating			
			E	D	M	P	S						
4.	Section C1.5. Fauna It is anticipated that the large variety of fauna present on the site may be impacted by the prospecting activities.	-	2	2	6	3	30	<ul style="list-style-type: none"> made to ensure that these species are not damaged. All areas affected by the prospecting sites should be kept free from weeds and alien invasive vegetation. A weed eradication programme must be compiled and implemented as far as possible. Where weeds or alien vegetation do occur on site, it should be removed manually and no pesticides may be used to eradicate weeds. Rehabilitation should occur with vegetation that occurs on the site naturally, and should be done to the satisfaction of the DMR and the relevant landowner. 	-	1	4	3	18
5.	Section C1.6, C2.12 – C2.17 Impact on existing nature reserves. The proposed prospecting will take place on various farms, to which access is gained through the existing farms.	-	2	3	8	5	65	<ul style="list-style-type: none"> No faunal species are allowed to purposefully killed on or around the site (including wildlife and livestock). Vehicle operators should reduce their speed while driving on site and remain vigilant, so as to reduce the risk of killing game and other fauna by accident. Prospecting team may not engage any of the animals and should remain aware of the risk of cheetahs, lions, elephant and crocodiles, amongst others. Where access roads are required, these access roads may not be longer than 30m and wider than 4 m or have a reserve greater than 6m (in the event that this is exceeded then there is a possibility that a NEMA 	-	2	8	4	48

	C.6.7 If significant impacts on any element of the environment mentioned in Section C.1 to C.6.6 above have been identified, summarise all of them here: (Regulation 52(2)(c))	Status	Significance rating ¹					C.6.8 How will the negative impacts on the environment be mitigated or managed (as described in C.6.11 to the left?) (Regulation 57(2)(c))	Status	Significance rating			
			E	D	M	H	S						
8.	Section C6.5 Generation of domestic waste. It is anticipated that a very small amount of domestic waste will be generated by the labourers on site.	-	1	1	4	5	30	<ul style="list-style-type: none"> all times to ensure that the local people have free access to and from their properties. Speed limits shall be enforced in such areas. This domestic waste must be collected in bins of adequate size and disposed of at a registered waste disposal site. 	-	1	2	3	12
9.	Section C6.6.3 Storage of fuel Prospecting vehicles and equipment will require re-fueling during operation.	-	2	2	8	3	36	<ul style="list-style-type: none"> It is recommended that fuel be stored at a suitable location, outside of the Farms or Nature Reserve and that fuel be transported to the site with a bowser as and when necessary. The fuel storage site should be approved by the DMR. All measures should be taken to ensure that the fuel storage and transportation equipment is in good working condition at all times. The provisions and requirements of the NEMA must also be considered when storing fuels and dangerous/ hazardous substances. 	-	1	8	2	20
10.	Section C6.3 Noise The some farms has lodges, of which are used for recreational purposes and weekend getaways. Excessive noise within close proximity to these lodges will disrupt the peaceful environment created on these farms and detract from the reason for visiting the farms in the first place.	-	2	1	6	4	36	<ul style="list-style-type: none"> All efforts should be made to avoid prospecting activities close to the residential lodges located on the farms when these lodges are occupied. The landowner should be consulted regarding the times of occupation of these lodges. Noisy activities should be limited to normal working hours only. Noise from labourers must be controlled. The contractor must take measures to discourage labourers from loitering in the 	-	1	4	4	24

	C.6.7 If significant impacts on any element of the environment mentioned in Section C.1 to C.6.6 above have been identified, summarise all of them here: (Regulation 52(2)(c))	Status		Significance rating ¹					C.6.8 How will the negative impacts on the environment be mitigated or managed (as described in C.6.11 to the left? (Regulation 57(2)(c))	Status	Significance rating			
		E	D	M	P	S	A	1			2	3	4	5
11.	Section C6.1 Dust and Air Pollution It is anticipated that the proposed prospecting activities will contribute to dust emissions within the immediate surroundings from where the prospecting boreholes will be drilled. Other than large game animals present on site, there are no sensitive receptors on or near to the site. It is therefore anticipated that dust emissions would not be a significant impact.	-	1	4	4	4	24		<ul style="list-style-type: none"> Retention of vegetation where possible will reduce dust travel Damping down of all exposed soil surfaces with a water bowser or sprinklers when necessary to reduce dust. Prospecting and other clearing activities must only be done during agreed working times and permitting weather conditions to avoid drifting of sand and dust into neighbouring areas. 	-	1	2	4	16
12.	Section C2.6 Abstraction of water During prospecting water would need to be abstracted.	-	2	1	8	4	44		<ul style="list-style-type: none"> Where possible water should be obtained from existing approved/licensed sources. This may include landowner's dams and/or boreholes. Any abstraction should be undertaken within the parameters of any relevant abstraction permit/license requirements. The use of local water sources must be negotiated and agreed with the relevant landowners prior to use. 	-	1	6	3	24
13.	Section C4 Social issues and Security risk/theft. It is anticipated that due to the increase in human activity within the area that potential social issues may arise and that theft or other criminal activity may exist.	-	2	2	6	3	30		<ul style="list-style-type: none"> Activities such as consumption or illegal selling of alcohol, drug use or selling and prostitution on site shall be prohibited. Any persons found to be engaged in such activities should receive disciplinary or criminal action taken against them. Access to the prospecting site should be strictly controlled and should be done in full consultation with all applicable landowners. 	-	1	4	3	18

C 6.7 If significant impacts on any element of the environment mentioned in Section C 1 to C 6.6 above have been identified, summarise all of them here. (Regulation 52(2)(c))	Status	Significance rating ¹					C.6.8 How will the negative impacts on the environment be mitigated or managed (as described in C.6.11 to the left?) (Regulation 57(2)(c))	Status	Significance rating							
		E	D	M	B	S										
							<ul style="list-style-type: none"> No workers shall be permitted to live on the site. No alcohol / drugs to be present on site. No firearms allowed on site or in vehicles transporting staff to / from site (unless used by security personnel). No harvesting of firewood from the site or adjacent properties. Where applicable, workers should be guided by a game ranger in order to avoid contact with dangerous game. 									

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.

Enter the amount of financial provision required here: R 18 810.00
 This amount has been determined and provided for by the Applicant as detailed in the attached Prospecting Works Program.

It should be noted a recommendation has been made under C6.8. Impact no 5 that a suitably qualified engineer be appointed to assess the ability of the bridge to support the prospecting machinery and equipment. At a consulting rate of approximately R1500 per hour x 10 hours it is anticipated that an additional R15 000.00 should be added to the financial provision (thus a total of R29 500.00).

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

Cash deposit	<input type="checkbox"/>
Bank guarantee	<input checked="" type="checkbox"/>
Trust Fund	<input type="checkbox"/>
Other: (specify) (Note: other methods must be approved by the Minister)	<input type="checkbox"/>

The standard formats for each of these types of guarantees are available from your regional office of the DMR.

C.8.1 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:

C.8.2 Please describe how the adequacy of this programme will be assessed and how any inadequacies will be addressed. (Regulations 55(1) and 52(2)(e))

The Applicant will undertake monitoring on a continuous basis and will prepare annual performance assessment reports to be submitted to the DMR for review. This assessment report will comply with the requirements of Regulation 55 of the MPRDA regulations. This assessment will report on the compliance/ non-compliance of the activities/ operations against the specific requirements as provided in this EMPlan.

In the event that unanticipated impacts are encountered all reasonable measures will be taken to avoid, prevent, minimize, and mitigate these impacts. Such impacts will be reported on in the monthly performance assessment.

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<p>C.9 Closure and Environmental objectives: (Regulation 52(2)(f)) Clearly state the intended end use for the area prospected/mined after closing of operations</p>
<p>The intended end use for the disturbed prospecting areas and the closure objectives must be defined in consultation with the relevant landowner/s. Proof of such consultation must be submitted together with the Application for Closure Certificate.</p>
<p>C.9.1 Describe, in brief terms, what the environment will look like after a closure certificate has been obtained.</p>
<p>The affected sites should be returned to a similar condition as was the pre-prospecting condition. This must be proved through the use of pre and post prospecting photographic records.</p>

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 below.

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)(g))

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"

C 11.1 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.

C 11.2 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.

C 11.3 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 organisations likely to be influenced by the proposed operations (these might include neighbours, other water users, etc.) Kindly indicate how these people were consulted (eg. 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?

Please refer to Appendix C for the full Issues and Responses Report.

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 C 1,2,4 and 5 and then to multiply it by the time factor in Section C 3**

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.

D 1.1 CALCULATION TABLE

Section C 1 Total	+	Section C 2 Total	+	Section C 4 Total	+	Section C 5 Total	=	<u>Subtotal</u>	X	Time Factor Section C 3	=	Score (Impact rating)
	+		+		+		=		X		=	

D 1.2 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.

E UNDERTAKING:

I,, the applicant for apermit/ right 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 thisday of 20.....at(Place)

.....
Signature of applicant

F. ENVIRONMENTAL MANAGEMENT PLAN:

INTRODUCTION

This Environmental Management Plan contains guidelines, operating procedures and rehabilitation/pollution control requirements which will be binding on the holder of the mining permit/ prospecting permission/ reconnaissance permission after approval of the Environmental Management Plan. It is essential that this portion be carefully studied, understood, implemented and adhered to at all times.

F 1 GENERAL REQUIREMENTS

F 1.1 MAPPING AND SETTING OUT

F 1.1.1 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 covered by the application; and*
- (e) in relation to farm boundaries and surveyed points-*
 - (i) the size and shape of the proposed area;*
 - (ii) the boundaries of the land or area comprising the subject of the application concerned;*
 - (iii) the layout of the proposed reconnaissance, prospecting, exploration, mining or production operations;*
 - (iv) surface structures and servitudes;*
 - (v) the topography of the land or area; "*

F 1.1.2 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.

F 1.1.3 DEMARCATING THE RIVER CHANNEL AND RIVERINE ENVIRONMENT

The following is applicable if operations are conducted within the riverine environment (See F 3.2):

- 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 F 1.1.2.

F 1.2 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 5 m of these areas.

F 1.3 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.

F 2 INFRASTRUCTURAL REQUIREMENTS

F 2.1 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.

F 2.2 ACCESS TO THE SITE

F 2.2.1 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 C 2.17
- 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.

F 2.2.2 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.

F 2.2.3 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.

F 2.2.4 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 specification.

F 2.3 OFFICE/CAMP SITES

F 2.3.1 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 F 2.1 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.

F 2.3.2 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, situated as far as possible, but not less than 200 metres, from any stream, river, pan, dam or borehole.
- Only domestic type wash 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.

F 2.3.3 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 -
 - (a) which may not be demolished in terms of any other law;
 - (b) which has been identified in writing by the Minister for purposes of this section; or
 - (c) 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.

F 2.4 VEHICLE MAINTENANCE YARD AND SECURED STORAGE AREAS

F 2.4.1 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 F 2.1 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.

F 2.4.2 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.

F 2.4.3 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.

F 2.4.4 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 F 2.4.3 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.

F 3 OPERATING PROCEDURES IN THE MINING AREA

F 3.1 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 F 1.1.2 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 effected.
- 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.

F 3.2 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 a 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 EMP, 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.

F 3.2.1 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 waters scour and erode access points in the process of rehabilitation over the river-bank or an access point currently in use, repair of such damage shall be the sole responsibility of the holder of the mining permit or prospecting right.
- Repair to 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.

F 3.2.2 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 F 2.3.2 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 LICENCE

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 licence** 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 DMR or DWAF.

Applications for a water use licence must be made in good time, such that approval can be granted before a water use activity can begin. The appropriate licence 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.

F 3.3 EXCAVATIONS

F 3.3.1 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 F 2.1 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.

F 3.3.2 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 F 2.3.2 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.

F 3.4 PROCESSING AREAS AND WASTE PILES (DUMPS)

F 3.4.1 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 F 2.1 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.

F 3.4.2 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.

F 3.5 TAILINGS 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 characterisation*
- (a) *Mine residue must be characterised to identify any potentially significant health and safety hazard and environmental impact that may be associated with the residue when stockpiled or deposited at the site(s) under consideration.*
- (b) *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 particle 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 -*

<i>Number of residents in zone of influence</i>	<i>Number of workers in zone of influence</i>	<i>Value of third party property in zone of influence</i>	<i>Depth to underground mine workings</i>	<i>Classification</i>
<i>0</i>	<i>< 10</i>	<i>0 – R2 m</i>	<i>> 200m</i>	<i>Low hazard</i>
<i>1 – 10</i>	<i>11 – 100</i>	<i>R 2 m – R20 m</i>	<i>50 m – 200 m</i>	<i>Medium hazard</i>
<i>> 10</i>	<i>> 100</i>	<i>> R20 m</i>	<i>< 50 m</i>	<i>High hazard</i>

- (e) *A risk analysis must be carried out and documented on all high hazard residue stockpiles and deposits.*
- (f) *The environmental classification of residue stockpiles 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, as 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 0.5 m 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 retention of polluted water in terms 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 catchment 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 manage 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 intrusion 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 imlemented to ensure the ongoing control of pollution, the integrity of rehabilitation and health and safety maters 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 secifically 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 after care:*
- (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.*

F 3.6 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.

F 4 MONITORING AND REPORTING

F 4.1 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 resubmit 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.*

F 4.2 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.

F 5 CLOSURE

When the holder of a prospecting right, mining permit or reconnaissance permission intends closing down his/her operations, an environmental risk report shall accompany the application for closure. The requirements of such a risk report is contained in Regulation 60 of the Regulations promulgated in terms of the Act and is quoted below :

F 5.1 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-evaluated and 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."*

F 5.2 CLOSURE OBJECTIVES

Closure objectives form part of this EMPlan and must-

- (a) identify the key objectives for mine closure to guide the project design, development and management of environmental objectives;
- (b) provide broad future land use objective(s) for the site; and
- (c) provide proposed closure cost

F 5.3 CONTENTS OF CLOSURE PLAN

A closure plan forms part of the EMP and must include the following:

- (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.

F 5.4 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 a 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 responsibilities is transferred to, have the necessary qualifications pertaining to health and safety and management of potential pollution of water resources.

F 5.5 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).

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										
Accomodation										
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.

H. UNDERTAKING

I,.....
....., the
undersigned and duly authorised thereto by.....
.....
Company/Close Corporation/Municipality (Delete that which is not applicable) have studied and
understand the contents of this document in it's entirety 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 this.....day of.....20.....

.....
Signature of applicant

.....
Designation

Agency declaration: This document was completed byon behalf
of.....

J. APPROVAL

Approved in terms of Section 39(4) of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002)

Signed at.....this.....day of.....20.....

.....
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:

The Director: Mine Environmental Management
Private Bag X 59
PRETORIA
0001

Tel : 012 317 9288
Fax: 012 320 6786
E-mail: dorothy@mepta.pwv.gov.za

REPORT

**CONSULTATION WITH THE LAND
OWNER/INTERESTED & AFFECTED PARTY**

IN RESPECT OF A

**PROSPECTING RIGHT APPLICATION BY AFRICAN
EXPLORATION MINING AND FINANCE
CORPORATION (PTY) LTD**

ON

Limpopo Region

**DME REF NO.
(LP) 30/5/1/1/3/2/1 (2690) PR**

30 MAY 2011

1. Introduction

African Exploration Mining and Finance Corporation (Proprietary) Limited (“the Company”) is applying for a prospecting right on the following farms: Habitat 477 KQ, Witwal 523 KQ, Vaalwal 525 KQ, Fauna 521 KQ, Kwaggafontein 546 KQ, Mogenzon 533 KQ, Kwaggafontein 596 KQ, (Lamarie), Knoppieskraal 537 KQ, Blauwbank 605 KQ, Niewpoort 516 KQ, Hartbeespoort 522 KQ, Rheebostrand 481 KQ, Olenenbosch 506 KQ, Weynek 505 KQ, Doomdraai 488 KQ and Onverwaght 486 KQ, situated in the Magisterial District of Thabazimbi: Limpopo Region..

2. Aim of the consultation

The primary aim of the consultation process is to:

- inform the land owner about company’s application for prospecting right to the DMR;
- inform the land owner about company’s proposed prospecting operations;
- gather issues and concerns regarding the proposed prospecting operations.

3. Methodology

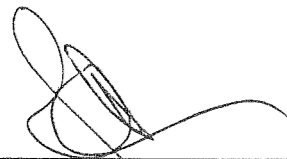
The consultation process undertaken for the project was done one-on-one with the land owner and by post to interested and affected party. In respect of the land owners/occupants that could not be located, a notice of advertisement was placed in a local news paper. In During the discussions a brief background description of the proposed project was provided.

4. Consultation summary

The results of the consultation are summarized in Table 1 below.

5. Conclusion

Due to the fact that the proposed operation only involves drilling there will be limited, if any, impact on the affected and surrounding landowners. The consultation process conducted was important as it raised awareness about the nature of the operation.



PLEASURE MASHAMBA
MGM CORPORATE LEGAL ADVISORS (Pty) Ltd

Table 1

Land Owner details	Property(ties)	How did consultation take place?
The Directors: Mabula Time-Sharing Share Block (Pty) Ltd Private Bag X 1665 Bela Bela 0480 Tel: 014 734 7000 Cell: 071 177 4187	The farm Habitat 477 KQ	One-on-one. The notice letter was given to Mr Natie Ferreira. Proof of consultation is attached.
The Directors: Mabula Wild Resort (Pty) Ltd Private Bag X 1665 Bela Bela 0480 Tel: 014 734 7000 Cell: 071 177 4187	The farm Witwal 523 KQ..	One-on-one. The notice letter was given to Mr Natie Ferreira. Proof of consultation is attached
The Directors: Mabula Wild Resort (Pty) Ltd Private Bag X 1665 Bela Bela 0480 Tel: 014 734 7000 Cell: 071 177 4187	The farm Fauna 521 KQ	One-on-one. The notice letter was given to Mr Natie Ferreira. Proof of consultation is attached
The Directors: Zebula Country Club	The farm Vaalwal 525 KQ.	One-on-one. The notice letter was given to Mananger and she refuse to sigh. Proof of consultation is attached.
The Directors: Rocket Ridge Inv 10 (Pty) Ltd	Portion 1 of the farm Doordraai 448 KQ.	One-on-one. The notice letter was given to Mr Tjaart (Mananger). Proof of consultation is attached.

Land Owner details	Property(ties)	How did consultation take place?
The Trustees: Doomdraai Tel: 012 330 1459 info@doomdraailodge.co.za	The farm Doomdraai 488 KQ	One-on-one. The notice letter was given to Mr Tjaart (Manager). Proof of consultation is attached.
The Directors: Platinum Mile Inv (Pty) Ltd Onverwacht Tel: 072 607 1133 082 967 2931	Portion 2 of the farm Onverwacht 486 KQ..	One-on-one. The notice letter was given to Employee..Proof of consultation is attached
The owner: Olivier Sigrid Elizabeth Onverwacht Cell: 082 562 3580	Remaining extent of the farm Onverwacht 486 KQ	One-on-one. The notice letter was given to Mr Willem Petrus du Plessis.Proof of consultation is attached
The Directors: Red Mountain Lodge Weynek	The farm Weynek 505 KQ.	One-on-one. The notice letter was given to receptionist and she refused to sign. Proof of consultation is attached.
The Directors: Maropeng Game Ranch Prop Nieuwpoort	Remaining extent of the farm Nieuwpoort 516 KQ	Gates were locked. Notice letter was served on the gates Proof of picture is attached.
The Directors: Tightrope Inv (Pty) Ltd Blauwbank	Remaining extent of the farm Blauwbank 605 KQ..	Gates were locked. Notice letter was served on the gates Proof of picture is attached
The Members: Desilets Inv CC Kwaggafontein 546	The farm Kwaggafontein 546 KQ	Gates were locked. Notice letter was served on the gates Proof of picture is attached
The Members: Desilets Inv CC Morgenzon	The farm Morgenzon 533 KQ	Gates were locked. Notice letter was served on the gates Proof of picture is attached