

File number: NC 30/5/1/1/2/1183PR

DEPARTMENT OF MINERALS AND ENERGY  
**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	

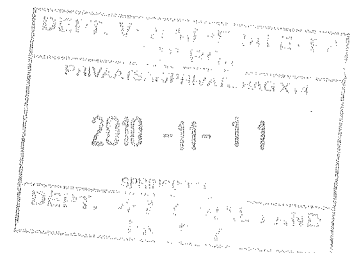
**Applicant:** Gemcore Properties (PTY) LTD

**Farm:** Remainder of Erf 1 Hondeklipbaai.

**District:** Namaqualand.

**Mineral:** GOLD ORE

**Date:** 11 November 2010



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#### 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 DME 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

- The National Water Act, 1998 (Act 36 of 1998)
- Mine Safety and Health Act, 1996 (Act 29 of 1996)
- The Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983).

## A.7 WORD DEFINITIONS

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

<b>Act (The Act)</b>	Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002)
<b>Borehole</b>	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.
<b>CARA</b>	The Conservation of Agricultural Resources Act
<b>EIA</b>	An Environmental Impact Assessment as contemplated in Section 38(1) (b) of the Act
<b>EMP</b>	an Environmental Management Plan as contemplated in Section 39 of the Act
<b>Fauna</b>	All living biological creatures, usually capable of motion, including insects and predominantly of protein-based consistency.
<b>Flora</b>	All living plants, grasses, shrubs, trees, etc., usually incapable of easy natural motion and capable of photosynthesis.
<b>Fence</b>	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.
<b>House</b>	any residential dwelling of any type, style or description that is used as a residence by any human being
<b>NDA</b>	National Department of Agriculture
<b>NWA</b>	National Water Act, Act 36 of 1998
<b>Pit</b>	Any open excavation
<b>"Porrel"</b>	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.
<b>Topsoil</b>	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.
<b>Trench</b>	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.
<b>Vegetation</b>	Any and all forms of plants, see also Fauna
<b>DWAF</b>	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.
<b>MPRDA</b>	the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002)
<b>EMPlan</b>	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>B 2.5</b> Name of the registered owner of the property	1. Hondeklipbaai = Government of RSA property
<b>B 2.6</b> Their Telephone numbers	Hondeklipbaai: Director of Land – Dept of Roads and Public Works, Kimberley – Mr Crouch tel:053-8392106
<b>B 2.7</b> Their Postal address	Dept Roads: PO Box 3132, Kimberley 8301.
<b>B 2.8</b> Current uses of surrounding areas	<b>Mainly mining</b> – natural veldt described as low agricultural potential due to lack of water. The absence of palatable grasses limits grazing and result in extreme low carrying capacity.
<b>B 2.9</b> Are there any other, existing land uses that impact on the environment in the proposed mining/ prospecting area?	Yes – mainly mining. The prospecting will however be done on existing residue deposit sites, slimes dams.
<b>B 2.10</b> What is the name of the nearest town?	Hondeklipbaai

### 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:**

<b>C.1 DESCRIPTION OF THE ENVIRONMENT LIKELY TO BE AFFECTED BY PROPOSED PROSPECTING/MINING OPERATIONS: (REGULATION 52(2)(a))</b>			
<b>ENVIRONMENTAL ELEMENT/ IMPACTOR</b>	<b>VALUE</b>	<b>TICK</b>	<b>OFFICE USE</b>
<b>C 1.1</b> What does the landscape surrounding the proposed operation look like? (Open veldt/ valley/ flowing landscape/ steep slopes)			
Flat open veldt with hardly any hills– see photo report – coastal zone or strand veldt with dunes. Area heavily impacted by previous prospecting and mining operations. See vegetation description in more detail.			

<b>C.2 HOW WILL THE PROPOSED OPERATION IMPACT ON THE NATURAL ENVIRONMENT? (REGULATION 52(2)(b))</b>			
<b>ENVIRONMENTAL ELEMENT/ IMPACTOR</b>	<b>VALUE</b>	<b>TICK</b>	<b>OFFICE USE</b>
<b>C 2.1</b> What will the ultimate depth of the proposed prospecting/mining operations be?	0		2
No prospecting will be done on natural surfaces. The prospecting is done on a slimes dam	6 – 10m	X	4
	10 – 25m		8
	25m +		10
<b>C 2.2</b> How large will the <i>total</i> area of all excavations be?			ha
<b>Core sampling on the slimes dams with no further impacted areas. Slimes dams ranging between 1 and 3 hectare.</b>			
<b>C 2.3</b> How large will each excavation be before it is filled up?	<10 X 10m	X	2
<b>No filling up is required, existing slimes dams will probably close after core has been sampled.</b>	<20 X 20m		4
	>20 X 20m		8
<b>C 2.4</b> How many <i>prospecting</i> boreholes or trenches will there be?	No trenches but approximately 5 to 10 core drilling holes per site.		

<b>C 2.14</b> Would it be necessary to construct roads to access the proposed operations?	Yes		4
Existing slimes dams as part of the mines infrastructure do have access roads already in place.	No	<b>X</b>	0

	VALUE	TICK	OFFICE USE
C 4.6 Will operations be conducted within 1 kilometer from a residential area	Yes		6
	No	X	1
C 4.7 How far will the proposed operation be from the nearest fence/windmill/house/dam/built structure?	0 – 50 metres		8
	51 – 100 metres		4
	150 or more metres	X	2
<b>C.5 HOW WILL THE PROPOSED OPERATION IMPACT ON THE CULTURAL HERITAGE OF THE SURROUNDING ENVIRONMENT? REGULATION 52(2)(b)</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		8
	No	X	0

## C.6 SPECIFIC REGULATORY REQUIREMENTS

<p><b>C.6.1 Air quality Management and Control (Regulation 64)</b> 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:</p> <p><b>DRILLING WILL MOST LIKELY NOT CREATE DUST. Therefore no water necessary to suppress dust. The slimes dams are Fine Residue Deposits (FRD's) and it will be easy to sample.</b></p>
<p><b>C.6.2 Fire Prevention (Regulation 65)</b> Applicants for permits, rights or permissions involving <b><i>coal or bituminous rock</i></b> must:</p> <ul style="list-style-type: none"> <li>• <b><i>Indicate on a plan</i></b> where the coal or rock discard dump will be located <b><i>(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)</i></b></li> </ul>
<b>NOT APPLICABLE</b>
<p><b>C.6.3 Noise control (Regulation 66)</b> Indicate how much noise the operation will generate, and how it will impact on the surrounding environment, who might be influenced by noise from your operation.</p> <p><b>NO NOISE WILL BE CREATED BY TAKING THESE SAMPLES. Site is remote and no houses are close to any planned operations.</b></p>



<p><b>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))</b></p>
<p><b>Example:</b> 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><b>1 THE CONTRACTOR WILL COMMUNICATE WITH THE LANDOWNERS CONCERNING THE SAMPLING SITES AND ALSO THE ACCESS ROADS.</b></p>
<p><b>2 NO BLASTING WILL TAKE PLACE.</b></p>
<p><b>3 CORE WILL BE PARTLY REMOVED FROM THE SITE WITH THE VEHICLE USED EVERY DAY. THE REST OF THE SAMPLE WILL REMAIN ON THE SLIMES DAM.</b></p>
<p><b>4 OILS AND OTHER FLUIDS SHALL BE PLACED ON PLASTIC SHEETS IF APPLICABLE</b></p>
<p><b>5 ONCE THE SAMPLING IS COMPLETED, ALL SITES WILL BE INSPECTED AND VERIFIED BY THE LANDOWNER THAT NO WASTE OR ANY OTHER MATERIAL IS LEFT BEHIND ON SITE.</b></p>
<p><b>6 THE LANDOWNERS MUST INSPECT THE SITE TO ENSURE THE SITE IS PROPERLY CLEARED . This is a restricted area and no un-authorised access is possible.</b></p>

<b>C.9 Closure and Environmental objectives: (Regulation 52(2)(f))</b>
Clearly state the intended end use for the area prospected/mined after closing of operations
<b>Will remain slimes dams DURING PROSPECTING. Possible rehabilitation will be investigated when mining becomes a reality after positive prospecting results.</b>
The site is to be returned back to its original pre prospecting land use.
<b>C.9.1 Describe, in brief terms, what the environment will look like after a closure certificate has been obtained.</b>
<b>Will remain as slimes dams.</b>
<b>Spillages from oil and diesel will be cleaned and the contaminated soils removed</b>

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.

## 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 <b>C 1</b> Total	+	Section <b>C 2</b> Total	+	Section <b>C 4</b> Total	+	Section <b>C 5</b> Total	=	<i>Subtotal</i>	X	Time Factor Section <b>C 3</b>	=	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 DME 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.

## 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.

## 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.**

- 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.

- 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.

- ◆ 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



- 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.

- (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 -

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

- (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.

- (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.*

### 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;*

## 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 5.5 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.

**NOTE:** Gemcore will only prospect on the already disturbed areas, the existing slimes dams, and will not take any responsibility for any rehabilitation costs on these already disturbed areas. They will only rehabilitate what they disturb by the prospecting actions.

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 PROPECTING										
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, **Phillip Mills**, the undersigned and duly authorised thereto by: Gemcore Properties (Pty) Ltd 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 ..... **Kimberley** .....this .....**2 nd** day of.....**November 2010**



Director and shareholder

.....  
**Signature of applicant**

.....  
**Designation**

**Agency declaration:** This document has been completed by Frank van der Kooy (Pr Sci Nat), Lidwala Environmental Planning Services (Pty) Ltd from Kimberley on behalf of Gemcore Properties (Pty)Ltd.

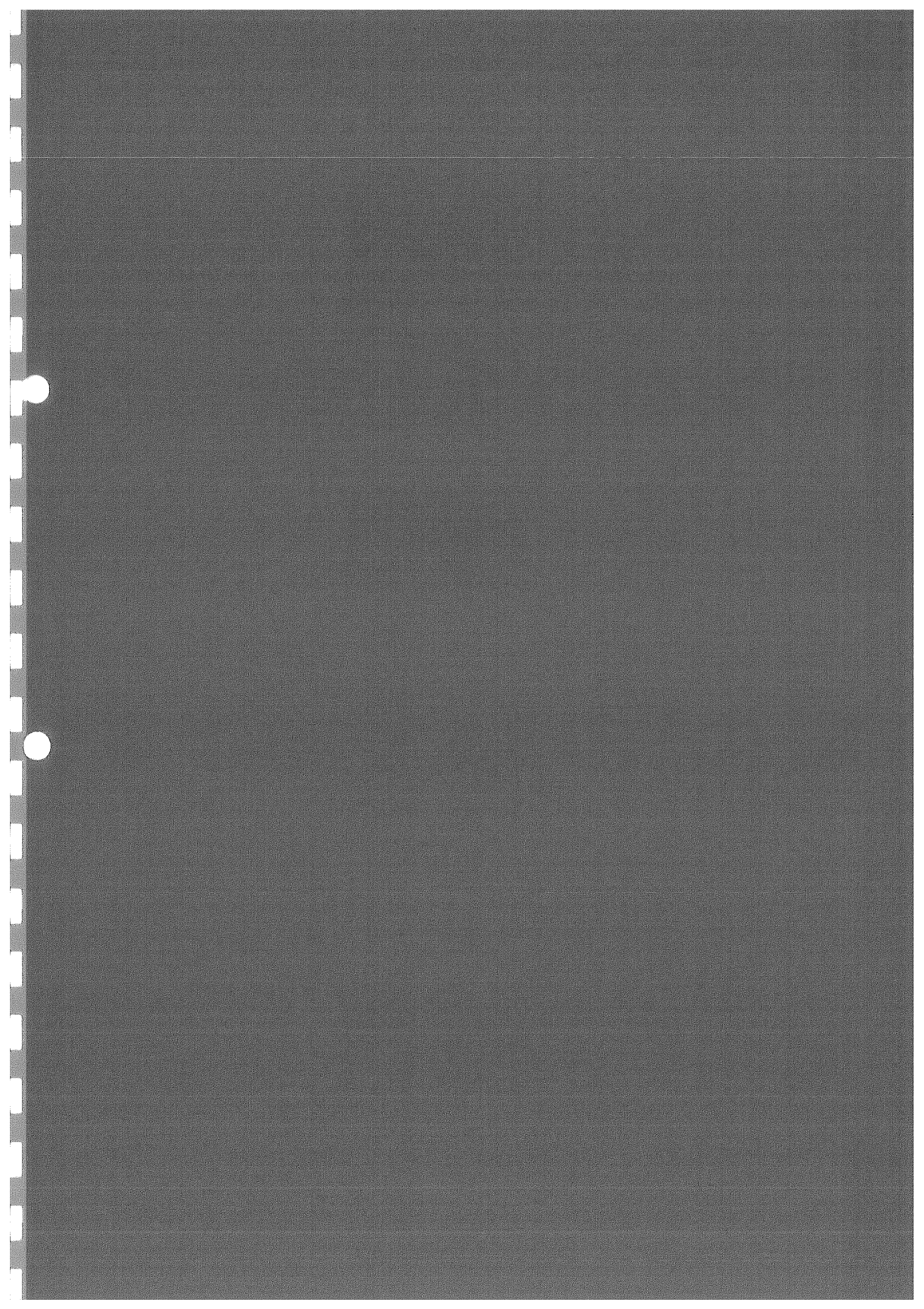
**J. APPROVAL**

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

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

.....  
**REGIONAL MANAGER**

**REGION:**.....





**ANNEXURE A**  
**LETTER FROM DME**



# mineral resources

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

Directorate : Mineral Regulation  
Northern Cape Region

Andia Building Private Bag X 14  
Voortrekker Street Springbok  
Springbok 8240  
8241

Tel : 027 - 712 8160  
Fax : 027 - 712 1959  
Enquiries : N Ndou  
E-mail : [ndanduleni.ndou@dme.gov.za](mailto:ndanduleni.ndou@dme.gov.za)

Ref : NCS 30/S/1/1/2/ 946 PR

Date : 11 October 2010.

**PER REGISTERED MAIL &  
FAX : 053 832 2816**

The Director  
Gemcore Properties (Pty) Ltd  
P.O.Box 10442  
BEACONSFIELD  
8315

## RE: ACCEPTANCE OF AN APPLICATION FOR A PROSPECTING RIGHT

Name of Applicant	Gemcore Properties (Proprietary) Limited
Description of Properties	Remainder of Erf 1 Hondeklipbaai, portions 2 and 5 of Avontuur No 488
District	Namaqualand

Sir

1. This is to inform you that your abovementioned application for the prospecting of **Gold** in terms of section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) has been accepted.

1.1 Furthermore there is an existing application for a prospecting right on some of the farms you have applied for, for the same mineral, **therefore your application will be processed in terms of section 9(1)(b) (in order of receipt) of the Act.**

2. In terms of section 16(4) of the MPRDA you are therefore required:

2.1. to submit an Environmental Management Plan **6 (Six) Copies**

**ANNEXURE B**  
**MAP OF AFFECTED AREA & FARMS**

# GEMCORE PROPERTIES (PTY) LTD.

PLAN PREPARED IN ACCORDANCE WITH  
**Regulation 2 (23 April 2004)**  
 OF THE REGULATIONS, PUBLISHED  
 UNDER THE MINERAL AND PETROLEUM  
 RESOURCES ACT.  
 (ACT 28 of 2002)

## Northern Cape Province

Administrative District of Namakwa

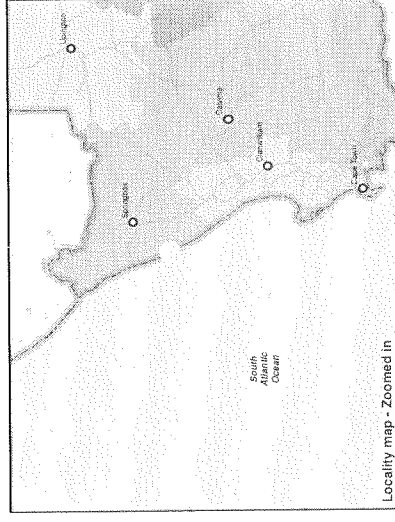
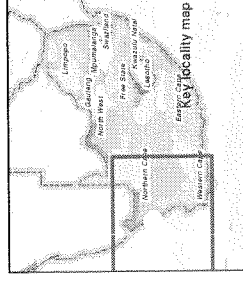
Plan Approved:  
 Regional Manager - Northern Cape Province

Date:

Name of Applicant:

Signed:

Date:



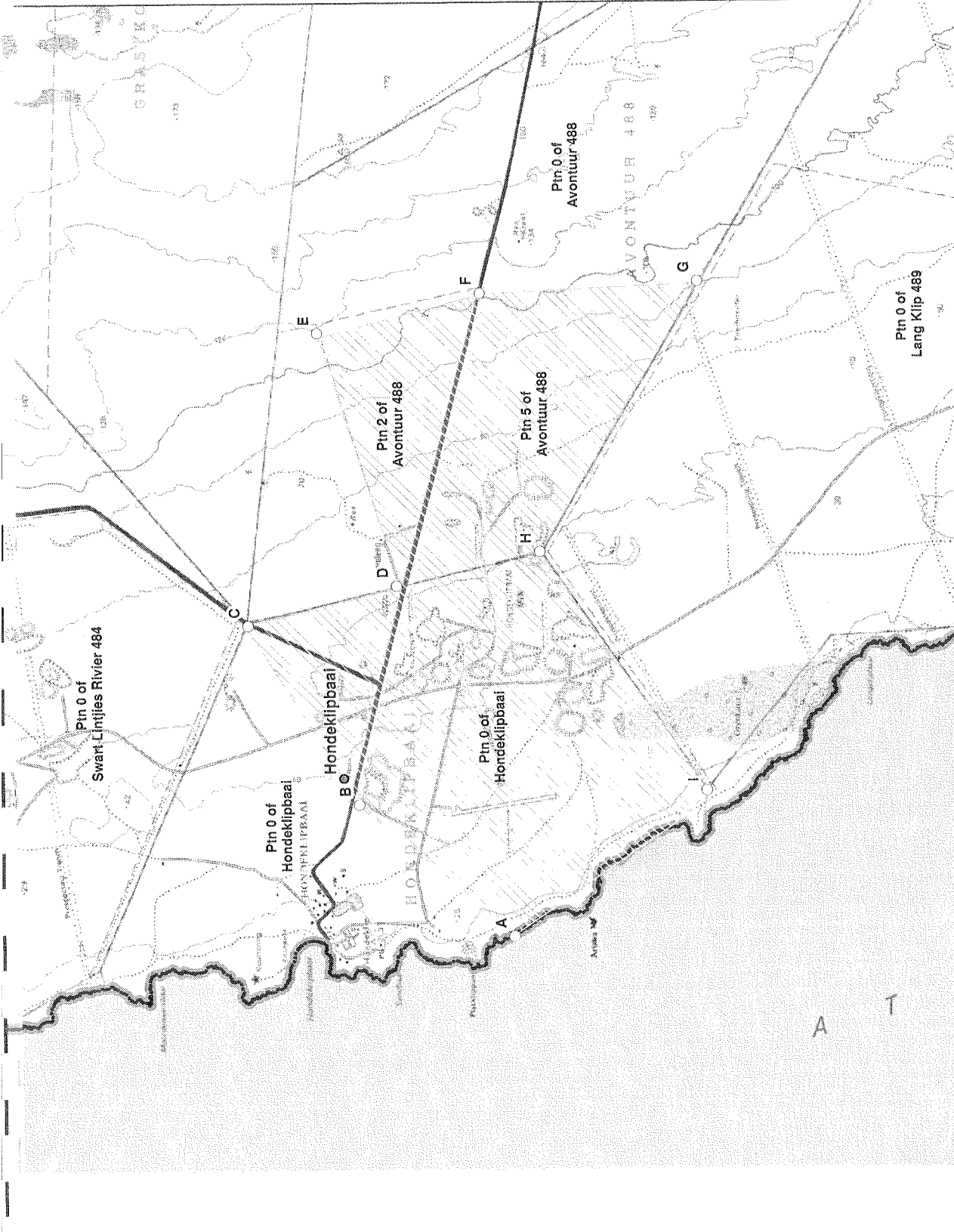
Locality map - Zoomed in

- Area under application
- Co-ordinates
- Farm Portions
- Main rivers
- Place Name
- Primary roads

20m Contour Interval

A3 Print

**Lidwala Environmental & Planning Services (Pty) L**  
 MAP PREPARED BY: Kees Steynberg  
 DATE MAP PRODUCED: 2010-08-30  
 Projection: Transverse Mercator  
 Central Meridian: 17° 30' E  
 Datum: WGS 1984



NAME	East (X)	South (Y)
A	17.27534644320	-30.33779724610
B	17.29016147080	-30.32071149410
C	17.31019572000	-30.30857541000
D	17.31456752770	-30.32502462120
E	17.34285556140	-30.31646855210
F	17.34721934750	-30.33442540480
G	17.34842056590	-30.35864697700
H	17.31825000300	-30.34093200480
I	17.29152500690	-30.35995069130

SLIME DAMS ON THE WEST COAST - CONSOLIDATION OF FARMS(2 254.19 ha)	FARM NO	PTN	HECTARES (ha)	FARMNAME
C05300000000048800002	488	2	322.335	Avontuur 488
C05300000000048800005	488	5	623.569	Avontuur 488
C0530000000000000000	000	0	1308.294	Hondeklipbaai

MINING CONCESSION AREA UNDER APPLICATION



Google

© 2010 Tele Atlas  
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Image © 2010 DigitalGlobe

Imagery Date: May 29, 2003 - Dec 31, 2003

30°20'17.12"S 17°21'03.80"E elev 111 m

Eye alt 23.24 km

# **GEMCORE PROPERTIES (PTY)LTD.**

## **ENVIRONMENTAL REPORT SUPPORTING SECTION C 1.4 OF THE EMP AND PHOTO REPORT**

**for**

**PROPOSED REMAINDER OF ERF 1 HONDEKLIPBAAI  
PROSPECTING APPLICATION**

**NOVEMBER 2010**

Project no: 10004 KNK

**Compiled by:**  
Lidwala EPS (Pty) Ltd  
P.O. Box 3585  
Diamond Pavillion  
8305  
Tel/Fax 053 842 0035  
Cell: 082 890 1918  
Contact:  
Frank vd Kooy(Pr Sci Nat)



**Client:**  
Sign and Seal Trading 255 (Pty) Ltd  
7 Monridge Park  
2 Kekewich Drive  
Monument Heights  
Kimberley  
8301  
Tel 053 – 832 2667  
Contact: Phillip Mills

## **Brief environmental description and photo record**

**1. Introduction:** The purpose of this description is to provide a short overview of the vegetation, environmental and geological conditions. Although the proposed prospecting is only planned on existing slime dams with the result that no impact is foreseen on existing vegetation or natural veldt, it is of value to highlight certain issues in an already battered environment. The overview is based on descriptions derived from various sources as well as from a site visit on 7 and 8 September 2010. The description can form the bases for later rehabilitation suggestions and practical steps in guiding any effort in restoring a very highly disturbed area.

**Vegetation map:** The vegetation map used is from the latest research information available. Map included in this report.

## **2. Geological description of the land**

### **(From prospecting work programme – A Fourie)**

The geological history of these deposits is complex and involves the interaction of fluvial, marine and, to some extent at least, aeolian systems. The Orange-Vaal River basin has in the past (and still does today) drained a substantial portion of the South African hinterland and was active in its present guise since at least the Late Cretaceous. Large volumes of sediment were eroded, transported to the west coast and deposited offshore.

During this period diamonds were eroded from pre-existing deposits (both primary and secondary) in the interior and transported to the coast. At the same time any other mineral occurrences would also have undergone erosion and transportation by the Orange-Vaal system. Depending on the durability, size and density of these minerals, they would have been co-deposited with the diamonds in the thickening sediment pile at the mouth of the river.

A series of marine transgressions and regressions, due to cyclical sea level fluctuations, resulted in the sediment pile being condensed into the palaeo-beach deposits that we see today. Any heavy and durable minerals present in the sediments were thereby concentrated and deposited in these beach sequences.



Atriplex sp. Originally from Australia – Australian saltbush



Euphorbia sp





*Mesembryanthemum* sp (Soutslaai)



*Galenia* sp (poisonous) and an indicator of high disturbance.



Gneiss rock – at Hondeklipbaai.

#### 5. Literature reference:

- 5.1 Plants of Southern Africa – an annotated checklist – Germishuizen & Meyer (Ed) 2003
- 5.2 The Vegetation of South Africa, Lesotho and Swaziland – Mucina & Rutherford (Ed) 2006.
- 5.3 Vegetation of South Africa, Lesotho and Swaziland – a companion to the Vegetation Map – Low & Rebelo (Ed), 1998.
- 5.4 Succulents of South Africa – a guide to the regional diversity – Van Jaarsveld, Van Wyk and Smith – 2005 second edition.
- 5.5 The Genera of the Mesembryanthemaceae – Herre, 1971.
- 5.6 Vetplante van Suidelike Afrika – Barkhuizen, 1978.
- 5.7 Minerals and Rocks – Kirkaldy, 1976.

# **GEMCORE PROPERTIES (PTY)LTD.**

## **PUBLIC PARTICIPATION REPORT for PROPOSED FARM: HONDEKLIPBAAI PROSPECTING APPLICATION**

**November 2010**

Project no: 10004 KNK

**Compiled by:**  
Lidwala EPS (Pty) Ltd  
P.O. Box 3585  
Diamond Pavillion  
8305  
Tel/Fax 053 842 0035  
Cell: 082 890 1918  
Contact:  
Frank vd Kooy(Pr Sci Nat)



**Client:**  
Gemcore Properties (Pty) Ltd  
7 Monridge Park  
2 Kekewich Drive  
Monument Heights  
Kimberley  
8301  
Tel 053 – 832 2667  
Contact: Phillip Mills

---

## **PUBLIC PARTICIPATION REPORT: FOR PROPOSED PROSPECTING**

### **1 INTRODUCTION**

Lidwala EPS has been appointed by Gemcore Properties (Pty)Ltd, to finalise the public participation process for the prospecting permit application on the proposed farm as indicated.

The Public Participation is in response to the acceptance letter from DME dated 11 October 2010 requesting “ (2.2) notify in writing and consult with the land owner(s) or lawful occupier(s) and any affected party;and (c) submit the results of such consultations to this office”..This report gives effect to this request. A copy of these letters are attached in Annexure A.

This report provides a systematical description on the Public Participation process followed. The report is also annexed with all related documentation to this process.

### **2 APPROACH & METHODOLOGY**

The aim of this PPP was to inform and where possible consult with the landowners and adjacent landowners. This was to inform them on the proposed prospecting activities and to gather any relevant information or possible concerns about the proposed activities.

The approach of this PPP was to identify the relevant landowners, besides those that were indicated by the department, the community through the structures were also contacted and issues explained, and by means of a background information document (BID) explain Gemcore Properties (Pty)Ltd intentions as well as the extend of the proposed prospecting. This did open the opportunity to register their concerns after which a report was prepared DME on the process and the outcome.

### **3 INDIVIDUAL MEETINGS WITH LANDOWNERS AND TELEPHONIC DISCUSSIONS**

Five affected landowners were identified and contacted as part of this PPP in order to discuss the intentions. The main landowner, the State in terms of the Provincial

## 5 CONCLUSION

This report gives effect to the process and outcome of the public participation process that was followed for this prospecting application.

Report prepared by: Frank van der Kooy (Pr Sci Nat)

Date: 11 October 2010

**ANNEXURE C**  
**BACKGROUND INFORMATION DOCUMENT**

During this initial phase of prospecting the sampling programme is designed to only test for the presence of gold. This will be achieved through sampling a sufficient volume of material from each of the FRD's present in the application area to test for the presence of gold. It is planned to use a simple auger system to access the deeper portions of the FRD's, which will ensure a representative cross section of material from each FRD. The sampled material will be submitted to a mineral laboratory for analysis.

#### **Follow-up Sampling of FRD's**

Once the presence of gold has been confirmed a follow-up sampling programme will commence. This follow-up sampling will be designed to systematically sample each of the dumps that tested positive for gold to determine the distribution within each of the selected FRD's. This will provide sufficient information from which to calculate a reasonably accurate estimate of the mineral resource, which will form the basis for an economic study to determine the viability of extracting the gold from the FRD's.

#### **Desktop Studies to Identify Remnant Areas Suitable for Gold Mineralisation**

In the event that the FRD's test positive for gold then a desktop study will be undertaken over the entire area to identify unmined/undisturbed areas that may host gold mineralisation. Where practical samples will be collected and analysed for gold and the viability of extracting gold from those areas that are not earmarked for future diamond mining activities will be determined.

In order for the company to adhere to the MPRDA requirements, it is respectfully requested that you provide us with your feedback within 14 days of receiving this letter. In the event that no feedback is received it will be assumed that there are no identified concerns or issues that need to be addressed.

Please contact the persons using the contact details below if you need clarification or additional information.

With kind regards



**Frank van der Kooy (Pr Sci Nat):**

**Independent Environmental Practitioner**

Tel: 082 890 1918  
Fax: 086 680 7758

**or Phillip Mills for Gemcore**

Tel: 053 832 2667  
Fax: 053 832 2816

During this initial phase of prospecting the sampling programme is designed to only test for the presence of gold. This will be achieved through sampling a sufficient volume of material from each of the FRD's present in the application area to test for the presence of gold. It is planned to use a simple auger system to access the deeper portions of the FRD's, which will ensure a representative cross section of material from each FRD. The sampled material will be submitted to a mineral laboratory for analysis.

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In order for the company to adhere to the MPRDA requirements, it is respectfully requested that you provide us with your feedback within 14 days of receiving this letter. In the event that no feedback is received it will be assumed that there are no identified concerns or issues that need to be addressed.

Please contact the persons using the contact details below if you need clarification or additional information.

With kind regards



**Frank van der Kooy (Pr Sci Nat):**

**Independent Environmental Practitioner**

Tel: 082 890 1918  
Fax: 086 680 7758

**or Phillip Mills for Gemcore**

Tel: 053 832 2667  
Fax: 053 832 2816

During this initial phase of prospecting the sampling programme is designed to only test for the presence of gold. This will be achieved through sampling a sufficient volume of material from each of the FRD's present in the application area to test for the presence of gold. It is planned to use a simple auger system to access the deeper portions of the FRD's, which will ensure a representative cross section of material from each FRD. The sampled material will be submitted to a mineral laboratory for analysis.

#### **Follow-up Sampling of FRD's**

Once the presence of gold has been confirmed a follow-up sampling programme will commence. This follow-up sampling will be designed to systematically sample each of the dumps that tested positive for gold to determine the distribution within each of the selected FRD's. This will provide sufficient information from which to calculate a reasonably accurate estimate of the mineral resource, which will form the basis for an economic study to determine the viability of extracting the gold from the FRD's.

#### **Desktop Studies to Identify Remnant Areas Suitable for Gold Mineralisation**

In the event that the FRD's test positive for gold then a desktop study will be undertaken over the entire area to identify unmined/undisturbed areas that may host gold mineralisation. Where practical samples will be collected and analysed for gold and the viability of extracting gold from those areas that are not earmarked for future diamond mining activities will be determined.

In order for the company to adhere to the MPRDA requirements, it is respectfully requested that you provide us with your feedback within 14 days of receiving this letter. In the event that no feedback is received it will be assumed that there are no identified concerns or issues that need to be addressed.

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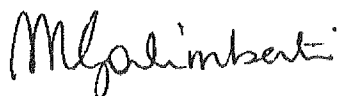
components. Appropriate mitigation (Phase 2), which involves recording, sampling and dating sites that are to be destroyed, are done as required.

According to the information provided in the EMP, prospecting will occur on a disturbed area, and more specifically on slime dams from previous mining activities. No new infrastructures such as access roads will be required and the sampled material will be taken off site and process directly in laboratories. If this information is correct, it is unlikely that any cultural remains will be uncovered and therefore that any significant impacts on heritage resources will result from this project.

Consequently, SAHRA Archaeology, Palaeontology & Meteorites (APM) Unit has no objection to the proposed prospecting for gold ore over slime dams in Remainder of the Farm Gypsum no. 5, Farm no. 625 and the Remainder of Farm 1, and requires that the following recommendations are adhered to:


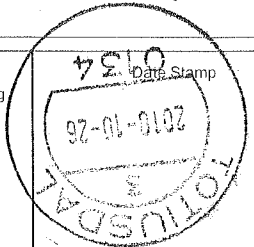
If any evidence of archaeological sites or remains (e.g. remnants of indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, marine shell and charcoal/ash concentrations), unmarked human burials or other categories of heritage resources are found during mining activities, SAHRA APM Unit (Mariagrazia Galimberti/Mary Leslie, Tel: 021 462 4502) must be alerted immediately, and an accredited professional archaeologist must be contacted as soon as possible to inspect the findings. If the newly discovered heritage resources prove to be of archaeological significance a Phase 2 rescue operation might be necessary.


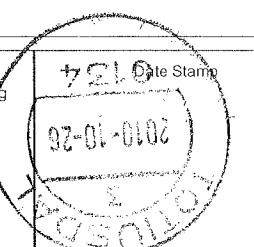
Yours sincerely



pp Mary Leslie 0  
SAHRA: Archaeology, Palaeontology and Meteorite Unit  
For: CHIEF EXECUTIVE OFFICE

Copies: SAHRA Northern Cape Office  
PHRA Northern Cape Office

<b>REGISTERED LETTER</b> <b>GEREGISTREERDE BRIEF</b> <i>(with an insurance option/met 'n versekeringsopsie)</i>				Postage paid R _____ c Service fee / Diensgeld R _____ c Insurance / Versekering R _____ c <b>Total / Totaal</b> R _____ c	
<b>Full tracking and tracing/Volledige volg en spoor</b>					
Addressed to/Geadresseer aan Trans Hex Group Box 123 Parow _____ _____ _____		Insured value of contents Versekerde waarde van inhoud R _____ c		Initial of accepting officer _____	
Postcode Poskode 7499		Enquiries/Navrae Toll-free number Tolvry nommer <b>0800 111 502</b>		Date Stamp 	
The value of the contents of this letter is as indicated and compensation is not payable for a letter received unconditionally. Compensation is limited to R100.00. No compensation is payable without documentary proof. Optional insurance up to R2 000.00 is available and applies to domestic registered letters only.		Affix Track and Trace <b>REGISTERED LETTER</b> <i>(with a domestic insurance option)</i> ShareCall 0800 111 502 www.sapo.co.za <b>RD 482 538 174 ZA</b>		Paraaf van aanneembeppte _____ Datumstempel _____	
Die waarde van die inhoud van hierdie brief is soos aangedui en vergoeding sal nie betaal word vir 'n brief wat sonder voorbehoud ontvang word nie. Vergoeding is beperk tot R100.00. Geen vergoeding is sonder dokumentêre bewys betaalbaar nie. Opsionele versekering tot R2 000.00 is beskikbaar en is slegs op binnelandse geregistreerde briewe van toepassing.		CUSTOMER COPY 301028R		Labone Litho Printers 011 493 7921 701281	

<b>REGISTERED LETTER</b> <b>GEREGISTREERDE BRIEF</b> <i>(with an insurance option/met 'n versekeringsopsie)</i>				Postage paid R _____ c Service fee / Diensgeld R _____ c Insurance / Versekering R _____ c <b>Total / Totaal</b> R _____ c	
<b>Full tracking and tracing/Volledige volg en spoor</b>					
Addressed to/Geadresseer aan Firestone Diamond Box 8399 Cape town _____ _____ _____		Insured value of contents Versekerde waarde van inhoud R _____ c		Initial of accepting officer _____	
Postcode Poskode 8017		Enquiries/Navrae Toll-free number Tolvry nommer <b>0800 111 502</b>		Date Stamp 	
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Die waarde van die inhoud van hierdie brief is soos aangedui en vergoeding sal nie betaal word vir 'n brief wat sonder voorbehoud ontvang word nie. Vergoeding is beperk tot R100.00. Geen vergoeding is sonder dokumentêre bewys betaalbaar nie. Opsionele versekering tot R2 000.00 is beskikbaar en is slegs op binnelandse geregistreerde briewe van toepassing.		CUSTOMER COPY 301028R		Labone Litho Printers 011 493 7921 701281	

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<b>Full tracking and tracing/Volledige volg en spoor</b>					
Addressed to/Geadresseer aan Dept. of Roads + Public Works Box 3132 Lombrey _____ _____ _____		Insured value of contents Versekerde waarde van inhoud R _____ c		Initial of accepting officer _____	
Postcode Poskode 8301		Enquiries/Navrae Toll-free number Tolvry nommer <b>0800 111 502</b>		Date Stamp 	
The value of the contents of this letter is as indicated and compensation is not payable for a letter received unconditionally. Compensation is limited to R100.00. No compensation is payable without documentary proof. Optional insurance up to R2 000.00 is available and applies to domestic registered letters only.		Affix Track and Trace customer copy <b>REGISTERED LETTER</b> <i>(with a domestic insurance option)</i> ShareCall 0800 111 502 www.sapo.co.za <b>RD 482 538 157 ZA</b>		Paraaf van aanneembeppte _____ Datumstempel _____	
Die waarde van die inhoud van hierdie brief is soos aangedui en vergoeding sal nie betaal word vir 'n brief wat sonder voorbehoud ontvang word nie. Vergoeding is beperk tot R100.00. Geen vergoeding is sonder dokumentêre bewys betaalbaar nie. Opsionele versekering tot R2 000.00 is beskikbaar en is slegs op binnelandse geregistreerde briewe van toepassing.		CUSTOMER COPY 301028R		Labone Litho Printers 011 493 7921 701281	

<b>REGISTERED LETTER</b> <b>GEREGISTREERDE BRIEF</b> <i>(with an insurance option/met 'n versekeringsopsie)</i>				Postage paid R _____ c Service fee / Diensgeld R _____ c Insurance / Versekering R _____ c <b>Total / Totaal</b> R _____ c	
<b>Full tracking and tracing/Volledige volg en spoor</b>					
Addressed to/Geadresseer aan Komiestraan Munisipaliteit P/Bag x 200 Carres _____ _____ _____		Insured value of contents Versekerde waarde van inhoud R _____ c		Initial of accepting officer _____	
Postcode Poskode 8124		Enquiries/Navrae Toll-free number Tolvry nommer <b>0800 111 502</b>		Date Stamp 	
The value of the contents of this letter is as indicated and compensation is not payable for a letter received unconditionally. Compensation is limited to R100.00. No compensation is payable without documentary proof. Optional insurance up to R2 000.00 is available and applies to domestic registered letters only.		Affix Track and Trace customer copy <b>REGISTERED LETTER</b> <i>(with a domestic insurance option)</i> ShareCall 0800 111 502 www.sapo.co.za <b>RD 482 538 072 ZA</b>		Paraaf van aanneembeppte _____ Datumstempel _____	
Die waarde van die inhoud van hierdie brief is soos aangedui en vergoeding sal nie betaal word vir 'n brief wat sonder voorbehoud ontvang word nie. Vergoeding is beperk tot R100.00. Geen vergoeding is sonder dokumentêre bewys betaalbaar nie. Opsionele versekering tot R2 000.00 is beskikbaar en is slegs op binnelandse geregistreerde briewe van toepassing.		CUSTOMER COPY 301028R		Labone Litho Printers 011 493 7921 701281	

**Frank van der Kooy**

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**From:** Basson, Anette [Anette.Basson@debeersgroup.com]  
**Sent:** 26 October 2010 02:15 PM  
**To:** Frank van der Kooy  
**Subject:** RE: Prospecting on Avontuur - Hondeklipbaai

Dear Frank,

Thank you for the e-mail and documents. We'll reply shortly.

Regards

Anette

---

**From:** Frank van der Kooy [mailto:environmental@lidwala.com]  
**Sent:** 26 October 2010 01:52 PM  
**To:** Basson, Anette  
**Subject:** Prospecting on Avontuur - Hondeklipbaai

Dear Anette – Herewith please find attached a letter with regards to the above. The application is for prospecting on existing waste site or slimes dams in the Hondeklip, West Coast area. Please also see the attached approval by DME. We would like to discuss the issue with you so that we can incorporate any comment into the EMP due on the 11<sup>th</sup> of November 2010 for approval by DME. According to DME they will process the application in terms of section 9(1)(b) of the legislation.

**Please acknowledge receipt – thank you**  
Kind regards

Frank van der Kooy (Pr Sci Nat)  
Independent Environmental Practitioner on behalf of Gemcore

---

**Lidwala Environmental & Planning Services (Pty) Ltd**  
**Office:** 84 Central road, Kimberley, Tel/faks: 053-842 0035  
PO Box 3585. Diamond Pavilion, 8305.

**Office:** 1415 Moulton Avenue, Waverley, Pretoria, 0186.  
PO Box 32497, Waverley, Pretoria, 0135  
Tel/faks: 012-332 3027

**Office:** 11th Church Avenue, Ruitershof, Randburg, 2194  
PO Box 4221, Northcliff, 2115. Tel: 0873515145

\*\*\*\*\*

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\*\*\*\*\*

2010/10/26

## Frank van der Kooy

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**From:** Stephen le Roux [stephen@firestonediamonds.co.za]  
**Sent:** 27 October 2010 02:04 PM  
**To:** Frank van der Kooy; m.moller@firestonediamonds.co.za  
**Cc:** Jasper Nieuwoudt; olivia@kingsley.co.za  
**Subject:** RE: Prospecting right: Avontuur  
**Attachments:** NMGold\_WP.pdf

Hi Frank,

As you may be aware, Surf Zone Diamonds are the surface owners of portion 1 and 2 of the farm Avontuur. Four points to consider:

1. DBCM has lodged a similar application over both portions of the farm Avontuur – please follow up with DME, Springbok (see file attached)
2. Jasper Mostert of the farm Wallekraal is renting both portions of the farm and needs to be consulted as well. All farm gates are closed and locked by him.
3. Surf Zone Diamonds has lodged a closure application over Avontuur and is legally responsible for all rehabilitation, including all dumps, slimes dams etc as per closure report. This may hamper possible exploration sampling as planned by yourself and need to be discussed ASAP.
4. Some safety issues must be discussed because there are still a few open excavations, unsafe high walls, loose berms, cracks and unsafe areas in and around the slimes dam etc.

Regards

Stephen le Roux

**From:** Frank van der Kooy [mailto:environmental@lidwala.com]  
**Sent:** 27 October 2010 10:59 AM  
**To:** stephen@firestonediamonds.co.za; m.moller@firestonediamonds.co.za  
**Subject:** FW: Prospecting right: Avontuur  
**Importance:** High

Thanks for the correct e-mails – lets try again

---

**From:** Frank van der Kooy  
**Sent:** 27 October 2010 08:15 AM  
**To:** 'mmoller@firestonediamonds.co.za'  
**Subject:** FW: Prospecting right: Avontuur

The e-mail to Steven came back to me.

Thanks  
Frank

---

2010/11/02

**From:** Frank van der Kooy  
**Sent:** 26 October 2010 12:20 PM  
**To:** 'steven@firestonediamonds.co.za'  
**Subject:** Prospecting right: Avontuur

Dear Sir – Herewith please find attached a letter with regards to the above. The application is for prospecting on existing waste site or slimes dams in the Hondeklip, West Coast area. Please also see the attached approval by DME. We would like to discuss the issue with you so that we can incorporate any comment into the EMP due on the 11<sup>th</sup> of November 2010 for approval by DME.

**Please acknowledge receipt – thank you**  
Kind regards

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\_\_\_\_\_ Information from ESET NOD32 Antivirus, version of virus signature database 5566  
(20101027) \_\_\_\_\_

The message was checked by ESET NOD32 Antivirus.

<http://www.eset.com>

\_\_\_\_\_ Information from ESET NOD32 Antivirus, version of virus signature database 5567  
(20101027) \_\_\_\_\_

The message was checked by ESET NOD32 Antivirus.

<http://www.eset.com>

2010/11/02