mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

NAME OF APPLICANT: NTSIMBINTLE MINING (PTY) LTD

REFERENCE NUMBER: NC30/5/1/1/3/2/1/1250

ENVIRONMENTAL MANAGEMENT PLAN FOR THE PROSPECTING EMP AMENDMENT PROCESS ON THE REMAINING EXTENT OF THE FARM GLORIA 266

SEPTEMBER 2012

SUBMITTED
IN TERMS OF SECTION 39 AND OF REGULATION 52 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002,
(ACT NO. 28 OF 2002) (the Act)

STANDARD DIRECTIVE

Applicants for prospecting rights or mining permits, are herewith, in terms of the provisions of Section 29 (a) and in terms of section 39 (5) of the Mineral and Petroleum Resources Development Act, directed to submit an Environmental Management Plan strictly in accordance with the subject headings herein, and to compile the content according to all the sub items to the said subject headings referred to in the guideline published on the Departments website, within 60 days of notification by the Regional Manager of the acceptance of such application. This document comprises the standard format provided by the Department in terms of Regulation 52 (2), and the standard environmental management plan which was in use prior to the year 2011, will no longer be accepted.

Ntsimbintle Mining (Pty) Ltd (Ntsimbintle) currently undertakes prospecting related activities in accordance to its approved environmental management plan (EMPlan) (NC30/5/1/1/3/2/1/1250 EM).

The approved prospecting EMPlan makes provision for the drilling of approximately 8 boreholes on the remaining extent of the farm Gloria 266. Ntsimbintle has drilled a total of 31 boreholes on the remaining extent of the farm Gloria 266 to date. It should be noted that the prospecting work programme provides for approximately 120 boreholes.

Ntsimbintle is proposing to amends its approved EMPlan to cater for:

- the additional boreholes drilled on the remaining extent of the farm Gloria 266; and
- a total of 120 prospecting boreholes.

It should be noted that based on discussions held with the DMR and the applicant, it is SLR's understanding that no additional public consultation or the re-assessment of the financial provision is required for this prospecting EMP amendment process. In this regard the prospecting EMP amendment process caters for:

- the transfer of data from the original approved EMPlan into the new prospecting EMPlan DMR template;
- additional boreholes drilled on the remaining extent of the farm Gloria 266; and
- the total of 120 boreholes as provided in the prospecting works programme

SLR Consulting (Africa) (Pty) Ltd has been appointed by Ntsimbintle to undertake the prospecting EMPlan amendment process.

IDENTIFICATION OF THE APPLICATION IN RESPECT OF WHICH THE ENVIRONMENTAL MANAGEMENT PLAN IS SUBMITTED.

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1 REGULATION 52 (2): Description of the environment likely to be affected by the prospecting operation.

Information in this section was sourced from the existing approved prospecting EMPlan.

1.1 The environment on site relative to the environment in the surrounding area.

1.1.1 Topography

The surrounding area is characterised by flat sandy plains. The topography is gently sloping towards the non-perennial Kuruman River in the North East. To the east of the property is the Ga-Mogara non perennial river.

1.1.2 Current land use

The prospecting area is characterised by flat sandy plains. No residential areas were identified in the prospecting area. Within the bigger prospecting area there are mining and livestock grazing activities.

1.1.3 Soil types

The soils occurring within the prospecting area have been classified using the South African soil classification system (Soil classification Working Group, 1991). The soils are generally red to light red, sandy soils of varying depths. These are infertile soils with no cultivation possibilities. The area receives less than 350 mm of rainfall annually, which makes these soils unsuited for any cultivation. Due to the fine sandy nature of the topsoil with a low clay content and limited organic matter, the soils are highly erodable, particularly where vegetation is removed.

The most dominant soils belong to the Hutton form (94.1%), with two series being identified, namely Hayfield (moderately leached) and Stella (lightly leached). The other soils belong to the Plooysburg form (5.9%).

The Hutton form is a reddish brown, apedal, sandy topsoil on yellowish red and apeddal sandy subsoil. The effective depth of these soils are greater than 1500mm and it has a low agricultural potential.

The Plooyburg form is characterized by reddish brown, apedal, sandy topsoil on yellowish red, apedal sandy subsoil on a hardpan carbonate horizon. The effective depth of these soils is between 200 and 1000mm and it also has a low agricultural potential.

1.1.4 Vegetation life

The prospecting area falls within the Kalahari Plains Thorn Bushveld vegetation type. This vegetation type is characterised by flat sandy plains and consists of a mixture of vegetation communities that have undergone various changes mainly due to livestock farming in. Vegetation communities identified within the prospecting area include the following:

- *Acacia haematoxylon* Savannah;
- *Acacia mellifera* Mixed Woodland;
- *Acacia erioloba* Savannah;
- *Schmidtia kalihariensis-Prosopis glandulosa* Shrubland;
- *Tarchonanthus camphorates-Schmidtia pappophoroides* Scrub; and
- secondary vegetation (due to previous disturbance).

Dominant species occurring within each vegetation community are listed in Appendix C.

Acacia haematoxylon Savannah

This vegetation community has poorly developed tree layer, moderately developed shrub layer and a moderate grass cover of about 50 – 60%.

Acacia mellifera Mixed Woodland

This vegetation community is characterised by a moderate to high shrub density with a poor to moderate grass coverage (40 –60%).

Acacia erioloba Savannah

Acacia erioloba occurs in patches throughout the prospecting area. This vegetation community is distinctive owing to the height of the tree layer which forms a distinct canopy. Three vegetation strata are evident within this vegetation unit, namely a prominent tree layer between 2.5m and 8m; a shrub layer between 1.5m and 2.5m and a grass layer with an average height of 70cm.

Schmidtia kalihariensis – Prosopis glandulosa Shrubland

This vegetation community is characteristic of non-perennial water resources in the greater area. An example of such a resource is the non-perennial Ga-mogara water course to the east of the prospecting area. Grass covered pans are common within the Kalahari and they have usually been carved deeper through wind erosion and consequently give the appearance of a dune street. These areas have a higher moisture content and are therefore heavily utilised.

Tarchonanthus camphoratus – Acacia karroo Scrub

This vegetation community occurs on the well-drained shallow stony soils which are underlain by calcrete. This vegetation community is characteristically short. Dwarf karroid shrubs are prominent within the community.

Tarchonanthus camphoratus – Schmidtia pappophoroides Scrub

This vegetation community is characterised by a high percentage of *Tarchonanthus camphoratus*. The grass layer is very patchy, but in some areas it is moderately well developed.

Secondary vegetation

Secondary vegetation covers areas that have been previous disturbed due to mining activities within the prospecting area. Typically these areas are extensively invaded, although a prominent woody component was observed on site. The grass layer is mostly poorly developed, especially in areas where little soil remains.

Red data species

No Red Data species are expected to occur in the prospecting area. There are however tree species occurring in the project area that are protected in terms of the National Forests Act, 84 of 1998. These include the *Acacia erioloba*, *Acacia haematoxylon* and *Boscia albitrunca.* A permit is required before these tree species may be removed.

In addition, a number of protected plant species in terms of the Northern Cape Nature Conservation Ordinance Schedule 4 could occur on the relevant property. These include: *Asclepias burchellii* (Milkbush), *Babiana hypogea* (Babiana), *Boophane disticha* (Oxbane), *Brunsvigia radulosa* (Candelabra) and *Ruschia griquensis* (Brilliant Ruschia). Permits are required before these species can be removed.

Fauna

Refer to Appendix D for a list of certain endangered and rare species that are likely to occur within the prospecting area.

Surface water

The Ga-Mogara River borders the farm Gloria 266 on the eastern boundary of the farm (refer to Appendix A).

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

No prospecting activities will take place within 100m of the Ga-Mogara River.

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

Please refer to Appendix A for a locality plan.

1.4 Confirmation that the description of the environment has been compiled with the participation of the community, the landowner and interested and affected parties,

The description of the environment was compiled from the information included in the approved prospecting EMPlan.

A focussed public process was undertaken for the approved prospecting EMPlan. This process involved consultation with the relevant landowners and land users on site and adjacent landowners. No additional consultation has been done for this EMPlan amendment process. It should be noted that the current landowner on site is the prospecting applicant.

2 REGULATION 52 (2) (b): Assessment of the potential impacts of the prospecting operation on the environment, socio- economic conditions and cultural heritage.

2.1 Description of the prospecting operation.

Project specific data that provides perspective with regards to the prospecting operations is provided in Table 1.

TABLE 1: PROJECT SPECIFIC DATA THAT PROVIDES PERSPECTIVE WITH REGARDS TO THE PROSPECTING OPERATIONS

Aspects	Detail
Mineral to be prospected	Manganese ore and Ferrous Metals
Number of boreholes	120 in total (including those drilled to date). The location of boreholes that will be drilled on the remaining extent of the farm Gloria 266 are unknown at this stage, and will be determined based on on-going prospecting results.
Borehole depth	Approximately 300m per borehole
Total area of the drill site	10m x 10m
Drilling and site equipment	• Truck mounted, diesel powered core-recovering drilling machines will be used to remove core samples; • A lined drilling water containment sump per boreholes; • Temporary storage area lined with tarpaulin; • Potable chemical toilets; • Drill rod storage; • Water tanks for storage; and • Core tray storage area.
Water supply	Water will be trucked to site using water bowsers. This water will be sourced from Black Rock or Hotazel.
Access to site	Existing roads will be used to reach the property. As far as possible, existing informal tracks will be used to gain access to

Aspects	Detail
	the borehole sites. These informal tracks are expected to vary in length and provision is made for approximately 200m per borehole.
Duration of prospecting operations	Drilling operations associated will each prospecting borehole will take between 1 to 2 months to complete.
Employment	A drilling contractor will be used for all prospecting operations. The drilling contractor will make use of their own workforce. Approximately 5 men will be employed per prospecting borehole. It should be noted that no drilling contractors will be allowed to stay on the property.

2.1.1 The main prospecting activities (e.g. access roads, topsoil storage sites and any other basic prospecting design features)

Refer to Table 2.

TABLE 2: DESCRIPTION OF PROSPECTING ACTIVITIES

Activity		Project Phase
Geophysics and planning		
1	Contact landowner to arrange site access	Design
2	Purchase and review of existing information	Design
3	Ground magnetic reconnaissance and interpretation	Design
4	Delineate borehole locations in consultation with landowner, allowing for buffer zones from watercourses, residences and heritage sites	Design
Drilling site establishment		
5	Access the drill site using a new or existing access tracks	Construction
6	Strip vegetation and topsoil in an area of approximately 10 m x 10 m and to a maximum depth of 0.5m and stripping topsoil from access tracks (approximately 200m access track per site)	Construction
7	Excavate water sump per borehole lined with PVC (0.5 m x 1 m x 0.5)	Construction
8	Stockpile the topsoil adjacent to the drilling site and allowed to naturally re-vegetate	Construction
9	Set-up chemical portable toilet, water tanks, drill rod and core tray storage area	Construction
10	Set-up temporary storage area lined with tarpaulin to catch any spills	Construction
11	Set-up the truck-mounted, diesel powered core-recovering drilling machine underlain with drip trays and tarpaulins	Construction
Drilling		
12	Drill borehole using water is trucked to site using a water bowser. This water is sourced from Black Rock or Hotazel.	Operation
13	Contain all drilling water in the PVC lined sump and allow to settle – use biodegradable drilling oils where possible	Operation
14	Log the drill core and place on core trays	Operation
15	Empty portable chemical toilets as required - using an approved contractor	Operation
16	Storage of domestic and industrial waste at the designed storage area. Domestic and industrial waste will be removed from site by the drilling contractor and disposed of at an approved waste disposal site	Operation
17	Storage of hazardous waste (fuels and lubricants) in sealed containers in the designated storage area. These substances will either be returned to the suppliers or disposed of at appropriately licensed facilities.	Operation
Closure and rehabilitation of drill site		

Activity		Project Phase
18	Remove water from the sump and drip trays	Decommissioning
19	Remove oils and silt from PVC lining and drip trays and store until disposal to permitted hazardous landfill site	Decommissioning
20	Backfill the sump once it has dried out (dome to allow for subsidence) and cover borehole	Decommissioning
21	Move drill core trays, drill rods, chemical toilet, water bowser, stores and drill rig from the site	Decommissioning
22	Dispose of any general waste to a permitted waste disposal site	Decommissioning
23	Remove temporary access control	Decommissioning
24	Rip and plough compacted areas	Decommissioning
25	Replace topsoil over disturbed area (10 x 10 m)	Decommissioning
26	Re-vegetate disturbed area (where necessary)	Decommissioning
27	Send core samples to laboratory for testing	Decommissioning
28	Monitoring of rehabilitated boreholes	Closure
29	Dismantle contractor’s site and rehabilitate	Decommissioning
30	Rehabilitate access track	Decommissioning
31	Monitor and maintain rehabilitated area	Closure

2.1.2 Plan of the main activities with dimensions

Refer to Appendix B.

2.1.3 Description of construction, operational, and decommissioning phases.

Refer to Table 2.

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

No listed activities are triggered in terms of NEMA.

2.2 Identification of potential impacts

2.2.1 Potential impacts per activity and listed activities.

Refer to Table 3 below for a list of potential impacts per activity as described in Table 2.

TABLE 3: POTENTIAL IMPACTS

Activity		Potential Impact	Description of potential impacts (unmitigated)
Geophysics and planning			
1	Contact landowner to arrange site access	None	None
2	Purchase and review of existing information	None	None
3	Ground magnetic reconnaissance and interpretation	None	None
4	Delineate borehole locations in consultation with landowner, allowing for buffer zones from watercourses, residences and heritage sites	None	None
Drilling site establishment			
5	Access the drill site using new or existing access tracks	Air quality deterioration	Dust generation through the establishment and use of an access track. Air pollution through vehicle entrainment is expected to be localised and negligible due to the small scale of the project. Air pollution from exhaust fumes. Air pollution through vehicle emissions and drill rig is expected to be negligible due to the small scale of the project
		Noise pollution	No impacts are expected as there are no nearby sensitive receptors
		Loss of topsoil	Topsoil could be compacted and sterilised by movement of staff and vehicles (very limited area)
		Biodiversity	Localised loss of natural vegetation and habitat for fauna (very small scale)
		Land use	Loss of economic function of disturbed area during prospecting activities and potential loss of land capability post prospecting (very limited area)
		Heritage	Loss of potential heritage resources (very limited area) if not planned.
6	Strip vegetation and topsoil in an area of approximately 10 m x 10 m and to a maximum depth of 0.5m and stripping topsoil from access track	Loss of topsoil	Vegetation will be cleared exposing topsoil to erosion. Topsoil could be compacted and sterilised by movement of staff and vehicles if not stripped

Activity		Potential Impact	Description of potential impacts (unmitigated)
	(approximately 200m access track per site)		prior to establishment of infrastructure (very limited area)
		Biodiversity	Localised loss of natural vegetation and habitat for fauna at the drill site (very small scale)
		Land use	Loss of economic function of disturbed area during prospecting activities and potential loss of land capability post prospecting (very limited area)
		Noise pollution	No impacts are expected as there are no nearby sensitive receptors
7	Excavate water sump per borehole lined with PVC (0.5 m x 1 m and 0.5 m depth)	Loss of topsoil	Vegetation will be cleared exposing topsoil to erosion. Topsoil could be compacted and sterilised by movement of staff and vehicles if not stripped prior to establishment of infrastructure (very limited area)
8	Stockpile the topsoil adjacent to the drilling site and re-vegetate	Biodiversity	Localised loss of natural vegetation and habitat for fauna (very small scale)
		Land use	Loss of economic function of disturbed area during prospecting activities and potential loss of land capability post prospecting (very limited area)
		Heritage	Loss of potential heritage resources (very limited area) if not planned
9	Set-up chemical portable toilet, water trays, drill rods and core trays storage area	Contamination of soil resources	Soil pollution from toilet spills
10	Set-up temporary storage area lined with tarpaulin to catch any spills	Contamination of soil resources	Soil pollution from spillage during handling and storage
11	Set-up the truck-mounted, diesel powered core-recovering drilling machine underlain with drip trays and Tarpaulins	Visual	Visual impact of the drilling machine on site
		Noise pollution	No impacts are expected as there are no nearby sensitive receptors
Drilling			
12	Drill borehole water is trucked to site using a water bowser. This water is	Contamination of soil	Soil pollution from use of hydro-carbon lubricants

Activity		Potential Impact	Description of potential impacts (unmitigated)
	sourced from Black Rock or Hotazel.		and the refuelling of drill rigs
		Surface water contamination	Surface water resources could be polluted as a result of spillages. This is dependent on the proximity to surface water resources and whether or not these surface water resources are flowing.
		Groundwater contamination	Groundwater could become polluted due to pollutants entering aquifers via surface water infiltration, depending on the volume of the spillage and drill team response time.
		Air quality deterioration	Air pollution through vehicle entrainment is expected to be localised and negligible due to the small scale of the project. Air pollution from exhaust fumes. Air pollution through vehicle emissions and drill rig is expected to be negligible due to the small scale of the project
		Noise generation	No impacts are expected as there are no nearby sensitive receptors
13	Contain all drilling water in the PVC lined sump and allow to settle – use biodegradable drilling oils where possible	Surface water contamination	Surface water resources could be polluted as a result of spillages. This is dependent on the proximity to surface water resources and whether or not these surface water resources are flowing.
		Groundwater contamination	Groundwater could become polluted due to pollutants entering aquifers via surface water infiltration, depending on the volume of the spillage and drill team response time.
14	Log the drill core and place on core trays	None	n/a
15	Empty portable chemical toilets as required - using an approved contractor	Contamination of soil	Soil pollution from toilet spills
		Contamination of surface water	Surface water resources could be polluted as a result of spillages, depending on the proximity to surface water resources.

Activity		Potential Impact	Description of potential impacts (unmitigated)
		Land use	Potential loss of land use and capability (very limited area)
16	Storage of domestic and industrial waste at the designed storage area. Domestic and industrial waste will be removed from site by the drilling contractor and disposed of at an approved waste disposal site	Contamination of soil	Soil pollution from spills during handling
		Surface water contamination	Surface water resources could be polluted as a result of spillages. This is dependent on the proximity to surface water resources and whether or not these surface water resources are flowing.
		Groundwater contamination	Groundwater could become polluted due to pollutants entering aquifers via surface water infiltration, depending on the volume of the spillage and drill team response time.
17	Storage of hazardous waste (fuels and lubricants) in sealed containers in the designated storage area. These substances will either be returned to the suppliers or disposed of at appropriately licensed facilities.	Contamination of soil	Soil pollution from spills during handling
		Surface water contamination	Surface water resources could be polluted as a result of spillages. This is dependent on the proximity to surface water resources and whether or not these surface water resources are flowing.
		Groundwater contamination	Groundwater could become polluted due to pollutants entering aquifers via surface water infiltration, depending on the volume of the spillage and drill team response time.
Closure and rehabilitation of drill site			
18	Remove water from the sump and drip trays	Contamination of soil	Soil pollution from spills during handling
		Surface water contamination	Surface water resources could be polluted as a result of spillages. This is dependent on the proximity to surface water resources and whether or not these surface water resources are flowing.
19	Remove oils and silt from PVC lining and drip trays and store until disposal to permitted hazardous landfill site	Contamination of soil	Soil pollution from spills during handling
		Surface water contamination	Surface water resources could be polluted as a result of spillages. This is dependent on the proximity to surface water resources and whether

Activity		Potential Impact	Description of potential impacts (unmitigated)
			or not these surface water resources are flowing.
		Groundwater contamination	Groundwater could become polluted due to pollutants entering aquifers via surface water infiltration, depending on the volume of the spillage and drill team response time.
20	Backfill the sump once it has dried out (dome to allow for subsidence) and cover borehole	None	n/a
21	Move drill core trays, drill rods, chemical toilet, water bowser, stores and drill rig from the site	Air quality deterioration	Air pollution through vehicle entrainment is expected to be localised and negligible due to the small scale of the project. Air pollution from exhaust fumes. Air pollution through vehicle emissions and drill rig is expected to be negligible due to the small scale of the project
		Noise pollution	No impacts are expected as there are no nearby sensitive receptors
		Contamination of soil	Soil pollution from toilet spills
		Contamination of surface water	Surface water resourced could be polluted as a result of spillages, depending on the proximity to surface water resources.
22	Dispose of any general waste to a permitted landfill site	None	n/a
23	Remove temporary access control	Contamination of soils	Soil pollution if fencing is not removed from site
24	Rip and plough compacted areas	Loss of topsoil	Vegetation will be cleared exposing topsoil to erosion. Topsoil could be compacted and sterilised by movement of staff and vehicles if not stripped prior to establishment of infrastructure (very limited area)
25	Replace topsoil over disturbed area (10 x 10 m)	Air quality deterioration	Dust generation by vehicle movement and replacing of soil. Air pollution through vehicle entrainment is expected to be localised and negligible due to the small scale of the project.

Activity		Potential Impact	Description of potential impacts (unmitigated)
26	Re-vegetate disturbed area (where necessary)	None	n/a
27	Send core samples to laboratory for testing	Air quality deterioration	Air pollution through vehicle entrainment is expected to be localised and negligible due to the small scale of the project. Air pollution from exhaust fumes. Air pollution through vehicle emissions and drill rig is expected to be negligible due to the small scale of the project
28	Monitoring of rehabilitated boreholes	Air quality deterioration	Dust generation through vehicle entrainment is expected to be localised and negligible due to the small scale of the project. Air pollution from exhaust fumes. Air pollution through vehicle emissions is expected to be negligible due to the small scale of the project.
		Noise pollution	No impacts are expected as there are no nearby sensitive receptors
29	Dismantle contractor's site and rehabilitate	Air quality deterioration	Dust generation by vehicle movement and replacing of soil. Air pollution through vehicle entrainment is expected to be localised and negligible due to the small scale of the project.
		Contamination of soils	Pollution of soils as a result of spillage of waste from the contractor's camp
30	Rehabilitate new access track	Air quality deterioration	Dust generation by vehicle movement and replacing of soil. Air pollution through vehicle entrainment is expected to be localised and negligible due to the small scale of the project.
		Soil erosion	Erosion of soils if vegetation does not re-establish
31	Monitor and maintain rehabilitated area	None	n/a

2.2.2 Potential cumulative impacts.

Due to the small scale and the temporary nature of the prospecting activities, the cumulative impacts are regarded as insignificant.

2.2.3 Potential impact on heritage resources

No heritage resources are expected to occur within the prospecting area. It should however be noted, that if there is any evidence of sites of heritage significance, the South African Heritage Resource Agency (SAHRA) and an accredited archaeologist will be alerted immediately.

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

(If no such impacts are identified this must be specifically stated together with a clear explanation why this is not the case.)

Potential impacts with regards to communities, individuals or competing land uses in close proximity to the prospecting operations are listed below:

- Increase in dust generation. This will be localised and negligible;
- Potential increase in petty crime;
- Potential pollution of soil resources through spills. This will be localised;
- Potential pollution of surface water resources through spills. This will be dependent on the proximity of the prospecting sites to surface water resources and whether or not these surface water resources are flowing;
- Potential groundwater pollution through spills. This is unlikely as this is dependent on the volume of the spill as well as the response of the drill team

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

A focussed public consultation process was undertaken for the original prospecting EMPlan. This process involved consultation with the landowner and land users on site and adjacent landowners. Information sourced during the consultation process was used to inform potential impacts.

No additional consultation has been done for this prospecting EMPlan amendment process. It should be noted that the current landowner on site is the prospecting applicant.

2.2.6 Confirmation of specialist report appended.

(Refer to guideline)

Due to the small scale of the prospecting sites and the temporary nature of the prospecting activities, no significant impacts are expected to occur (See Section 3.1) and therefore no specialist studies were conducted.

3 REGULATION 52 (2) (c): Summary of the assessment of the significance of the potential impacts and the proposed mitigation measures to minimise adverse impacts.

3.1 Assessment of the significance of the potential impacts

3.1.1 Criteria of assigning significance to potential impacts

The impact rating for each potential impact listed in Table 4 is provided in the section below. The criteria used to rate each impact is attached in Appendix F. The significance of the potential impacts included in Table 3 have been assessed in the mitigated scenario.

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

(Refer to Table 4).

3.1.3 Assessment of potential cumulative impacts.

Due to the small scale of the prospecting sites and the temporary nature of the prospecting activities, the cumulative impacts are regarded as insignificant and therefore no detailed assessment is given.

3.2 Mitigation measures to minimise adverse impacts.

(Refer to Table 4).

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

(Refer to Table 4).

TABLE 4: LIST OF POTENTIAL ENVIRONMENTAL IMPACTS INCLUDING THEIR SIGNIFICANCE AND MITIGATION OPTIONS

Activity		Potential Impact	Impact description	Impact rating	Project phase	Mitigation
Geophysics and planning						
1	Contact landowner to arrange site access	None	None	n/a	Design	n/a
2	Purchase and review of existing information	None	None	n/a	Design	n/a
3	Ground magnetic reconnaissance and interpretation	None	None	n/a	Design	n/a
4	Delineate borehole locations in consultation with landowner, allowing for buffer zones from watercourses, residences and heritage sites	None	None	n/a	Design	n/a
Drilling site establishment						
5	Access the drill site using new or existing access tracks	Air quality deterioration	Dust generation through the establishment of a new access track.	Low	Construction	This impact is expected to be of low significance due to the following factors: • The movement of drilling related vehicles on the unpaved access track will be on a small scale. • Vehicle speeds will be limited to 40km/h on site. • Route establishing activities will be temporary (± 1 week).
			Air pollution from exhaust fumes	Low	Construction	This impact is expected to be of low significance due to the following factors: • Vehicle speeds will be limited to 40km/h on site. • The project will be small scale and temporary. • Vehicles will be maintained in good working order
		Noise pollution	Noise generated by the possible establishment of a new access road	Low	Construction	This impact is expected to be low as there are no nearby sensitive receptors.

Activity		Potential Impact	Impact description	Impact rating	Project phase	Mitigation
		Loss of topsoil	Topsoil could be compacted and sterilised by movement of staff and vehicles	Low	Construction	This impact is expected to be of low significance due to the following: • Topsoil will be stripped and stored separately • Topsoil stockpiles will be demarcated and vegetated. • Areas were topsoil is to be placed will be ripped. • The disturbed area will be re-vegetated.
		Biodiversity	Loss of natural vegetation and habitat for fauna	Low	Construction	This impact is expected to be of low significance due to the following: • The new access track will be delineated so that no trees need be removed. • As far as possible, the access track will be established in already disturbed areas. Sensitive ecological areas will be avoided. • If the prospecting site must be established in an undisturbed/natural area, prior to delineating of this site an ecological specialist will be appointed to survey the site. If required additional measures such as search and rescue or relocation of specific species will be undertaken prior to prospecting activities commencing.
		Land use	Loss of economic function of disturbed area during prospecting activities and potential loss of land capability post prospecting	Low	Construction	This impact is expected to be of low significance due to the following: • Delineate the location of the new access track location in consultation with landowner. • Disturbed areas will be rehabilitated to pre-disturbed potential.
		Heritage	Loss of potential heritage resources	Low	Construction	No heritage resources were identified on site, however should any evidence of sites of heritage significance be found during the proposed operation, SAHRA and an accredited archaeologist will be alerted immediately.
6	Strip vegetation and topsoil in	Loss of topsoil	Vegetation will be	Low	Construction	This impact is expected to be of low significance due

Activity		Potential Impact	Impact description	Impact rating	Project phase	Mitigation
	an area of approximately 10 m x 10 m and to a maximum depth of 0.5m and stripping topsoil from access tracks (approximately 200m of access track)		cleared exposing topsoil to erosion. Topsoil could be compacted and sterilised by movement of staff and vehicles if not stripped prior to establishment of infrastructure			to the following: • The removal of vegetation will be kept to a minimum. • Topsoil will be stripped (where possible) and stockpiled adjacent to the site, re-vegetated for use during the rehabilitation process. • No vehicle movement or waste disposal will be allowed on the topsoil stockpiles • Upon completion of the project, all disturbed areas will be rehabilitated: ○ Stockpiled topsoil will be replaced and raked. ○ The area will be re-vegetated (if necessary)
7	Excavate water sump per borehole lined with PVC (0.5 m x 1 m and 0.5 m depth)	Loss of topsoil	Vegetation will be cleared exposing topsoil to erosion. Topsoil could be compacted and sterilised by movement of staff and vehicles if not stripped prior to establishment of infrastructure	Low	Construction	
8	Stockpile the topsoil adjacent to the drill site and re-vegetate	Biodiversity	Loss of natural vegetation and habitat for fauna	Low	Construction	This impact is expected to be of low significance due to the following: • Drilling sites will be delineated so that no trees need be removed. • As far as possible, the access track will be established in already disturbed areas. • If the prospecting site must be established in an undisturbed/natural area, prior to delineating of this site an ecological specialist will be appointed to survey the site. If required additional measures such as search and rescue or relocation of specific species will be undertaken prior to prospecting activities commencing.
		Land use	Loss of economic function of disturbed area during prospecting activities and potential loss of land capability	Low	Construction	This impact is expected to be of low significance due to the following: • Delineate new access track location in consultation with landowner.

Activity		Potential Impact	Impact description	Impact rating	Project phase	Mitigation
			post prospecting			• Disturbed areas will be rehabilitated as close as possible to pre-disturbed potential.
		Heritage	Loss of potential heritage resources	Low	Construction	• No heritage resources were identified on site, however should any evidence of sites of heritage significance be found during the proposed operation, SAHRA and an accredited archaeologist will be alerted immediately.
9	Set-up chemical portable toilets, water, drill rods and core trays	Contamination of soil resources	Soil pollution from toilet spills	Low	Construction	This impact is expected to be of low significance due to the following: • Chemical toilets to be serviced and emptied by qualified contractor on regular basis.
		Biodiversity	Loss of natural vegetation and habitat for fauna	Low	Construction	This impact is expected to be of low significance due to the following: • Drilling sites will be delineated so that no trees need be removed. • As far as possible, the access track will be established in already disturbed areas. • If the prospecting site must be established in an undisturbed/natural area, prior to delineating of this site an ecological specialist will be appointed to survey the site. If required additional measures such as search and rescue or relocation of specific species will be undertaken prior to prospecting activities commencing.
		Land use	Loss of economic function of disturbed area during prospecting activities and potential loss of land capability post prospecting	Low	Construction	This impact is expected to be of low significance due to the following: • Delineate new access track location in consultation with landowner. • Disturbed areas will be rehabilitated as close as possible to pre-disturbed potential.
		Heritage	Loss of potential heritage resources	Low	Construction	No heritage resources were identified on site, however should any evidence of sites of heritage significance be found during the proposed operation,

Activity		Potential Impact	Impact description	Impact rating	Project phase	Mitigation
						SAHRA and an accredited archaeologist will be alerted immediately.
10	Set-up temporary storage area lined with tarpaulin to catch any spills	Contamination of soil resources	Soil pollution from spillage during handling and storage	Low	Construction	This impact is expected to be of low significance due to the following: • Environmental awareness training of contractor. Management measures need to be incorporated into contractor's contract. • Fuel and lubricants will be stored in sealed containers on containment trays with a 110% capacity. • If spillages do occur the contaminated soils will be rehabilitated by either: ○ In situ organic treatment; or ○ removal and disposal of contaminated soils at an appropriately licensed facility (Certificates of disposal will be obtained for recording purposes).
11	Set-up the truck, mounted diesel powered core-recovering drilling machine underlain with drip trays and tarpaulins.	None	n/a	n/a	Construction	n/a
Drilling						
12	Drill borehole water is trucked to site using a water bowser. This water is sourced from Black Rock or Hotazel.	Contamination of soil	Soil pollution from use of hydro-carbon lubricants and the refuelling of drill rigs	Low	Operation	This impact is expected to be of low significance due to the following: • Environmental awareness training of contractor • The drill rig will be underlain with drip trays and tarpaulins to contain any spills or leaks of lubricants. • The refuelling of vehicles will take place on an impermeable tarpaulin surface. • Vehicles will not be serviced on site. • The use of drip trays and/or tarpaulins underneath leaking vehicles and equipment until

Activity		Potential Impact	Impact description	Impact rating	Project phase	Mitigation
						such a time as these machines can be removed from the site for repair. • If spillages do occur then the contaminated soils will be rehabilitated by either: ○ In situ organic treatment; or ○ removal and disposal of contaminated soils at an appropriately licensed facility (Certificates of disposal will be obtained for recording purposes).
		Surface water contamination	Surface water could become polluted due to spillages of pollutants during handling and use.	Low	Operation	This impact is expected to be of low significance due to the following: • Environmental awareness training of contactor. • A PVC lined sump will be used for collection of oils and silt contained in the drilling water • The drill rig will be underlain with drip trays and tarpaulins to contain any spills or leaks of lubricants • The refuelling of vehicles will take place on an impermeable tarpaulin surface • Vehicles will not be serviced on site • No drilling will occur within 100m of water courses
		Groundwater contamination	Groundwater could become polluted due to pollutants entering aquifers via boreholes or surface water infiltration	Low	Operation	• Non-toxic and biodegradable drilling lubricant will be used • A PVC lined sump will be used for collection of oils and silt contained in the drilling water
		Air quality deterioration	Dust generation by vehicle movement on the access track Air pollution from exhaust fumes	Low	Operation	This impact is expected to be of low significance due to the following factors: • The movement of drilling related vehicles on unpaved access track will be on a small scale. • Vehicle speeds will be limited to 40km/h on site. • Drilling at each site will be temporary • Vehicles and drill rigs will be maintained in good

Activity		Potential Impact	Impact description	Impact rating	Project phase	Mitigation
						working order
		Noise generation	Noise generated by the drill could disturb nearby residences	Low	Operation	This impact is expected to be low as there are no nearby sensitive receptors
13	Contain all drilling water in the PVC lined sump and allow to settle – use biodegradable drilling oils where possible	Surface water contamination	The spillage of lubricants of fuel	Low	Operation	This impact is expected to be of low significance due to the following: • Environmental awareness training of contractor • A PVC lined sump will be used for collection of oils and silt contained in the drilling water • No drilling will occur within 100m of water courses
		Groundwater contamination	Groundwater could become polluted due to pollutants entering aquifers via boreholes or surface water infiltration	Low	Operation	This impact is expected to be of low significance due to the following: • Non-toxic and biodegradable drilling lubricant will be used • A PVC lined sump will be used for collection of oils and silt contained in the drilling water • Upon completion of drilling, oils and silt collected in the sump lining and drip trays will be stored and disposed at a permitted hazardous landfill.
14	Log the drill core and place on core trays	None	n/a	n/a	Operation	n/a
15	Empty portable chemical toilets as required – using an approved contractor	Contamination of soil	Soil pollution form toilet spills	Low	Operation	This impact is expected to be of low significance due to the following: • Chemical toilets to be serviced and emptied by recognised contractor on regular basis
16	Storage of domestic and industrial waste at the designed storage area. Domestic and industrial waste will be removed from site by the drilling contractor and	Contamination of soil	Soil pollution from toilet spills	Low	Operation	This impact is expected to be of low significance due to the following: • Chemical toilets to be serviced and emptied by recognised contractor on regular basis
		Surface water contamination	The spillage of lubricants of fuel	Low	Operation	This impact is expected to be of low significance due to the following:

Activity		Potential Impact	Impact description	Impact rating	Project phase	Mitigation
	disposed of at an approved waste disposal site					• Environmental awareness training of contractor • A PVC lined sump will be used for collection of oils and silt contained in the drilling water • No drilling will occur within 100m of water courses
		Groundwater contamination	Groundwater could become polluted due to pollutants entering aquifers via boreholes or surface water infiltration	Low	Operation	This impact is expected to be of low significance due to the following: • Non-toxic and biodegradable drilling lubricant will be used • A PVC lined sump will be used for collection of oils and silt contained in the drilling water • Upon completion of drilling, oils and silt collected in the sump lining and drip trays will be stored and disposed at a permitted hazardous landfill.
17	Storage of hazardous waste (fuels and lubricants) in sealed containers in the designated storage area. These substances will either be returned to the suppliers or disposed of at appropriately licensed facilities.	Contamination of soil	Soil pollution form toilet spills	Low	Operation	This impact is expected to be of low significance due to the following: • Chemical toilets to be serviced and emptied by recognised contractor on regular basis
		Surface water contamination	The spillage of lubricants of fuel	Low	Operation	his impact is expected to be of low significance due to the following: • Environmental awareness training of contractor • A PVC lined sump will be used for collection of oils and silt contained in the drilling water • No drilling will occur within 100m of water courses
		Groundwater contamination	Groundwater could become polluted due to pollutants entering aquifers via boreholes or surface water infiltration	Low	Operation	This impact is expected to be of low significance due to the following: • Non-toxic and biodegradable drilling lubricant will be used • A PVC lined sump will be used for collection of oils and silt contained in the drilling water • Upon completion of drilling, oils and silt collected in the sump lining and drip trays will be stored

Activity		Potential Impact	Impact description	Impact rating	Project phase	Mitigation
						and disposed at a permitted hazardous landfill.
Closure and rehabilitation of drill site						
18	Remove water from the sump and drip trays	Contamination of soil	Contamination of soil through spillages	Low	Decommissioning	This impact is expected to be of low significance due to the following: • Environmental awareness training of contractor. Management measures need to be incorporated into contractor's contract. • If spillages do occur the contaminated soils will be rehabilitated by either: ○ In situ organic treatment; or ○ removal and disposal of contaminated soils at an appropriately licensed facility (Certificates of disposal will be obtained for recording purposes); or ○ removed to a rehabilitation pad at an existing mine. Proof of adequate treatment to be kept on record.
		Surface water contamination	Contamination of soil through spillages	Low		This impact is expected to be of low significance due to the following: • Environmental awareness training of contractor
19	Remove oils and silt from PVC lining and drip trays and store until disposal to permitted hazardous landfill site	Contamination of soil	Soil pollution from spills during handling	Low	Decommissioning	This impact is expected to be of low significance due to the following: • Environmental awareness training of contractor • Removed oils and silts will be stored in sealed containers and placed on tarpaulins to catch any spills. • The use of drip trays and/or tarpaulins underneath leaking vehicles and equipment until such a time as these machines can be removed from the site for repair. • If spillages do occur the contaminated soils will be rehabilitated by either: ○ In situ organic treatment; or ○ removal and disposal of contaminated soils

Activity		Potential Impact	Impact description	Impact rating	Project phase	Mitigation
						at an appropriately licensed facility (Certificates of disposal will be obtained for recording purposes).
20	Backfill the sump once it has dried out (dome to allow for subsidence) and cover plug borehole	None	n/a	n/a	Decommissioning	n/a
21	Move drill core trays, chemical toilet, water bowser, stores and drill rig from the site	Air quality deterioration	Dust generation by vehicle movement on gravel access track Air pollution from exhaust fumes	Low	Decommissioning	This impact is expected to be of low significance due to the following factors: • The movement of drilling related vehicles on unpaved access track will be on a small scale. • Vehicle speeds will be limited to 40km/h on site. • Site de-establishment will be temporary
		Noise pollution	Noise generated by the drill rig could disturb nearby residences	Low	Decommissioning	This impact is expected to be low as there are no nearby sensitive receptors
		Contamination of soil	Soil pollution from toilet spills	Low	Decommissioning	This impact is expected to be of low significance due to the following: • Chemical toilets to be serviced and emptied by qualified contractor prior to being moved between drill sites.
		Contamination of surface water	Contamination of surface water resources from toilet spills and the stores	Low	Decommissioning	This impact is expected to be of low significance due to the following: • Environmental awareness training of contractor
22	Dispose of any general waste to a permitted landfill site	None	n/a	n/a	Decommissioning	n/a
22	Remove temporary access control	Contamination of soils	Contamination of soil through littering	Low	Decommissioning	This impact is expected to be of low significance due to the following: • this activity will be on a small scale and will be short-lived
24	Rip and plough compacted areas	Loss of topsoil	Vegetation will be cleared exposing topsoil	Low	Decommissioning	This impact is expected to be of low significance due to the following:

Activity		Potential Impact	Impact description	Impact rating	Project phase	Mitigation
			to erosion. Topsoil could be compacted and sterilised by movement of staff and vehicles if not stripped prior to establishment of infrastructure			• The removal of vegetation will be kept to a minimum. • Topsoil will be stripped (where possible) and stockpiled, re-vegetated for use during the rehabilitation process.
25	Replace topsoil over disturbed area (10 x 10 m)	Air quality deterioration	Dust generation by vehicle movement and replacing of soil	Low	Decommissioning	This impact is expected to be of low significance due to the following: • this activity will be on a small scale and will be short-lived • and is needed for the rehabilitation process.
26	Re-vegetate disturbed area (where necessary)	None	n/a	n/a	Decommissioning	n/a
27	Send core samples to laboratory for testing	Air quality deterioration	Dust generation by vehicle movement on gravel access track Air pollution from exhaust fumes	Low	Decommissioning	This impact is expected to be of low significance due to the following factors: • The movement of drilling related vehicles on unpaved access track will be on a small scale. • Vehicle speeds will be limited to 40km/h on site. • The project will be temporary.
28	Monitoring of rehabilitated boreholes	Air quality deterioration	Dust generation by vehicle movement on gravel access track Air pollution from exhaust fumes	Low	Closure	This impact is expected to be of low significance due to the following: • this activity will be on a small scale and will be short-lived • and is needed for the rehabilitation process.
		Noise pollution	Noise generated from vehicle movement during site inspections	Low	Closure	This impact is expected to be low as there are no nearby sensitive receptors
29	Dismantle contractor's site and rehabilitate	Air quality deterioration	Dust generation by vehicle movement and replacing of soil	Low	Decommissioning	This impact is expected to be of low significance due to the following: • this activity will be on a small scale and will be short-lived, • and is needed for the rehabilitation process.
30	Rehabilitate access track	Air quality deterioration	Dust generation by vehicle movement and	Low	Decommissioning	

Activity		Potential Impact	Impact description	Impact rating	Project phase	Mitigation
			replacing of soil			
31	Monitor and maintain rehabilitated area	None	n/a	n/a	closure	n/a

3.2.2 Concomitant list of appropriate technical or management options

(Chosen to modify, remedy, control or stop any action, activity, or process which will cause significant impacts on the environment, socio-economic conditions and historical and cultural aspects as identified. Attach detail of each technical or management option as appendices)

Refer to Table 4 and Appendix G for the EMP commitments. Where required, commitments have been revised to cater for the scale of the prospecting operation, these are indicated in *italics* in Appendix G.

3.2.3 Review the significance of the identified impacts

After bringing the proposed mitigation measures into consideration, the identified impacts, if managed correctly and in compliance to the EMPlan commitments included in Table 3 and Appendix G, can be reduced to negligible levels.

4 REGULATION 52 (2) (d): Financial provision.The applicant is required to-

4.1 Plans for quantum calculation purposes.

(Show the location and aerial extent of the aforesaid main prospecting actions, activities, or processes, for each of the construction operational and closure phases of the operation).

Refer to Appendix A for the location of the prospecting activities that have taken place to date and Appendix B for the conceptual layout of the drill site. Please note that the exact location where the remaining boreholes will be drilled is unknown at this stage and can only be determined from on-going prospecting results.

4.2 Alignment of rehabilitation with the closure objectives

(Describe and ensure that the rehabilitation plan is compatible with the closure objectives determined in accordance with the baseline study as prescribed).

The rehabilitation and closure objective is to rehabilitate the prospecting site to reflect that of its surrounding environment and to return all disturbed land to its pre-prospecting state.

4.3 Quantum calculations.

(Provide a calculation of the quantum of the financial provision required to manage and rehabilitate the environment, in accordance with the guideline prescribed in terms of regulation 54 (1) in respect of each of the phases referred to).

In January 2011, the financial provision was re-assessed. A copy of the financial provision re-assessment as submitted to the DMR in January 2011 is provided in Appendix H. The re-assessment caters for 31 boreholes.

4.4 Undertaking to provide financial provision

(Indicate that the required amount will be provided should the right be granted).

As per the financial re-assessment calculations included in Appendix H, as well as the DMR letter dated 25 July 2012 (Appendix I) a total amount of R52 690.88 was provided.

5 REGULATION 52 (2) (e): Planned monitoring and performance assessment of the environmental management plan.

5.1 List of identified impacts requiring monitoring programmes.

Due to the small scale and temporary nature of the prospecting operations as well as the low significance of the identified impacts, no formal monitoring programmes are required. On-going and regular inspections and monitoring on the progress of the implementation of the EMPlan

and compliance with EMP commitments will be done. This includes visual monitoring of potential impacts on plant and animal life, erosion and physical pollution.

5.2 Functional requirements for monitoring programmes.

As a general approach, Ntsimbintle will ensure that the inspections and monitoring as outlined in Section 5.1 comprise the following:

- inspections and monitoring will be conducted by suitably qualified personnel
- results from the inspections and monitoring will be compiled into a report by a competent person on a regular basis
- these reports will be kept on record for the life of the prospecting activities.

5.3 Roles and responsibilities for the execution of monitoring programmes.

Internal inspections will be carried out by the project geologist. The results of these inspections will be documented and kept on record for the life of the prospecting operation. Third party EMP performance assessment will be undertaken by a suitably qualified specialist. Third party EMP performance assessments will be documented and submitted to the DMR.

5.4 Committed time frames for monitoring and reporting.

During prospecting operations, internal monitoring and reporting will take place monthly. Once the site has been rehabilitated internal quarterly monitoring for a period of 2 to 3 years is typically allocated for areas disturbed by prospecting operations. This period may be reduced depending on the monitoring results.

Third party EMP performance assessments will be submitted to the DMR every 2 years.

6 REGULATION 52 (2) (f): Closure and environmental objectives.

6.1 Rehabilitation plan

(Show the areas and aerial extent of the main prospecting activities, including the anticipated prospected area at the time of closure).

Refer to Appendix A for the location of the prospecting activities and Appendix B for the conceptual layout of the drill site. Please note that the exact location for the remaining boreholes is still to be determined.

6.2 Closure objectives and their extent of alignment to the pre-prospecting environment.

The objective of closure is to return the environment back to its pre-prospecting state.

6.3 Confirmation of consultation

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

As part of the approved prospecting EMPlan process, a background information document was distributed to interested and affected parties (IAPs) to inform IAPs about the
project and the environmental assessment process being followed. Included in this background information document were the objectives for the rehabilitation of the borehole sites. Refer to Appendix E for a copy of the background information document.

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

The public consultation process that was completed by Metago Environmental Engineers (Pty) Ltd as part of the approved prospecting EMPlan is provided below.

It should be noted that the current landowner of the remaining portion of the farm Gloria 266 is Ntsimbintle, this was not the case when the initial public involvement process was undertaken. Please refer to Appendix E for the details of the landowners at the time that the approved prospecting EMPlan process was undertaken, as well as the current landowners.

7.1 Identification of interested and affected parties.

(Provide the information referred to in the guideline)

Deeds Search and social scan
Ntsimbintle managed the deed search process and provided Metago with the landowner's details for the portion under consideration. In addition to this a social scan was undertaken by Metago on Monday 16 and Tuesday 17 July 2007 to identify any potentially affected parties.The prospecting actitivites will take place on the remaining extent of the farm Gloria 226. (see Appendix A). The land is owned by Terra Nominees (Pty) Ltd. Details of the land ownership is attached in Appendix E.

Key stakeholders that were identified as part of the approved EMPlan include:

IAPs
- Landowner and land user in the prospecting area; and
- Landowners adjacent to the prospecting area.

Regulatory authorities
- Department of Water Affairs;
- Department of Environment and Nature Conservation;
- National Department of Agriculture;
- South African Heritage Resource Agency;
- John Taolo Gaetsewe District Municipality (previously known as the Kgalagadi District Municipality)

7.2 The details of the engagement process.

The public consultation comprised:
- A deeds search and social scan to confirm the name of the landowners (See section 7.1 above);
- Direct consultation with the landowner and potentially affected parties;
- Public review of the environmental management programme (EMPlan), if requested.

Direct consultation with the landowner and potentially affected parties
A background information document (BID) was prepared by Metago to inform potentially affected parties about the project and the environmental assessment process being followed. A copy of the BID is attached in Appendix E. All people consulted by Metago were given copies of the BID. Metago also undertook a field and social scan of the area on Monday 16 and Tuesday 17 July 2007. The purpose of the scan was to inspect the prospecting area and to consult with any potentially affected parties. Mr Ntsako Baloyi and Mr Brandon Stobart from Metago undertook the scan. Proof of consultation and comments received is attached in Appendix E.

The full list of people consulted and issues raised is provided in Appendix E.

Review of EMP by IAPs
If specifically requested, the prospecting EMP was made available for public review at the same time that copies of the EMP were submitted to the Department of Minerals and Energy (Currently known as the Department of Mineral Resources). Interested and affected parties (IAPs) were given a 30 day period to review the EMPlan. Any comments received during the reveiw period were forwarded to the Department of Mineral and Engergy.

A advised by the DMR, no additional consultation was undertaken as part of this prospecting EMPlan amendment process.

7.2.1 Description of the information provided to the community, landowners, and interested and affected parties.

Refer to the background information document in Appendix E for the information that was provided to IAPs as part of the approved prospecting EMPlan process. A summary of the information provided is outlined below:

- To inform IAPs about the project;
- Description of the environmental process and timeframes;
- The relevant parties involved in the environmental process;
- The role of IAPs into the environmental process and how IAPs can provide input; and
- A project overview of the activities.

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

With reference to Section 7.1 all parties that were consulted as part of the public involvement process are detailed in Appendix E and include:

- Landowner and land users in the prospecting area;
- Landowners adjacent to the prospecting area; and
- Other IAPs who were interested in the prospecting operation.

A list of parties that were identified during the public participation process but were not consulted directly by Metago include:

Regulatory authorities

- Department of Water Affairs;
- Department of Environment and Nature Conservation;
- National Department of Agriculture;
- South African Heritage Resource Agency; and
- John Taolo Gaetsewe District Municipality (previously known as the Kgalagadi District Municipality).

It is however expected that these department would have been consulted directly by the DMR.

It should be noted that the new prospecting DMR guidelines requires that the land claims commissioner is consulted in order to confirm if any land claims have been lodged on the farm. It is SLR's understanding from the applicant, that no land claims have been lodged against the farm Gloria 266.

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

No views were raised by IAPs regarding the existing cultural, socio-economic or biophysical environment.

7.2.4 List of views raised by consulted parties on how their existing cultural, socio-economic or biophysical environment potentially will be impacted on by the proposed prospecting operation.

The following views were raised by consulted parties relating to their existing cultural, socio-economic and biophysical environment:

- Procedural related issues: The EMPlan needs to address refuse, water use, roads, no collection of firewood and making fires, access to site and access roads, pre-and post-closure rehabilitation, endangered species, housing and non-compliance of drilling companies with health and environmental standards;
- Project related issues: The location of drill sites, demarcation of drill sites, the type of drill rig, the maintenance of equipment, the submission of drilling safety standard reports and damage to property
- Biodiversity related issues: loss of game from poaching
- Land use related issues: The impact of the prospecting operations towards game farming and hunting operations;
- Socio-economic related issues: Safety and security concerns

7.2.5 Other concerns raised by the aforesaid parties.

No other concerns were raised by IAPs.

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

The record of consultation is included in Appendix E.

7.2.7 Information regarding objections received.

No objections have been received.

7.3 The manner in which the issues raised were addressed.

Issus and concerns raised were either addressed directly with the party at the time of raising the issue and/or in a specific land use agreement where required.

8 SECTION 39 (3) (c) of the Act: Environmental awareness plan.

8.1 Employee communication process

(Describe how the applicant intends to inform his or her employees of any environmental risk which may result from their work).
Ntsimbintle will provide environmental awareness training (either by means of video or presentation) to individuals at a level of detail specific to the requirements of their job, but will generally comprise:

- Basic awareness training for all prior to granting access to site (e.g. short video presentation requiring registration once completed). Employees and contractors who have not attended the training will not be allowed on site.
- General environmental awareness training will be given to all employees and contractors as part of the Safety, Health and Environment induction programme.
- All non Ntsimbintle personnel who will be on site for more than five days must undergo the SHE induction training;
- Specific environmental awareness training will be provided to personnel whose work activities can have a significant impact on the environment (e.g. workshops, waste handling and disposal, sanitation, etc).

8.2 Description of solutions to risks

(Describe the manner in which the risk must be dealt with in order to avoid pollution or degradation of the environment).
The general procedure in which a risk must be dealt with is summarised below:

- Applicable geologist must be notified of an incident upon discovery;

- Take photographs and samples as necessary to assist in investigation;
- Projects environmental department must comply with Section 30 of the National Environmental Management Act (107 of 1998) such that the environmental department must immediately notify the Director General of the Department of Mineral Resources (DMR) and the regional Department of Water and Affairs (DWA) and any persons whose health may be affected of;
    - The nature of the incident;
    - Any risks posed to public health, safety and property;
    - The toxicity of the substances or by-products released by the incident; and
    - Any steps taken to avoid or minimise the effects of the incident on public health and the environment.
- The exploration department in consultation with the environmental department must as soon as is practical after the incident:
    - Take all reasonable measures to contain and minimise the effects of the incident including its effects on the environment and any risks posed by the incident to the health, safety and property of persons;
    - Undertake clean up procedures;
    - Remedy the effects of the incident; and
    - Assess the immediate and long term effects of the incident (environment and public health);
    - Within 14 days the environmental department must report to the Director-General DMR and the regional DWA office such information as is available to enable an initial evaluation of the incident, including:
        - The nature of the incident;
        - The substances involved and an estimation of the quantity released;
        - The possible acute effects of the substances on the persons and the environment (including the data needed to assess these effects);
        - Initial measures taken to minimise the impacts;
        - Causes of the incident, whether direct or indirect, including equipment, technology, system or management failure; and
        - Measures taken to avoid a recurrence of the incident.

8.3 Environmental awareness training.

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

Environmental awareness training will be conducted as outlined in Section 8.1. Emergency response training will be conducted as outlined in Table 6.

Table 6: Emergency response procedures

Item	Emergency Situation	Response in addition to general procedures
1	Spillage of chemicals, and waste	Where there is a risk that contamination will contaminate the land (leading to a loss of resource), surface water and/or groundwater, Ntsimbintle will: • Notify residents/users downstream of the pollution incident. • Identify and provide alternative resources should contamination impact adversely on the existing environment. • Cut off the source if the spill • Contain the spill (e.g. construct temporary earth bund around source) • Pump excess hazardous liquids on the surface to temporary containers (e.g. drums, mobile tanker, etc.) for appropriate disposal. • Remove hazardous substances from damaged infrastructure to an appropriate storage area before it is removed/repaired.
2	Discharge of dirty water to	Apply the principals listed for Item 1 above. To stop spillage from the dirty water system Ntsimbintle will:

Item	Emergency Situation	Response in addition to general procedures
	the environment	• Redirect excess water to other dirty water facilities where possible; • Carry out an emergency discharge of clean water and redirect the spillage to the emptied facility. • Apply for emergency discharge as a last resort.
3	Pollution of surface water	• Personnel discovering the incident must inform the environmental department of the location and contaminant source. • Apply the principals listed for Item 1 above. • Absorbent booms will be used to absorb surface plumes of hydrocarbon contaminants. • Contamination entering the surface water drainage system should be redirected into the dirty water system. • The environmental department will collect in-stream water samples downstream of the incident to assess the immediate risk posed by contamination.
4	Groundwater contamination	• Investigate the source of contamination and implement control/mitigation measures.
5	Veld fire	• Evacuate employees from areas at risk. • Notify downwind residents and industries of the danger. • Assist those in imminent danger/less able individuals to evacuate until danger has passed. • Provide emergency fire fighting assistance with available trained personnel and equipment.
6	Uncovering of graves and sites	• Personnel discovering the grave or site must inform the environmental department immediately. • Prior to damaging or destroying any of the identified graves, permission for the exhumation and relocation of graves must be obtained from the relevant descendants (if known), the National Department of Health, the Provincial Department of Health, the Premier of the Province and the local police. • The exhumation process must comply with the requirements of the relevant Ordinance on Exhumations, and the Human Tissues Act, 65 of 1983.

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

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

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

TABLE 7: ESTIMATED COSTS PER BOREHOLE FOR IMPLEMENTING TECHNICAL AND MANAGEMENT MEASURES

Potential impact	Mitigation measures	Estimated costs
		Once off
Construction cost	Includes facilities and activities that will be established during the development of the site (construction of sumps and waste storage area)	R500
Loss of soil resources	In-situ treatment of contaminated soils Removal of contaminated soils Ripping and levelling topsoil Chemical toiles will be serviced and emptied by qualified contractor	R500 R1 500 R250 R250
Biodiversity	Re-vegetation of disturbed areas	R150
Surface water pollution	Lining the sumps (re-usable drums) Cleaning up any spillages	R50 R2 000

Potential impact	Mitigation measures	Estimated costs
		Once off
Groundwater pollution	Disposal of drilling oils and silt collected in the sump lining and drip trays at a permitted hazardous landfill. Lined the sumps	R500 R750
Total		R6 450

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

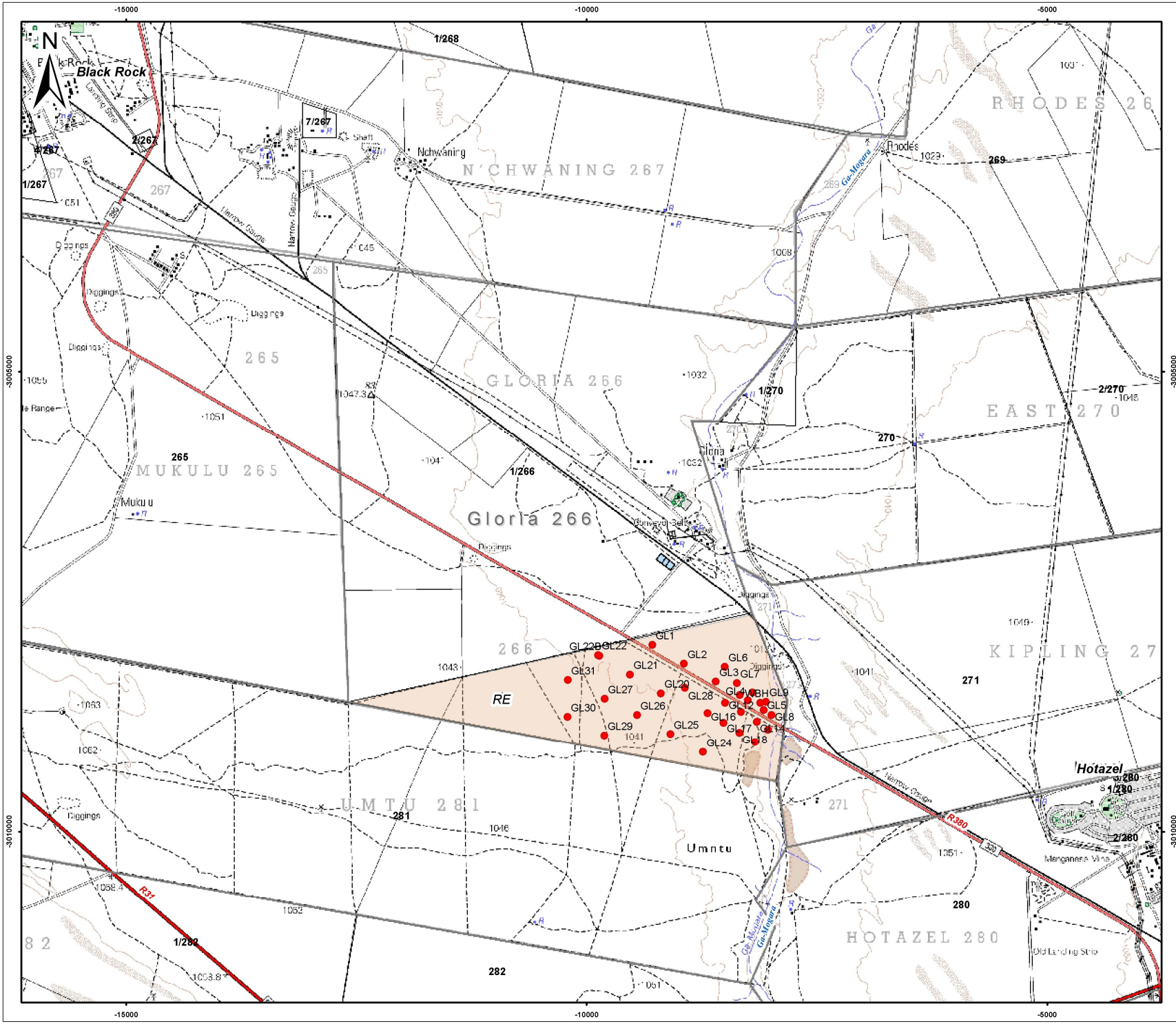
This amount is provided for in the drilling costs.

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

Herewith I, the person whose name and identity number is stated below, confirm that I am the person authorised to act as representative of the applicant in terms of the resolution submitted with the application, and confirm that the above report comprises EIA and EMP compiled in accordance with the guideline on the Departments official website and the directive in terms of sections 29 and 39 (5) in that regard, and the applicant undertakes to execute the Environmental management plan as proposed.	
Full Names and Surname	Jeffrey Patrick Leader 25/9/2024.
Identity Number	5603275001085

-END-

APPENDIX A: LOCALITY MAP SHOWING THE COMPLETED PROSPECTING OPERATIONS AS WELL AS THE AREA DESIGNATED FOR BOREHOLES



Legend

- Drilled Boreholes
- Prospecting Area

Projection: Transverse Mercator
Datum: Hartebeeshoek, LO23

NTSIMBINTLE PROSPECTING

Figure 1

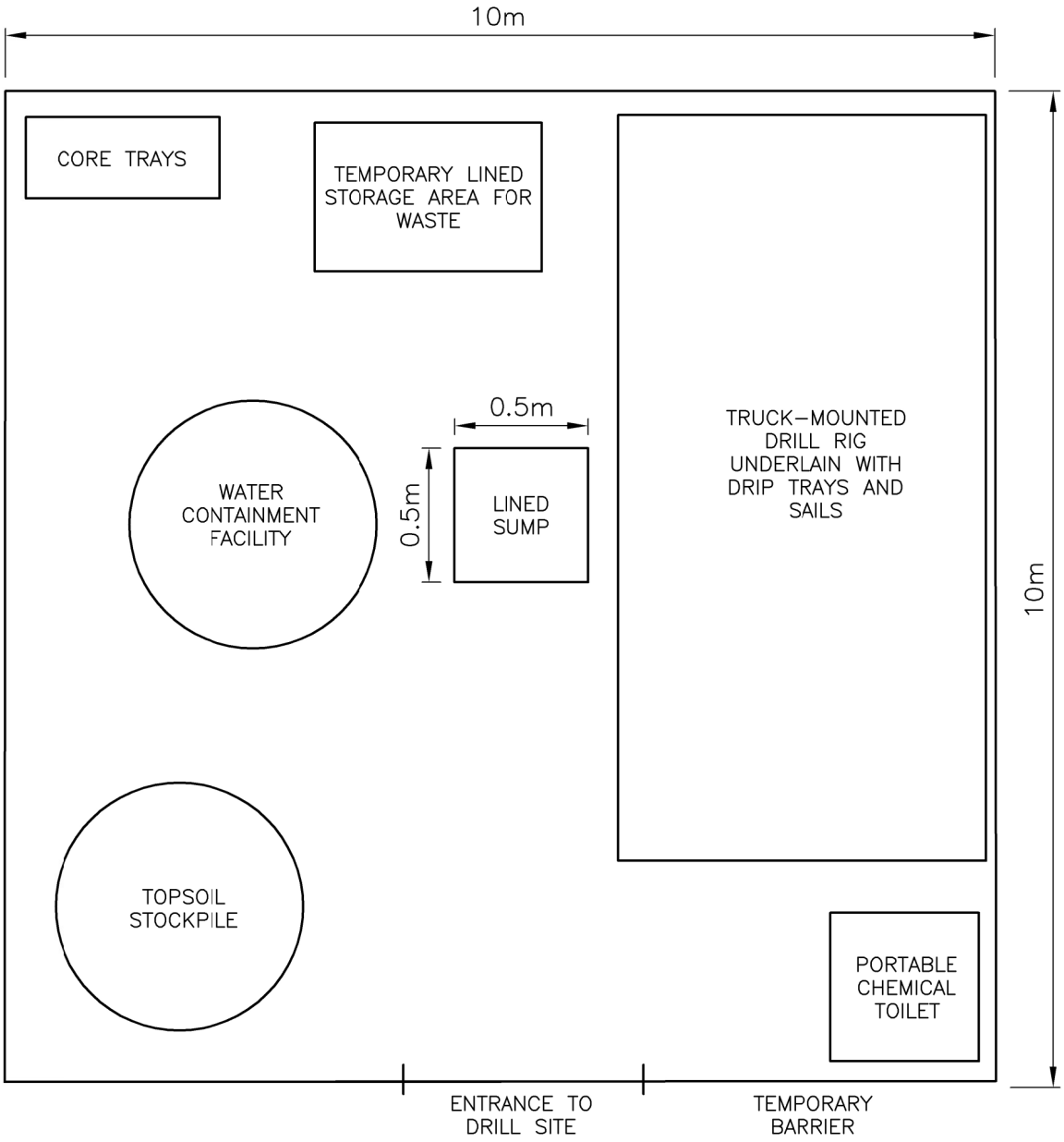
Local Setting

SLR Consulting (Africa) (Pty) Ltd
P O Box 1596, Cramerview, 2060, South Africa
Tel: +27 (11) 467-0945 Fax: +27 (11) 467-0978

710.14007.00003

September 2012

APPENDIX B: CONCEPTUAL LAYOUT OF THE



SLR
Johannesburg Office
METAGO HOUSE
FOURWAYS MANOR OFFICE PARK
CORNER ROOS AND MACBETH STREETS
FOURWAYS
JOHANNESBURG, SOUTH AFRICA
T: +27 (11) 467-0945
F: +27 (11) 467-0978
www.slrconsulting.com

CONCEPTUAL LAYOUT OF A DRILLING SITE

09/20012

710.14007.00003

FIGURE 2

APPENDIX C: LIST OF THE MORE DOMINANT PLANT SPECIES THAT OCCUR IN THE PROSPECTING AREA AS PER THE VEGETATION COMMUNITIES

Acacia haematoxylon Savannah

Scientific name	Common name (where available)
Acacia haematoxlyon (dominant shrub species)	Grey camel thorn
Acacia mellifera	Black thorn
Acacia erioloba	Camel thorn
Eragrostis lehmanniana	Lehmanns love grass
Eragrostis micrantha	Finessa grass
Stipagrostis uniplumis	Silky bushmans grass
Schmidtia pappophoroides	Sand quick
Aristida congesta	Tassel Three awn
Aristida stipitata	Long-awned Three awn
Acanthosicyos naudiniana	Gemsbok cucumber
Tribulus zeyheri	Devils thorn
Gnidia polycephala	-
Helichrysum argyrosphaerum	Hottentots tea
Monochema incanum	-

Acacia mellifera Mixed Woodland

Scientific name	Common name
Acacia mellifera (dominant shrub species)	Black thorn
Grewia flava	Velvet raisin
Acacia hebeclada	Candle thorn
Acacia erioloba	Camel thorn
Ziziphus mucronata	Buffalo thorn
Sasola tuberculata	-
Tribulus zeyheri	Devil's thorn
Chrysocomma ciliata	Bitter Karoo
Walafrida geniculata	Waterfinder bush
Rhigosum trichotomum (invader)	Drie Doring
Eragrostis lehmanniana	Lehmann's love grass
Aristida congesta	Tassel Three awn
Eragrostis chloromelas	Curly leaf
Aristida meridionalis	-
Schmidtia pappophoroides	Sand quick
Stipagrostis uniplumis	Silky bushman grass

Acacia erioloba Savannah

Scientific name	Common name
Acacia erioloba (prominent woody component)	Camel thorn
A hebeclada	Candle thorn
Ziziphus muconata	Buffalo thorn
Grewia flava	Velvet raisin
Schmidtia kalihariensis	-
Eragrostis lehmanniana	Lehmann's love grass
Stipagrostis uniplumis	Silky bushman grass
Aristida stipitata	Long-awned three awn
Aristida congesta	Tassel Three awn
Tribulus zeyheri	Devil's thorn
Acanthosicyos naudiniana	Gemsbok cucumber

Scientific name	Common name
Helichrysum spp	-

Schmidtia kalihariensis – Prosopis glandulosa Shrubland

Scientific name	Common name
Schmidtia kalihariensis	Sour grass
Eragrostis lehmanniana	Lehmann's love grass
Cynodon sp	-
Prosopis glandulosa (dominant woody component)	Mesquite
Ziziphus mucronata	Buffalo thorn
Acacia mellifera	Black thorn
Acacia erioloba	Camel thorn

Tarchonanthus camphoratus – Acacia karroo Scrub

Scientific name	Common name
Acacia karroo	Sweet thorn
Tarchonanthus camphoratus	Camphor tree
Lycium hirsutum	River honey thorn
Acacia mellifera	Black thorn
Pteronia glauca	Sage
Pentzia calcarea	Meerkat bush
Chrysocoma ciliata	Bitter karoo

Tarchonanthus camphoratus – Schmidtia pappophoroides Scrub

Scientific name	Common name
Tarchonanthus camphoratus	Camphor tree
T. camphorates (dominant shrub species)	
Grewia flava	Velvet raisin
Acacia karoo	Sweet thorn
Acacia erioloba	Camel thorn
Olea europaea	Wild olive
Schmidtia pappophoroides	Sand quick
Eragrostis lehmanniana	Lehmann's love grass
Pogonarthria squarrosa	Herringbone grass
Aristida meridionalis	-
Aristida congesta	Tassel Three awn

Secondary vegetation

Scientific name	Common name
Acacia mellifera	Black thorn
Cenchrus ciliaris	Blue buffalo grass
Stipagrostis obtusa	Small bushman grass
Eragrostis obtusa	Dew grass
Tribulus terrestris	Devil's thorn
Tribulus zeyheri	Devil's thorn
Tagetes minuta	Khaki bush
Solanum spp.	-

APPENDIX D: LIST OF POTENTIAL ENDANGERED OR RARE SPECIES THAT COULD OCCUR IN THE PROSPECTING AREA

Birds

Common name	Scientific name	Conservation status	Suitable habitat on-site	Potential for occurrence on-site
Martial Eagle	*Polemaetus bellicosus*	Vulnerable	High – Woodland, savannah or grassland with clumps of large trees or power pylons for nest sites	High – Nesting habitat in the *Acacia erioloba* Savannah.
Ludwig's Bustard	*Neotis ludwigii*	Vulnerable	Moderate – Requires semi-arid dwarf shrublands, occasionally visiting the southern Kalahari.	Medium – Moderate to high shrub density throughout the site. However, not commonly sided in the prospecting area.
Secretary Bird	*Sagittarius serpentarius*	Near threatened	High – Requires open grassland with scattered trees, shrubland, open *Acacia* Savannah.	High – Moderate to high shrub density throughout the site and *Acacia haematoxylon* Savannah.

Mammals

Common name	Scientific name	Conservation status	Suitable habitat on-site	Potential for occurrence on-site
Dent's horseshoe bat	*Rhinolophus denti*	Near threatened	Limited – Requires substantial cover such as caves and rock crevices.	Very little – As the landscape in the vicinity of the site is flat sand veld and does not offer suitable roosting habitat for these species.
Schreiber's long-fingered bat	*Miniopterus schreibersii*	Near threatened	Limited – Suitable cover such as caves and mine adits determines distribution.	
Honey badger	*Mellivora capensis*	Near threatened	High – As they are not catholic in habitat requirements, they are likely to occur on-site.	High to Medium – Area may be less suitable due to previous disturbances. However, this species is known to occur in association with humans.
South African hedgehog	*Atelerix frontalis*	Near threatened	High – Require ample groundcover and dry places for nesting.	High to Medium – Suitable habitat available in the *A. haematoxylon* Savannah and *A. erioloba* Savannah. However, site may be less suitable due to previous disturbances.
Springhass	*Pedentes capensis*	Vulnerable	High	High to Medium
Pangolin	*Manis temminckii*	Vulnerable	High	High to Medium

APPENDIX E: PROOF OF PUBLIC CONSULTATION

- List of people consulted and a summary of issues and comments raised;
- Background information document;
- Details of the landowner as part of the approved prospecting EMPlan and the prospecting EMPlan amendment process;
- Proof of consultation with landowners and potentially affected parties and comments from IAPs

Table 1: List of people consulted to date and a summary of issues and comments raised

Name	Interest	Address	Contact Number	Comments and/ or Notes. Response from the project team is written in Italics.	Received BID
Elsa Wlochowsky	Representative of Terra Nominees (Pty) Ltd. Terra Nominees is the land owner of the remaining extent of Gloria 226.		Elsa.wlochowsky@ bhpbilliton.com	Ms Wlochowsky was contacted via email on 10 July 2007. No comments were submitted.	Yes
David Wellbeloved	Representative of Kalahari Resources. Prospecting on Umtu 281, a farm immediately adjacent to Gloria 226.		davew@metmar.co.za	Mr Wellbeloved was contacted via email on 11 July 2007. Submitted comments were as follows: ▪ No particular problems with the application except that Kalahari Resources is also in the process of applying for prospecting rights on Umtu 281, a farm immediately adjacent to Gloria 226. *Comments noted.*	Yes
Oscar van Anwerpen	Representative of Samancor's manganese mines in the Hotazel area.	PO Box 1 Hotazel 8490	Oscar.vanantwerpen@ bhpbilliton.com	Metago met with Mr van Anwerpen on 17 July 2007. Comments and issues raised include the following: ▪ The following issues should be dealt with in the EMP for this project: ○ Refuse ○ Water use ○ Roads ○ No collection of firewood or making of fire ○ Access roads ○ Provision for rehabilitation including pre and post rehabilitation photos ○ Endangered species ○ Housing ○ Concerns with the drilling company, J&E drilling not complying with safety,	Yes

Name	Interest	Address	Contact Number	Comments and/ or Notes. Response from the project team is written in Italics.	Received BID
				health and environmental standards ▪ Drill sites must be discusses with Oscar van Antwerpen and land users before drilling commences. ▪ The drill sites must be properly fenced and not taped as is commonly practised. ▪ Ntsimbintle's environmental policy and management measures for drilling contactors must be submitted. ▪ The types of drills going to be used should be clearly stated. ▪ It should be clearly stated how and where equipment will be mantained. ▪ Drill cycles and shifts should be clearly stated. ▪ The drilling company must submit current drilling safety standards and reports. *Issues raised and comments will be addressed in a specific land use agreement where required.*	
Tony Kennet/ Braam van Rensberg	Land user and lessee of the remaining extent of Gloria 226 as Traponza Trading 169 CC (Game Farm).	PO Box 6340 Nelspruit 1200	013-755-2484 (T) 013-755-2462 (F) 082-449-8869 tkenn@iafrica.com fincon@mweb.co.za	Mr Kennet was contacted via email on 19 July 2007. Comments received are as follows: ▪ Prospecting will have direct influence on game farming and hunting operations. How will this be addresses? ▪ Security could also be a problem. *Issues raised and comments will be addressed in a specific land use agreement where required.*	Yes
Danie Terblanche	Representative of Assmang Mine on the farm Gloria 226.		083-288-7086 053-751-5227 (T) 085-614-2821 (F) daniet@assmang.co.za	Mr Terblanche was contacted via email on 11 July 2007. Comments and issues raised are as follows: ▪ No open fires to be allowed at the drilling sites. ▪ Killing of animals and cutting of wood on Assmang's property adjoining the prospecting	Yes

Name	Interest	Address	Contact Number	Comments and/ or Notes. Response from the project team is written in Italics.	Received BID
				farm not to be allowed. ▪ Cutting and damage to Assmang's property fences not to be allowed and if done by accident must be repaired at cost. ▪ If access is required from Assmang's side, a gate must be installed, the gate must be locked and a duplicate key must be handed over to Assmang, on completion the gate must be removed and the fence repaired. *Comments noted.*	

NTSIMBINTLE MINING (PTY) LTD

BACKGROUND INFORMATION DOCUMENT ON THE ENVIRONMENTAL ASSESSMENT FOR PROSPECTING ON THE FARM GLORIA 266 IN THE NORTHERN CAPE PROVINCE

INTRODUCTION

Ntsimbintle Mining (Pty) Ltd (Ntsimbintle) would like to conduct prospecting activities on the farm Gloria 266 in the Kuruman Magisterial District of the Northern Cape Province (Figure 1). The prospecting right application is for the remaining extent of the farm.

The first phase of the prospecting activities will involve drilling of approximately seven boreholes to remove samples for test purposes.

This background information document has been prepared by Metago to inform you:

* about the proposed project;
* about the environmental assessment process to be followed;
* of possible environmental impacts; and
* how you can have input into the environmental assessment process as an interested and/or affected party (IAP)

ENVIRONMENTAL IMPACT ASSESSMENT AND MANAGEMENT PLAN

In accordance with the Mineral and Petroleum Resources Development Act, 28 of 2002, and the supporting Regulations, 527 of 23 April 2004, - Ntsimbintle must submit a standard environmental management plan (EMP) in support of each prospecting right application.

The standard EMP includes a basic environmental assessment process. The environmental assessment, involving consultation with regulatory authorities and IAPs, provides information on whether the proposed prospecting activities are acceptable from an environmental perspective.

Ntsimbintle has appointed Metago Environmental Engineers (Pty) Ltd (Metago) to both manage the environmental assessment process and compile the EMP.

YOUR ROLE

You have been identified as an interested and/or affected party (IAP) who may want to be informed about the proposed project and have input into the environmental assessment process.

All comments will be recorded, included in the standard EMP and submitted to the Department of Minerals and Energy (DME) for decision-making. The DME will involve other regulatory authorities, with an interest in the environment, in the decision-making process.

HOW TO RESPOND

Responses to this document can be made directly to the people listed below by the indicated dates.

WHO TO CONTACT

By 12h00 on Wednesday, 25 July 2007:

Metago Environmental Engineers
Brandon Stobart or Ntsako Baloyi
(011) 467-0945 (tel) or
(011) 467-0978 (fax)
OR
brandon@metago.co.za or
ntsako@metago.co.za

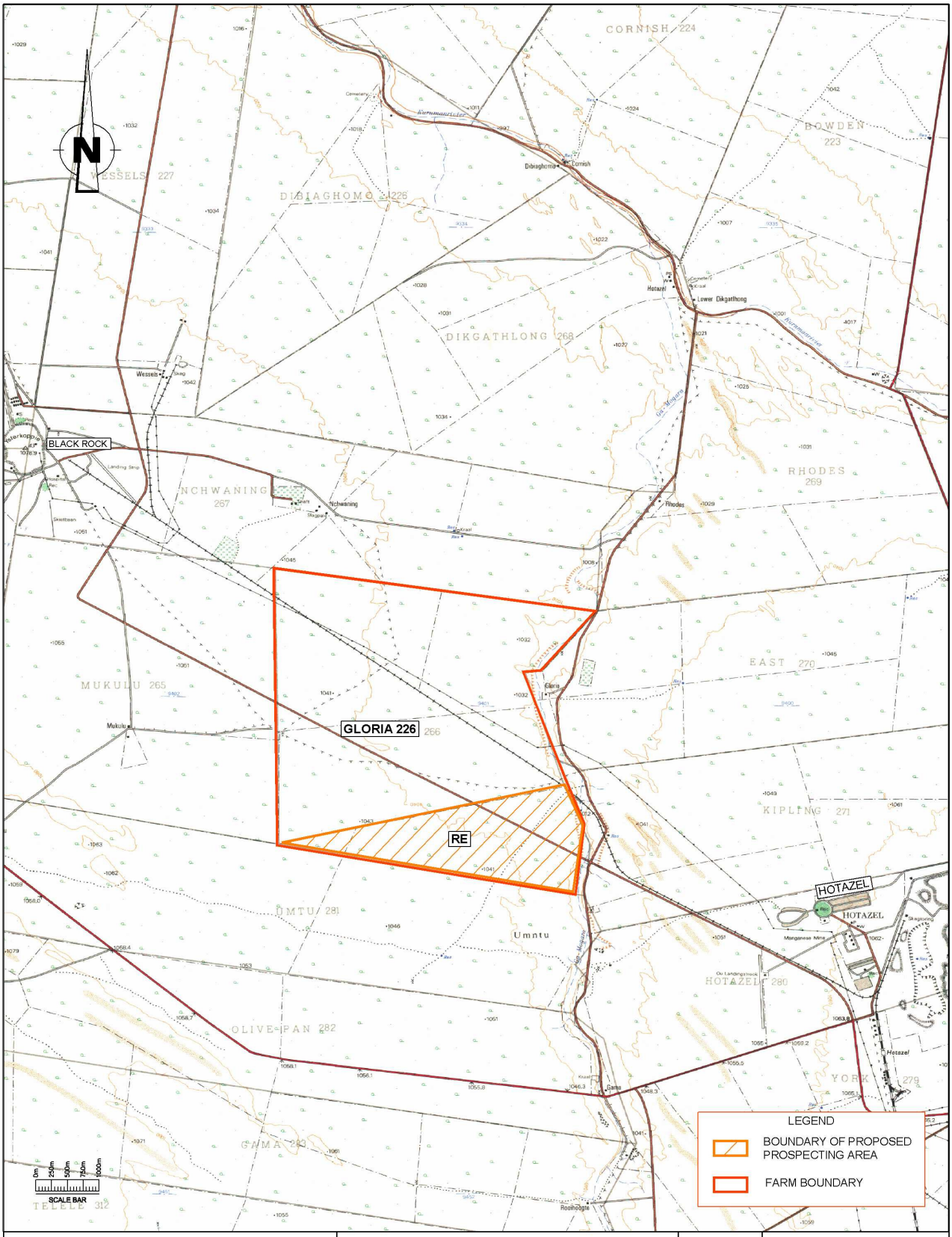
and/or

By Friday 27 July 2007:

The Regional Manager: Northern Cape
Department of Minerals and Energy
(053) 830 0800 (tel) or
(053) 832 5631 (fax)

DME Reference No:

NC30/5/1/1/2/1250 PR



Metago Environmental Engineers (Pty) Ltd Consulting Engineers & Scientists	NTSIMBINTLE MINING (PTY) LTD PROPOSED PROSPECTING OPERATIONS	07/2007 N001-01	FIGURE 1

PROPOSED PROSPECTING OPERATION

PROSPECTING:

Prospecting will be performed by means of drilling. At this stage it is planned to drill approximately seven boreholes. The target mineral is manganese (Mn).

Samples taken will be sent to a laboratory for analysis. In addition air-magnetic data interpretation and the application of modern basin analysis techniques will be used during the interpretation of the geological drilling data.

CONTRACTOR and SERVICES:

Ntsimbitle will make use of a drilling contractor. Approximately 5 workers will be required for drilling purposes. All workers will stay off-site in Kuruman.

Water for drilling purposes and potable water for drinking could be sourced from existing nearby water users. Power will be supplied by an on-site diesel generator.

WASTE:

No mine waste will be generated, as this is a prospecting operation. All material recovered will be sent for analysis.

Domestic and industrial waste (oil, grease, hydraulic fluids) will be collected on site and disposed of by the contractor at permitted waste disposal facilities.

Chemical toilets will be made available on site by the contractor

REHABILITATION OF LAND:

After prospecting, the drilling and storage areas and any access roads will be returned to their pre-disturbed state. Rehabilitation will involve sealing of boreholes, removal of all waste and equipment, filling of sumps and replacing topsoil, where relevant. The rehabilitation will be done in consultation with the landowners/lawful occupiers.

TIMING OF THE PROJECT:

It is anticipated that if a prospecting right is awarded to Ntsimbintle prospecting will commence within three months from the date of the award. Each borehole will take between 2 and 3 months to drill.

ENVIRONMENTAL ASSESSMENT PROCESS

A standard environmental management plan (EMP) as prescribed by the Department of Minerals and Energy must be completed. The standard EMP incorporates a simple environmental impact assessment (EIA). The EIA and EMP will:

* provide information on the prospecting applicant;
* assess the impact of the operation based on the proposed activities and the environment in which it is being undertaken;
* record concerns or issues raised by interested and/or affected parties (IAPs) about the prospecting operation; and
* guide the applicant to mitigate environmental impacts to limit damage to the environment.

STEPS IN THE ENVIRONMENTAL ASSESSMENT PROCESS

APPLICATION
Prospecting application submitted to DME (April 2007)
↓
DME accepted the prospecting application (31 May 2007)

WE ARE HERE!!

PUBLIC INVOLVEMENT
Notify regulatory authorities and IAPs of the project and environmental assessment and record any concerns or issues (16 July 2007)

↓

REPORTING
Complete standard EMP
↓
Submit standard EMP to DME (by 29 July 2007)

Please let us know if there are any additional parties that should be involved.

Parties involved in the environmental assessment are:

IAPS

- Surface owners and land users on and immediately surrounding the proposed prospecting sites
- Any other people who may be affected by the project

REGULATORY AUTHORITIES

- Department of Minerals and Energy
- Department of Water Affairs and Forestry
- Department of Tourism, Environment and Conservation
- National Department of Agriculture
- South African Heritage Resources Agency
- Kgalagadi District Municipality

NTSIMBINTLE MINING (PTY) LTD

ENVIRONMENTAL ASSESSMENT FOR PROSPECTING ON THE FARM GLORIA 266 IN THE NORTHERN CAPE PROVINCE

REGISTRATION AND RESPONSE FORM FOR INTERESTED AND AFFECTED PARTIES

PARTICULARS OF THE INTERESTED AND AFFECTED PARTY PLEASE COMPLETE YOUR DETAILS IN THE SPACE PROVIDED BELOW	
DATE:	TIME
NAME AND SURNAME:	
POSTAL ADDRESS:	STREET ADDRESS:
WORK/DAY TELEPHONE NUMBER:	
WORK/ DAY FAX NUMBER:	
CELL PHONE NUMBER:	
E-MAIL ADDRESS:	

PLEASE IDENTIFY YOUR INTEREST IN THE PROPOSED PROJECT
PLEASE WRITE YOUR COMMENTS AND QUESTIONS HERE

Please return completed forms to:

Brandon Stobart or Ntsako Baloyi
Metago Environmental Engineers
P O Box 1596, Cramerview, 2060
Fax: (011) 467-0978

Details of landowners for the farm Gloria 266 (as part of the approved prospecting EMPlan process)

Farm Name and Number		Gloria
Registration Number		266
Province		Northern Cape
Magisterial District		Kuruman
PORTION	**TITLE DEED**	**SURFACE OWNER**
Remaining extent	T2388/ 1996	Terra Nominees (Pty) Ltd C/o Elsa Wlochowsky Elsa.wlochowsky@bhpbilliton.com

Details of landowners for the farm Gloria 266 (as part of the prospecting EMPlan amendment process)

Farm Name and Number		Gloria
Registration Number		266
Province		Northern Cape
Magisterial District		Kuruman
PORTION	**TITLE DEED**	**SURFACE OWNER**
Remaining extent	T2388/ 1996	Ntsimbintle Mining (Pty) Ltd

NAME & SURNAME	INTEREST IN THE PROSPECTING PROJECT	ADDRESS	RECEIVED BID	SIGNATURE
Oscar Van Antwerpen	- Samancor Manganese representative - managing land	oscar.vanantwerpen@bhpbilliton.com	YES - ALL THREE. GLORIA MAMAFIWANI WESSELS/ DISMANTLING	
COMMENTS: Refer to notes taken during discussion.				

NAME & SURNAME	INTEREST IN THE PROSPECTING PROJECT	ADDRESS	RECEIVED BID	SIGNATURE
COMMENTS:				

Brandon Stobart

From: Brandon Stobart [brandon@metago.co.za]
Sent: 10 July 2007 05:04 PM
To: 'Wloschowsky, Elsa (BSA)'
Cc: 'Justin Pitt'
Subject: Prospecting application on Gloria Farm
Attachments: Ntsimbintle-Gloria BID_2007-07-05.pdf

Hi Elsa

Attached is a background information document regarding Ntsimbintle's application for prospecting rights on the Farm Gloria. I look forward to receiving comments from you as a representative of Terra Nominees. If you would like these comments to be included in our process please submit them by 12h00 on 25 July 2007.

Please reply to this e-mail as confirmation that you have received it.

Kind regards

Brandon Stobart, Director
Metago Environmental Engineers (Pty) Ltd
Tel: 011 4670945, Fax: 011 4670978, Cell: 0834712231
e-mail: brandon@metago.co.za

Brandon Stobart

From: Wloschowsky, Elsa (BSA) [Elsa.Wloschowsky@bhpbilliton.com]
Sent: 10 July 2007 05:31 PM
To: Brandon Stobart
Subject: RE: Prospecting application on Gloria Farm

Received
Elsa

From: Brandon Stobart [mailto:brandon@metago.co.za]
Sent: 10 July 2007 05:04 PM
To: Wloschowsky, Elsa (BSA)
Cc: 'Justin Pitt'
Subject: Prospecting application on Gloria Farm

Hi Elsa

Attached is a background information document regarding Ntsimbintle's application for prospecting rights on the Farm Gloria. I look forward to receiving comments from you as a representative of Terra Nominees. If you would like these comments to be included in our process please submit them by 12h00 on 25 July 2007.

Please reply to this e-mail as confirmation that you have received it.

Kind regards

Brandon Stobart, Director
Metago Environmental Engineers (Pty) Ltd
Tel: 011 4670945, Fax: 011 4670978, Cell: 0834712231
e-mail: brandon@metago.co.za

Brandon Stobart

From: Brandon Stobart [brandon@metago.co.za]
Sent: 11 July 2007 09:31 AM
To: 'david@kalagadi.co.za'; 'davew@metmar.co.za'
Cc: 'Justin Pitt'
Subject: prospectring application on Gloria Farm
Attachments: Ntsimbintle-Gloria BID_2007-07-05.pdf

Hi Dave

Attached is a background information document regarding Ntsimbintle's application for prospecting rights on the Farm Gloria. I look forward to receiving comments from you as a representative of Kalahari Resources. If you would like these comments to be included in our process please submit them by 12h00 on 25 July 2007.

Please reply to this e-mail as confirmation that you have received it.

Kind regards

Brandon Stobart, Director
Metago Environmental Engineers (Pty) Ltd
Tel: 011 4670945, Fax: 011 4670978, Cell: 0834712231
e-mail: brandon@metago.co.za

Brandon Stobart

From: David Wellbeloved [david@kalahariresources.co.za]
Sent: 20 July 2007 10:06 AM
To: 'Brandon Stobart'
Subject: RE: Ntsimbintle's application on Gloria

Hi Brandon,
I have no real comment except that we are in the process of applying ourselves. I do not think that bit, on its own, is a viable prospect.
Regards,
Dave Wellbeloved

From: Brandon Stobart [mailto:brandon@metago.co.za]
Sent: Thursday, July 19, 2007 5:25 PM
To: davew@metmar.co.za; david@kalagadi.co.za
Subject: Ntsimbintle's application on Gloria

Hi Dave

If possible, could you send me your comments by close of business on Monday next week? This would really help me.

Regards

Brandon Stobart, Director
Metago Environmental Engineers (Pty) Ltd
Tel: 011 4670945, Fax: 011 4670978, Cell: 0834712231
e-mail: brandon@metago.co.za

Brandon Stobart

From: Brandon Stobart [brandon@metago.co.za]
Sent: 11 July 2007 09:18 AM
To: 'Daniet@assmang.co.za'
Cc: 'Justin Pitt'
Subject: Prospecting application on Gloria Farm
Attachments: Ntsimbintle-Gloria BID_2007-07-05.pdf

Hi Danie

Attached is a background information document regarding Ntsimbintle's application for prospecting rights on the Farm Gloria. I look forward to receiving any comments from you as a representative of Assmang. If you would like these comments to be included in our process please submit them by 12h00 on 25 July 2007.

Please reply to this e-mail as confirmation that you have received it.

Kind regards

Brandon Stobart, Director
Metago Environmental Engineers (Pty) Ltd
Tel: 011 4670945, Fax: 011 4670978, Cell: 0834712231
e-mail: brandon@metago.co.za

Brandon Stobart

From: Danie Terblanche [daniet@assmang.co.za]
Sent: 11 July 2007 03:35 PM
To: Brandon Stobart
Subject: RE: Prospecting application on Gloria Farm

Mr Stobart

Herewith comment on prospecting application at Gloria.

1. No open fires to be allowed at the drilling sites.
2. Killing of animals and cutting of wood on our property adjoining the prospecting farm not to be allowed.
3. Cutting and damage to our fences not to be allowed and if done by accident must be repaired at your cost.
4. If access is required from our side a gate must installed, the gate must be locked and a duplicate key must be handed over to Assmang, on completion the gate must be removed and the fence repaired.

Thanks

Danie Terblanche
Environmental Superintendent
daniet@assmang.co.za
083 288 7086
053 7515227 Office
086 6142 821 Fax

From: Brandon Stobart [mailto:brandon@metago.co.za]
Sent: Wed 7/11/2007 9:17 AM
To: Danie Terblanche
Cc: 'Justin Pitt'
Subject: Prospecting application on Gloria Farm

Hi Danie

Attached is a background information document regarding Ntsimbintle's application for prospecting rights on the Farm Gloria. I look forward to receiving any comments from you as a representative of Assmang. If you would like these comments to be included in our process please submit them by 12h00 on 25 July 2007.

Please reply to this e-mail as confirmation that you have received it.

Kind regards

Brandon Stobart, Director
Metago Environmental Engineers (Pty) Ltd
Tel: 011 4670945, Fax: 011 4670978, Cell: 0834712231
e-mail: brandon@metago.co.za

Brandon Stobart

From: Brandon Stobart [brandon@metago.co.za]
Sent: 19 July 2007 05:24 PM
To: 'tkenn@iafrica.com'
Cc: 'Justin Pitt'
Subject: Prospecting application - RE Gloria
Attachments: Ntsimbintle-Gloria BID_2007-07-05.pdf

Hi Tony

Attached is a background information document regarding Ntsimbintle's application for prospecting rights on the Farm Gloria. The map indicates the target area. I was informed by an employee of Samancor Manganese that Traponza Trading uses this land for game farming. If you have comments I would appreciate it if you could send them to me by close of business on 23 July 2007.

In addition, please reply to this e-mail as confirmation that you have received it.

Kind regards

Brandon Stobart, Director
Metago Environmental Engineers (Pty) Ltd
Tel: 011 4670945, Fax: 011 4670978, Cell: 0834712231
e-mail: brandon@metago.co.za

[redacted]

PARTICULARS OF THE INTERESTED AND AFFECTED PARTY PLEASE COMPLETE YOUR DETAILS IN THE SPACE PROVIDED BELOW	
DATE: 24-7-2007	TIME 16h00.
NAME AND SURNAME: TRIPONZA TRADING 169 CC	
POSTAL ADDRESS: P.O BOX 6340 NELSPRUIT 1200	STREET ADDRESS: 7 ALLCREST BUILDING C/O McADAM AND ROTHERY SAMEETS NELSPRUIT 1200
WORK/DAY TELEPHONE NUMBER: 013-7552484	
WORK/ DAY FAX NUMBER: 013-7552462	
CELL PHONE NUMBER: 0836296860 JAKENSBURG	
E-MAIL ADDRESS: fincon@mweb.co.za	

[redacted]

LESSEE OF THE PROPERTY – GAME FARM

[redacted]

1) PROSPECTING WILL HAVE DIRECT INFLUENCE ON GAME FARMING AND HUNTING OPERATIONS – HOW WILL THIS BE ADDRESSED?

2) SECURITY COULD ALSO BE A PROBLEM.

[redacted]

APPENDIX F: CRITERIA USED TO ASSESS ENVIRONMENTAL IMPACTS

PART A: DEFINITION AND CRITERIA		
Definition of SIGNIFICANCE		**Significance = consequence x probability**
Definition of CONSEQUENCE		**Consequence is a function of severity / nature, spatial extent and duration**
Criteria for ranking of the SEVERITY/NATURE of environmental impacts	**H**	Substantial deterioration (death, illness or injury). Recommended level will often be violated. Vigorous community action. Irreplaceable loss of resources.
	M	Moderate/ measurable deterioration (discomfort). Recommended level will occasionally be violated. Widespread complaints. Noticeable loss of resources.
	L	Minor deterioration (nuisance or minor deterioration). Change not measurable/ will remain in the current range. Recommended level will never be violated. Sporadic complaints. Limited loss of resources.
	L+	Minor improvement. Change not measurable/ will remain in the current range. Recommended level will never be violated. Sporadic complaints.
	M+	Moderate improvement. Will be within or better than the recommended level. No observed reaction.
	H+	Substantial improvement. Will be within or better than the recommended level. Favourable publicity.
Criteria for ranking the DURATION of impacts	**L**	Quickly reversible. Less than the project life. Short term
	M	Reversible over time. Life of the project. Medium term
	H	Permanent. Beyond closure. Long term.
Criteria for ranking the SPATIAL SCALE/ EXTENT of impacts	**L**	Localised - Within the site boundary.
	M	Fairly widespread – Beyond the site boundary. Local
	H	Widespread – Far beyond site boundary. Regional/ national

PART B: DETERMINING CONSEQUENCE					
SEVERITY / NATURE = L					
DURATION	Long term	**H**	**Medium**	**Medium**	**Medium**
	Medium term	**M**	**Low**	**Low**	**Medium**
	Short term	**L**	**Low**	**Low**	**Medium**
SEVERITY / NATURE = M					
DURATION	Long term	**H**	**Medium**	**High**	**High**
	Medium term	**M**	**Medium**	**Medium**	**High**
	Short term	**L**	**Low**	**Medium**	**Medium**
SEVERITY / NATURE = H					
DURATION	Long term	**H**	**High**	**High**	**High**
	Medium term	**M**	**Medium**	**Medium**	**High**
	Short term	**L**	**Medium**	**Medium**	**High**
			L	**M**	**H**
			SPATIAL SCALE / EXTENT		

PART C: DETERMINING SIGNIFICANCE					
PROBABILITY (of exposure to impacts)	Definite/ Continuous	**H**	**Medium**	**Medium**	**High**
	Possible/ frequent	**M**	**Medium**	**Medium**	**High**
	Unlikely/ seldom	**L**	**Low**	**Low**	**Medium**
			L	**M**	**H**
			CONSEQUENCE		

PART D: INTERPRETATION OF SIGNIFICANCE	
Significance	**Decision guideline**
High	It would influence the decision regardless of any possible mitigation.
Medium	It should have an influence on the decision unless it is mitigated.
Low	It will not have an influence on the decision.

***H = high, M= medium and L= low and + denotes a positive impact.**

APPENDIX G: EMP COMMITMENTS

Note: With reference to Section 3.2.2, commitments that have been revised are written in italics

EMP COMMITMENTS
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 must be available at the prospecting site for scrutiny when required. Plan must show co-ordinates of the area being applied for; north point; scale; name, number and location of the area covered by the application; size and shape of area; boundaries of area; layout of operations; surface structures and servitudes; and topography of the land.
The plan must be updated on a regular basis with regard to the actual progress of the establishment of surface infrastructure and rehabilitation (a copy of the updated plan shall be forwarded to the Regional Manager on a regular basis).
F 1.1.2 DEMARCATING THE PROSPECTING SITE
The prospecting *drill site* must be clearly demarcated *by means of fencing*
Fences 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.
Prospecting and resultant operations shall only take place within this demarcated area.
F 1.2 RESTRICTIONS ON PROSPECTING
On assessment of the application, the Regional Manager may prohibit the conducting of prospecting operations in vegetated areas or over portions of these areas
In the case of areas that are excluded from prospecting, no operations shall be conducted within 5 m of these areas.
F 1.3 RESPONSIBILITY
The environment affected by the 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 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.

EMP COMMITMENTS
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 prospecting area outside the 1:50 flood level within the boundaries of the prospecting area.
Topsoil shall not be used for building or maintenance of access track.
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 TRACK ON THE SITE
Existing access tracks will be used as far as practicable to gain access to the prospecting area.
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 track this must be listed
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 TRACK
In the case of dual or multiple use of access track by other users, arrangements for multiple responsibility must be made with the other users. If not, the maintenance of access track will be the responsibility of the holder of the prospecting right.
Newly constructed access track shall be adequately maintained so as to minimise dust, erosion or undue surface damage.
F 2.2.3 DUST CONTROL ON THE ACCESS TRACK
The speed of *vehicles* must be strictly controlled to avoid dangerous conditions, excessive dust or excessive deterioration of the road being used.

EMP COMMITMENTS
F 2.2.4 REHABILITATION OF ACCESS TRACK
Whenever a 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-prospecting situation.
Access tracks 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 prospecting operation, be corrected and the area be seeded with a seed mix to the Regional Manager's specification.
F 2.3 SECURED STORAGE AREAS
F 2.3.1 ESTABLISHING SECURED STORAGE AREAS
The 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 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 the storage area is to be indicated on the layout plan.
No vehicle may be extensively repaired on site
F 2.3.2 MAINTENANCE OF VEHICLES AND EQUIPMENT
The maintenance of vehicles and equipment used for any purpose during the prospecting operation will take place at a maintenance yard off-site
Equipment used in the 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 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 2.3.3 WASTE DISPOSAL
Suitable covered receptacles shall be available at all times and conveniently placed for the disposal of waste.

EMP COMMITMENTS
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.
On completion of the prospecting operations, the above areas shall be cleared of any contaminated soil, which must be dumped as referred to in section F 2.3.3 above.
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 prospecting operation be corrected and the area be seeded with a seed mix to his or her specification.
F 3 GENERAL OPERATING PROCEDURES IN THE PROSPECTING AREA
F 3.1 LIMITATIONS ON PROSPECTING
Prospecting may be limited to the areas indicated by the Regional Manager on assessment of the application.
The holder of the prospecting right shall ensure that operations take place only in the demarcated areas as described in section F 1.1.2 above.
F 3.3 FINAL REHABILITATION
All infrastructure, equipment, camp site and other items used during the prospecting 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 prospecting 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 in order to ensure that the provisions of this programme are adhered to.
On-going 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.

EMP COMMITMENTS
Visual inspections on erosion and physical pollution shall be carried out on a regular basis.
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 biannial 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
F 5.1 ENVIRONMENTAL RISK REPORT
When the holder of a prospecting right 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.
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
See EMP commitments for contents of closure plan

EMP COMMITMENTS
F 5.4 TRANSFER OF ENVIRONMENTAL LIABILITIES TO A COMPETENT PERSON
Should the holder of a prospecting right 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 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 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).

APPENDIX H: FINANCIAL RE-ASSESSMENT

20 January 2011

Department of Mineral Resources: Northern Cape
29-30 Curry Street
Kimberley
8300
Attention: Vincent Muila

2011 FINANCIAL PROVISION UPDATE OF THE GLORIA 266 PROSPECTING OPERATIONS
NTSIMBINTLE MINING (PTY) LTD
DMR REFERENCE NO.: NC 30/5/1/1/2/1250 PR

Dear Mr Muila

1 INTRODUCTION

SLR Consulting (Africa) (Pty) Ltd (SLR) was commissioned by Ntsimbintle Mining (Pty) Ltd (Ntsimbintle) to perform the 2011 annual update of the financial provision for closure and rehabilitation of the Gloria 266 prospecting operations. It is noted that subsequent to the last financial provision update conducted in July 2010 by Metago Environmental Engineers (Pty) Ltd, now SLR Consulting (Africa) (Pty) Ltd, no further prospecting boreholes have been drilled. A map of the boreholes drilled to date is provided in Appendix A.

The prospecting area was visited on 22 November 2011 by Mr J Mograbi from SLR. The purpose of the site visit was to determine the extent of disturbance and the measures needed to rehabilitate the boreholes, drill sites and access roads. The information contained in this report is based on observations made during the site visit, on communications with the Ntsimbintle prospecting project manager and on review of previous reports and documentation.

During the site visit it was noticed that Kalagadi Manganese (Pty) Ltd (Kalagadi), which is currently constructing a manganese mining operation on the farms Umtu, Gama and Olivepan adjacent to Ntsimbintle's Gloria prospecting operations, has constructed an access road and located a borrow pit on the farm Gloria. It is SLR's understanding from communications with Ntsimbintle that Kalagadi's activities on the farm Gloria have taken place without consultation with Ntsimbintle – the current surface and prospecting rights holder. These activities are therefore not included in this financial provision update and it is SLR's recommendation that Ntsimbintle engage with Kalagadi and the DMR in order to make financial provisions for the rehabilitation of its activities on the farm Gloria.

2 FINANCIAL PROVISION CALCULATIONS

Three types of estimates have been calculated as outlined in Appendix B. The first estimate is based on premature closure of the prospecting project (i.e. the current environmental liability), the second is based on final planned closure of the prospecting project (i.e. the final environmental liability following completion of the prospecting project) and the third is based on unplanned closure of the prospecting project (i.e. the environmental liability for the remaining boreholes assuming all boreholes are drilled in the next financial year).

2.1 CURRENT CLOSURE LIABILITY

The **current closure liability** takes the following into account:

	Previous drill sites (pre November 2011) [#]	**Current drill sites (at November 2011)***
Boreholes and associated drill sites (including camp sites)	27 No.	0 No.
New access roads	5000m	0m

[#] *Boreholes have been sealed. The drill sites and access tracks rehabilitated. Vegetation has already re-established. Only monitoring of the sites and access tracks is required.*

* *Boreholes are currently in the process of being drilled. The drill sites and access tracks will require rehabilitation and re-vegetation on completion.*

As there are currently no active drill sites, the current/premature closure liability allows for the following:

- aftercare and maintenance (post closure management) of previously rehabilitated sites (27 borehole sites and 5000m of access tracks).

This estimate assumes that any rehabilitation and monitoring of the rehabilitation work will be done according to the requirements of the EMP.

2.2 FINAL CLOSURE LIABILITY

The **final planned closure liability** takes the following into account:

	Previous drill sites (pre final closure)*	**Drill sites (at final closure)[#]**
Boreholes and associated drill sites (including camp sites)	33 No.	2 No.
New access roads	5600m	200m

* *Boreholes have been sealed. The drill sites and access tracks rehabilitated. Vegetation has already re-established. Only monitoring of the sites and access tracks is required.*

[#] *Boreholes are in the process of being drilled or will be drilled. The drill sites and access tracks will require rehabilitation and re-vegetation on completion.*

The final closure liability assumes planned closure and takes the following into account:

- drilling, sealing and rehabilitation of two borehole sites – this estimate assumes that only two boreholes will be open at final closure and that all other sites have been rehabilitated;
- rehabilitation of 200m of access tracks;
- aftercare and maintenance (post closure management) of all recently rehabilitated sites (six borehole site and 600m of access tracks) and previously rehabilitated sites (27 borehole sites and 5000m of access tracks).

This estimate assumes that any rehabilitation and monitoring of the rehabilitation work will be done according to the requirements of the EMP. Monitoring of the exploration boreholes will also continue as prescribed.

2.3 UNPLANNED CLOSURE LIABILITY

The **unplanned closure liability** takes the following into account:

	Previous drill sites (pre-assessment)*	**Drill sites (at assessment)#**
Boreholes and associated drill sites (including camp sites)	27 No.	8 No.
New access roads	5000m	800m

** Boreholes have been sealed. The drill sites and access tracks rehabilitated. Vegetation has already re-established. Only monitoring of the sites and access tracks is required.*

 # Boreholes are in the process of being drilled or will be drilled. The drill sites and access tracks will require rehabilitation and re-vegetation on completion.

The unplanned closure liability assumes all remaining boreholes are drilled concurrently and takes the following into account:

- drilling, sealing and rehabilitation of eight borehole sites (zero current and eight future sites);
- rehabilitation of 800m of access tracks;
- aftercare and maintenance (post closure management) of all recently drilled sites (eight borehole sites and 800m of access tracks) and previously rehabilitated sites (27 borehole sites and 5000m of access tracks).

This estimate assumes that any rehabilitation and monitoring of the rehabilitation work will be done according to the requirements of the EMP. Monitoring of the exploration boreholes will also continue as prescribed.

3 CONCLUSION

As itemised below, Ntsimbintle submitted a financial guarantee of R8,600.00 to the DME for this prospecting project (dated 18 September 2007). In December 2008, based on the estimated unplanned final rehabilitation and closure costs as part of the prescribed annual reassessment, the updated financial provision was calculated at R7,281.71 (including VAT). Accordingly, the existing guarantee remained

unchanged. Based on the estimated unplanned rehabilitation and closure costs outlined in this document as part of the prescribed annual reassessment, the updated financial provision has been calculated at R9,286.78 (including VAT), resulting in a shortfall of R 686.78 (including VAT). It is therefore proposed by SLR that Ntsimbintle provide the shortfall amount of R 686.78 (including VAT) to the DMR in a manner acceptable to the DMR.

Ntsimbintle submitted a financial guarantee of **R8,581.69** (including VAT) to the DMR for this prospecting project in July 2007. Based on the most recent financial provision update (July 2010), the estimated unplanned final rehabilitation and closure costs, as part of the prescribed annual reassessment, was calculated at **R109 281.97** (including VAT). It is SLR's understanding that Ntsimbintle is awaiting acceptance of the July 2010 financial provision calculation from the DMR. It is therefore recommended that the July 2010 financial provision be disregarded and rather the financial provision of **R52 690.88** (including VAT) as calculated in this report be taken into consideration due to the drilling and rehabilitation that has taken place in the interim. It is therefore proposed by SLR that Ntsimbintle provide the current shortfall amount of **R44 109.19** (including VAT), as detailed in the calculation below, to the DMR in a manner acceptable to the DMR.

Financial Guarantee currently in place	**R 8 581.69**
Re-assessment caculated by SLR (2011)	**R 52 690.88**
Shortfall	**R -44 109.19**

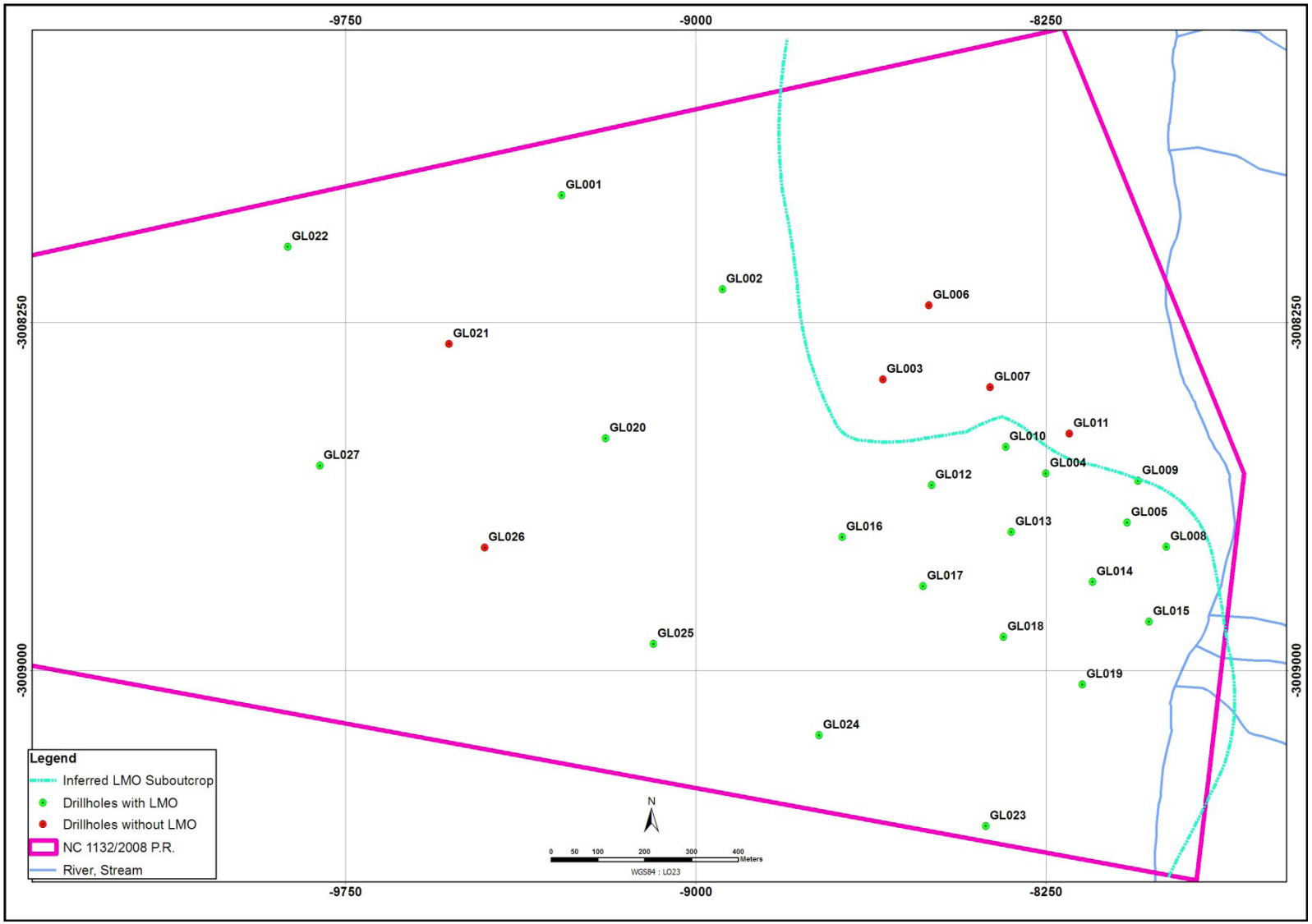
We trust you will find the above in order. Please feel free to contact SLR should you have any further questions.

Yours faithfully

Jonathan Mograbi Francois Van Heerden (Pr Eng)

for SLR Consulting (Africa) (Pty) Ltd

APPENDIX A: MAP OF PROSPECTING BOREHOLES DRILLED TO DATE



APPENDIX B: UPDATED CLOSURE AND REHABILITATION COSTS

Gloria Prospecting Area					
Current Closure and Rehabilitation Costs					
Item	Description	Quantity	Unit	Rate	Amount
1	Sealing of boreholes (0 No.)	0.00	No.	R 650.00	R 0.00
2	Demolish and backfill sumps (0.5m x 1m x 0.5m x 0 No.)	0.00	No.	R 500.00	R 0.00
Item	Description	Quantity	Unit	Rate *	Amount
3	General surface rehabilitation (rip and vegetate) of current drilled sites (10m x 10m x 0 No.)	0.00	ha	R 79 163.00	R 0.00
4	General surface rehabilitation of previously rehabilitated sites (10m x 10m x 27 No.)	0.27	ha	R 0.00	R 0.00
5	General surface rehabilitation (rip and vegetate) of current access tracks (0m)	0.00	ha	R 79 163.00	R 0.00
6	General surface rehabilitation of previously rehabilitated access tracks (5000m)	0.75	ha	R 0.00	R 0.00
7	Demobilise and general surface rehabilitation (rip and vegetate) of current camp site (no camp sites established)	0.00	ha	R 79 163.00	R 0.00
8	General surface rehabilitation of previously rehabilitated camp sites (no camp sites established)	0.00	ha	R 0.00	R 0.00
9	2 to 3 years of maintenance & aftercare (this covers all current and previously rehabilitated sites listed above)	1.02	ha	R 10 535.00	R 10 745.70
				SUB TOTAL 1	R 10 745.70
10	Preliminary and General	12.00	%	of Sub Total 1	R 1 289.48
11	Contingencies	10.00	%	of Sub Total 1	R 1 074.57
				SUB TOTAL 2	R 13 109.75
12	VAT	14.00	%	of Sub Total 2	R 1 835.37
				GRAND TOTAL	R 14 945.12

* Rates have been taken from "*Guideline Document for the Evaluation of the Quantum of Closure-Related Financial Provision Provided by a Mine*" as published by the Department of Minerals and Energy (DME), dated January 2005. The rates have been inflated by 50.5% to account for escalation since January 2005.

Reputable consultant: The entire closure calculation (including rates) was provided by SLR Consulting (Africa) (Pty) Ltd (SLR). SLR is a specialist environmental engineering and consulting company with over fifteen years experience in this field.

Gloria Prospecting Area					
Final Planned Closure and Rehabilitation Costs					
Item	Description	Quantity	Unit	Rate	Amount
1	Sealing of boreholes (2 No.)	2.00	No.	R 650.00	R 1 300.00
2	Demolish and backfill sumps (0.5m x 1m x 0.5m x 2 No.)	2.00	No.	R 500.00	R 1 000.00
Item	Description	Quantity	Unit	Rate *	Amount
3	General surface rehabilitation (rip and vegetate) of current drill sites (10m x 10m x 2 No.)	0.02	ha	R 79 163.00	R 1 583.26
4	General surface rehabilitation of previously rehabilitated drill sites (10m x 10m x 33 No.)	0.33	ha	R 0.00	R 0.00
5	General surface rehabilitation (rip and vegetate) of current access tracks (200m)	0.03	ha	R 79 163.00	R 2 374.89
6	General surface rehabilitation of previously rehabilitated access tracks (5600m)	0.84	ha	R 0.00	R 0.00
7	Demobilise and general surface rehabilitation (rip and vegetate) of current camp site (no camp sites established)	0.00	ha	R 79 163.00	R 0.00
8	General surface rehabilitation of previously rehabilitated camp sites (no camp sites established)	0.00	ha	R 0.00	R 0.00
9	2 to 3 years of maintenance & aftercare (this covers all current and previously rehabilitated sites listed above)	1.22	ha	R 10 535.00	R 12 852.70
				SUB TOTAL 1	R 19 110.85
10	Preliminary and General	12.00	%	of Sub Total 1	R 2 293.30
11	Contingencies	10.00	%	of Sub Total 1	R 1 911.09
				SUB TOTAL 2	R 23 315.24
12	VAT	14.00	%	of Sub Total 2	R 3 264.13
				GRAND TOTAL	R 26 579.37

* Rates have been taken from "*Guideline Document for the Evaluation of the Quantum of Closure-Related Financial Provision Provided by a Mine*" as published by the Department of Minerals and Energy (DME), dated January 2005. The rates have been inflated by 50.5% to account for escalation since January 2005.

Reputable consultant: The entire closure calculation (including rates) was provided by SLR Consulting (Africa) (Pty) Ltd (SLR). SLR is a specialist environmental engineering and consulting company with over fifteen years experience in this field.

Gloria Prospecting Area					
Unplanned Closure and Rehabilitation Costs					
Item	Description	Quantity	Unit	Rate	Amount
1	Sealing of boreholes (8 No.)	8.00	No.	R 650.00	R 5 200.00
2	Demolish and backfill sumps (0.5m x 1m x 0.5m x8 No.)	8.00	No.	R 500.00	R 4 000.00
Item	Description	Quantity	Unit	Rate *	Amount
3	General surface rehabilitation (rip and vegetate) of current drill sites (10m x 10m x 8 No.)	0.08	ha	R 79 163.00	R 6 333.04
4	General surface rehabilitation of previously rehabilitated sites (10m x 10m x 27 No.)	0.27	ha	R 0.00	R 0.00
5	General surface rehabilitation (rip and vegetate) of current access roads (800m)	0.12	ha	R 79 163.00	R 9 499.56
6	General surface rehabilitation of previously rehabilitated access roads (5000m)	0.75	ha	R 0.00	R 0.00
7	Demobilise and general surface rehabilitation (rip and vegetate) of current camp site (no camp sites established)	0.00	ha	R 79 163.00	R 0.00
8	General surface rehabilitation of previously rehabilitated camp sites (no camp sites established)	0.00	ha	R 0.00	R 0.00
9	2 to 3 years of maintenance & aftercare (this covers all current and previously rehabilitated sites listed above)	1.22	ha	R 10 535.00	R 12 852.70
				SUB TOTAL 1	R 37 885.30
10	Preliminary and General	12.00	%	of Sub Total 1	R 4 546.24
11	Contingencies	10.00	%	of Sub Total 1	R 3 788.53
				SUB TOTAL 2	R 46 220.07
12	VAT	14.00	%	of Sub Total 2	R 6 470.81
				GRAND TOTAL	R 52 690.88

* Rates have been taken from "*Guideline Document for the Evaluation of the Quantum of Closure-Related Financial Provision Provided by a Mine*" as published by the Department of Minerals and Energy (DME), dated January 2005. The rates have been inflated by 50.5% to account for escalation since January 2005.

Reputable consultant: The entire closure calculation (including rates) was provided by SLR Consulting (Africa) (Pty) Ltd (SLR). SLR is a specialist environmental engineering and consulting company with over fifteen years experience in this field.

APPENDIX I: CORRESPONDENCE RECEIVED FROM DMR

mineral resources
Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

Private Bag X6093, Kimberley, 8300,
Tel: (053) 807 1700, Fax: (053) 832 8527
65 Phakamile Mabija Street, Permanent Building,
First & Second Floors, Kimberley 8301

Directorate: Mineral Regulation: Northern Cape.
Enquiries: Mr. C. Tshisevhe **E-mail:** chris.tshisevhe@dmr.gov.za
Sub Directorate: Mine Environmental Management **Ref:** NC 30/5/1/1/3/2/1/1250 EM

REGISTERED MAIL

The Manager
Ntsimbintle Mining (Pty) Ltd
P.O. Box 652286
BENMORE
2010

Dear Sir/ Madam

AUDIT AND COMPLIANCE INSPECTION CONDUCTED IN RESPECT OF THE REMAINING EXTENT OF THE FARM GLORIA NO. 266, SITUATED IN THE MAGISTERIAL DISTRICT OF KURUMAN BY NTSIMBINTLE MINING (PTY) LIMTED.

1. **As per the approved Environmental Management Plan (EMP) you undertook to adhere to its contents. However, our inspection conducted on the 11th June 2012, the following contraventions were observed:**

   a) Your company has drilled and exceeded the number of boreholes committed on the approved PWP and EMP without any approval from this office. In accordance with the approved EMP your company was supposed to drilled eight (8) boreholes.

2. **Please note that in terms of section 93(1) (b) (i) of Act 28 of 2002, the Regional Manager must direct the holder of the right to take specified measures to remedy any contraventions or breach, or failure. You are therefore instructed to undertake the following corrective measures to remedy the above situation:**

a) Your company must amend their EMP and submit six (6) copies of the amended EMP to this office. Your company must also amend their PWP and submit two (2) copies to this office. The amended PWP and EMP must include the total number of boreholes which the company has drilled and the number of boreholes anticipated to be drilled.

3. **According to the environmental liability assessment conducted by yourselves in 2010 the pre-mature closure was estimated at R52, 690.88 and our record indicate that your current contributions towards rehabilitation liability stand at R8, 600.00. Your are therefore requested to upgrade your financial provision to an amount of R52, 690.88 with an amount of R44, 090.88 to cater for rehabilitation and management of negative environmental impacts associated with your prospecting operation as required by Regulation 54(1) of the Act. You are therefore requested to address the above within Fourteen (14) days from the signing of this letter.**

4. **Please note that in terms of section 93(1) (b) (ii) of Act 28 of 2002, the Regional Manager may order that the prospecting operations or part thereof be suspended or terminated, and give such other instructions in connection therewith as may be necessary.**

5. **You are therefore, instructed to submit Six (6) copies of the amended EMP and Two (2) of the emended PWP within Sixty (60) days from the date of the signing of this letter as required by Act 28 of 2002.**

Regards,

.....

ACTING REGIONAL MANAGER: NORTHERN CAPE

DEPARTMENT OF MINERAL RESOURCES

DATE: 25/07/2012

ALL CORRESPONDENCE SHOULD BE ADDRESSED TO THE ATTENTION OF THE WRITER HEREOF: MINERAL RESOURCES: NORTHERN CAPE REGION. PLEASE QUOTE THIS OFFICE FILE NUMBER AS REFERENCE.