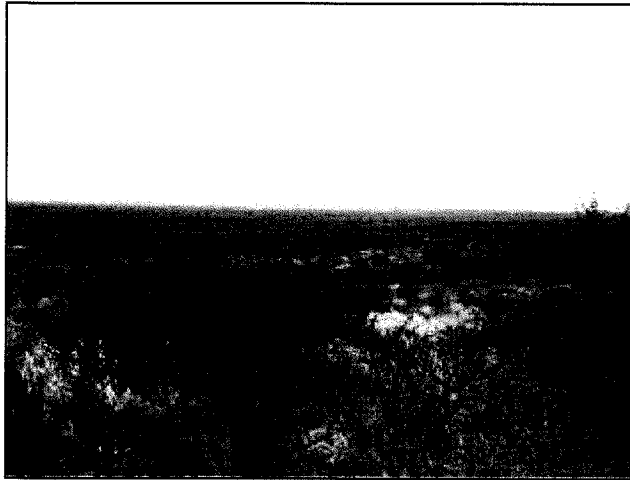


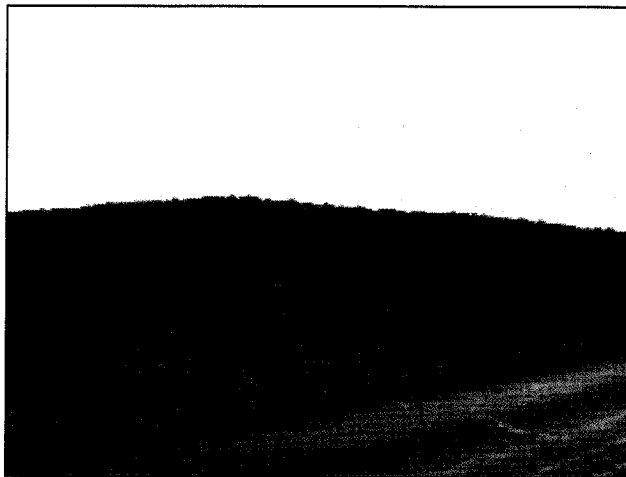
View to the south-west from phase 3



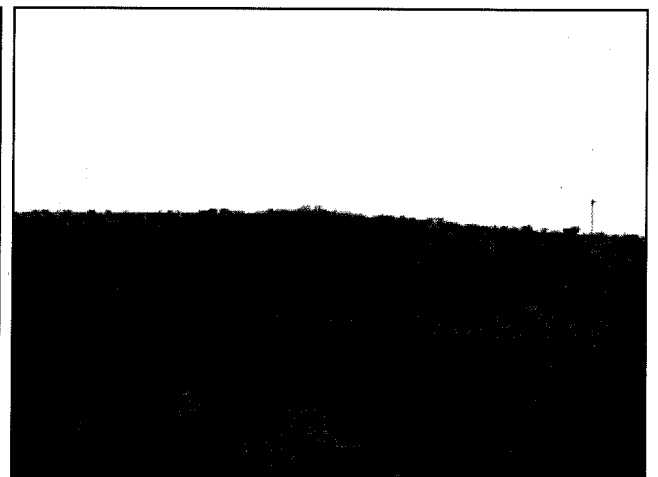
Quartzitic rim of hill to be retained



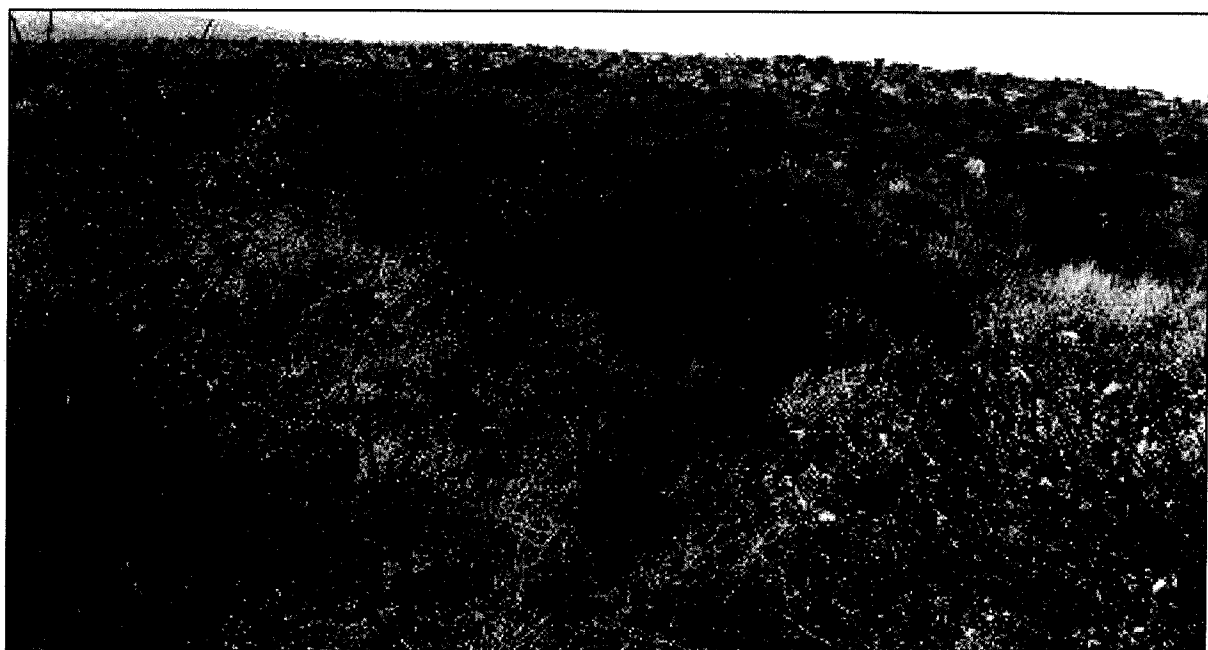
View of phase 4 from the south-east



View of phase 3 from R325



View from phase 4 to phase 3 with R325 in middle ground



Visual Impact

	OPERATIONAL (no mitigation)	WEIGHT	OPERATIONAL (with mitigation)	WEIGHT	CLOSURE	WEIGHT
Extent	Local	2	Local	2	Local	2
Duration	Permanent	4	Long Term	3	Medium Term	2
Intensity	Medium -High	5	Low-Medium	3	Low	2
Probability	Definite	4	Definite	4	Likely	3
Status	Negative		Negative		Negative	
Confidence	Medium		High		High	
Significance	High	44	Moderate	32	Low	18

Management plan:

- No vegetation clearing will take place outside the proposed mine area.
- No vegetation clearing will take place outside the proposed mine area with specific emphasis on down slope of phases 3 & 4 and within 100m from the road at the crest of the hill.
- The quartzitic rim present on the southern side of the hill, must not be disturbed unless significant manganese reserves are determined in this area.
- No vehicle movement will be allowed outside the mine boundaries and approved haul roads.
- The proposed mine areas will be kept clean and free of litter on a continuous basis. A weekly clean up of the entire site will be done.
- No dumping of waste will be allowed in the quarry areas or immediate surrounds.
- A phased development and rehabilitation approach will be adopted at the Boskop Mine.
- Clearing of vegetation will be restricted to the minimum that is required for optimal mining.
- Mining areas will be re-vegetated to a 20% cover during the first year, a 40% cover in the second year and a 50 % cover in the third year. After a five year period phase 1 will dispose of a 80% cover, phase 2 of at least a 70% cover and phases 3 & 4 of at least a 60% cover. Infill planting will be done as per the re-vegetation plan and should be directed to conceal production faces at phases 3 & 4.
- The sides of the quarry will be profiled through precision blasting as per the mine development plan.

- Final cuts will follow curvilinear lines, which will blend in with those of the surrounding landscape, rather than straight geometric lines.
- 'Pocket mining' should be prevented as far as possible and individual excavation should be linked if practical.
- No erosion that could lead to head-cuts, gullies or slumping will be allowed in the mine area and disturbed areas would be made stable and safe as soon as possible.
- Alien vegetation will be removed on a continuous basis to ensure that established natural vegetation is not outcompeted.
- Dust plumes within the mine area or on the haul roads will be eliminated through wetting when required.
- At closure, all mobile infrastructure will be removed and disturbed areas be rehabilitated as per the re-vegetation plan.

15.13 SOCIO -ECONOMIC IMPACT**Economic Impact**

The underlying geology of the Northern Cape has provided the province with a variety of rich mineral deposits. The country's main diamond pipes are found in the Kimberley district, whilst alluvial diamonds are found in the beaches and sea between Alexander Bay and Port Nolloth. The Sishen Mine near Kathu is the biggest source of iron ore in South Africa. The province is rich in asbestos, manganese, fluorspar, semi-precious stones and marble.

The exceptional mineral wealth of the Northern Cape Province has ensured the importance - both nationally and internationally - of the mining industry in the province. The minerals economy of the Northern Cape is a hundred and fifty years old and is still the mainstay of its economy. In 1998, the Northern Cape produced approximately 37% of South Africa's diamond output, 44% of its zinc, 70% of its silver and 84% of its iron ore.

The economy of the province is therefore dominated by mineral production and makes the greatest contribution to the Gross Geographic Product (GGP) of the province (22 per cent). Although the Northern Cape has the smallest economy of the nine provinces, its Gross Geographic Product (GGP) per capita is higher than the national average, i.e. R6 808 compared to R5 745, indicating that the province provides reasonable levels of economic activity to sustain its population which is mostly related to mining activities.

Although certain sub-sectors of the mining industry in the Northern Cape are approaching maturity, there are still significant reserves of a range of minerals as well as new, as yet unexploited deposits that will sustain the mining industry for many years to come. As a result of its rich mineral endowment, mining has been the mainstay of the Northern Cape economy for well over a century. The proposed Boskop Mine will therefore fit well into the economic model for the Northern Cape for the next 30 years.

Considering the low income and poor employment opportunities in the Northern Cape as outlined in the scoping report, the proposed 30 new employment opportunities is therefore of value and should receive the required support, especially in light of the low environmental impact that the Boskop Mine would impose. With the multiplier effect, at

least 180 people would benefit from this proposed mining operation. In addition, the mine would provide employment security for DVD Quality Engineering's workforce for at least 30 years.

Social Impact

The potential of a new mining concern to lure away workers from the farming industry due to possible higher wages is not a consideration taking into account the high unemployment rate in the area. Care will be taken that workers of immediate surrounding farms are not employed.

The establishment of the concern will have a significant impact on the landowner's agricultural activities since at least half of the farm could potentially be sterilised for this purpose. In addition, he had to vacate his residence and find accommodation at his abutting farm. To counteract this specific impact and inconvenience, the landowner was presented with a payment agreement that exceeds the economic value of the land should it be farmed. The compensation agreement cited is deemed fair, but only if the land is properly rehabilitated. If lack of topsoil and pocket mining result in the permanent loss of land, the compensation should not suffice and would have to be supplemented at closure. From the above and taking the positive economic impact of the mine and degraded environmental status of the mine area into consideration, the development of the mine is definitely the preferred land-use option.

As it is the intention to rehabilitate the site as mining progresses, the land capability will be mostly restored for future grazing purposes and might in certain areas be significantly better if the principles of the EMP are upheld. In such case a positive impact on land capability is anticipated. At closure, the landowner must maintain the status of the rehabilitated land, failing which the rehabilitation process would be unsustainable.

Since the site is not located near any tourist vantage point or regularly visited by tourists the impact on the local tourist industry is rated low during the first stages of phase 1 and negligible during the final stages. The same would apply to the final stages of phases 3 & 4 and at closure the impact should be insignificant.

The 'sense of place' would over the short term, be affected by increased visual disturbances and dust and noise pollution and the mitigation measures prescribed in the

EMP, should be followed vigorously to reduce these potential impacts to acceptable levels. If the principles of this EMP are applied, the post closure impact on the sense of place should be of low significance.

Due to 1) the extensive distances to abutting residences, 2) the fact that most quarry areas will not be visible to them, 3) the low noise and 4) dust levels predicted, property values should not be affected and this impact is rated of low significance. Due to the same reasons quality of life and ambiance of these abutting agricultural units should not be detrimentally affected.

Neither the air blast nor the ground vibration are, in the author's experience, likely to have any damaging effect on buildings, if it is designed and carried out with due regard to normal good blasting practice and with the desire to obtain cost effective results in operational terms. However, both air blast and ground vibration can give rise to secondary noise in a building, such as the rattling of windows and other loose objects in a state of neutral equilibrium and this is often interpreted as a far more serious occurrence than it really is. An additional complication is that the blast in general will contain frequencies below those which can be heard by the human ear, i.e. below 20Hz. These low frequencies also contain sufficient energy to give rise to secondary noise, just as with ground vibration, making it characteristically difficult to differentiate between airborne blast and ground borne vibration and the secondary effects of both.

Humans are extremely sensitive to vibration and can detect levels of ground vibration of less than 0.1mm/s, which is less than 1/100th of the levels which could cause even minor structural damage to a building. Complaints and annoyance regarding ground vibration are therefore much more likely to be determined by human perception than by noticing actual minor structural damage. However, these effects and the startling effect of sudden impulses of both sound and vibration are often perceived as an intrusion of privacy and could be a source of considerable annoyance to local residents.

In terms of South-African legislation buildings/structures that comply with building regulations can be subject to PPV's of 50mm/s. However, at most quarries, due to the use of relay systems PPV readings seldom exceed 25mm/s within 100m from the site. With distance these readings will abate to approximately 12mm/s within 300m and around 8mm/s within 400m and less than 5mm/s within 500m. Considering the distance of at

least 300m to the nearest residence, no impact is anticipated and can be ground-truthed with the first representative blasts. In addition, fly rock might be a potential danger but not outside a 500m radius hence again no impact is anticipated, provided that all people are vacated within 300m radius and that the R325 is closed off with any blast within 500m from the road.

However, prior notification of blasting activities at predetermined times on stated days and careful design of the blasting regime to reduce the levels of both airborne blast, noise and ground borne vibration, will significantly contribute to the minimization of the overall impact of blasting on any abutting landowner. It is essential that blasting be carefully controlled by a specialist blaster and that seismographic readings are taken at the first four representative blasts at the residence of the landowner, Mr. Venter. In order to support the anticipated low impact, a specialist report by the blaster can be submitted by the applicant before commencement of blasting activities to detail risks and potential mitigation measures. It is the author's opinion that the distance to the abutting residence will largely mitigate the horizontal propagation of ground vibrations to this structure. Since blasting will be restricted to approximately once a month and the fact that the landowner is accustomed to blasting regimes, it is anticipated that it will impose a very low impact on structural integrity of any abutting residence and annoyance level of the landowner respectively.

Operational hours will be restricted to normal working hours and daytime, therefore noise and light pollution at night is not a consideration. Dust generation will be effectively curbed as described earlier and should not pose a significant risk.

Stock and game theft on the property is a reality and the applicant will have to address this matter through a dedicated environmental awareness programme and strict discipline in the workplace. Veld fires could severely affect land capability and income of abutting landowners and must be addressed similarly.

Socio-economic Impact

	OPERATIONAL (no mitigation)	WEIGHT	OPERATIONAL (with mitigation)	WEIGHT	CLOSURE	WEIGHT
Extent	District	3	District	3	Local	2
Duration	Long Term	3	Long Term	3	Medium Term	2
Intensity	Very Low	1	Low-Medium	3	Low	1
Probability	Definite	4	Definite	4	Likely	3
Status	Positive (The positive impact will be reduced by environmental degradation)		Positive		Positive (the impact of the mine will extend beyond the closure of the concern)	
Confidence	High		High		High	
Significance	Low-Moderate	28	Moderate	36	Low	15

Management plan

- Mining rights do not supersede property rights hence the holder must comply with all reasonable requirements to minimize the impact of mining on landowners and agricultural activities.
- Normal working of 07:00 to 18:00, Mondays to Fridays hours shall be deemed as normal working hours. No work will take place over weekends and public holidays. These conditions can, however, be changed after written communication with the Regional Manager (DMR) and after discussion with the affected landowner and assessing the impact of such extended work hours.
- Field personnel will have sufficient kitchen and sanitary facilities and the veld will not be used for ablutions.
- No food or waste shall be deposited in the veld that could result in the proliferation of scavengers/rodents.
- Mining personnel, except skeleton staff, will be accommodated off site. If a campsite has to be established within the mining area, a limited impact assessment will be done if the landowner deems it important and the outcome submitted to the DMR.
- No open fires will be allowed and smoking may only be allowed inside the plant area. Persons found smoking outside the designated area will be subject to disciplinary action.

- No cigarette butts will be tossed from vehicles along any road.
- Fire extinguishers of adequate capacity shall be made available at the plant and quarry areas to put out any fires inadvertently caused by the workforce.
- The following fire fighting procedure shall be established:
 - a) Workers at the mining sites will be properly trained on the dangers of fires and the negative social impacts that it poses.
 - b) Communications (radio or cellular phone) will be established between mining and drilling crews, site office and mine manager.
 - c) Workers will at all times be informed of the names and telephone numbers of farm owners (and alternative) and the nearest fire brigade station, whom shall be contacted immediately if a fire has started.
 - d) Workers will be trained on how to engage in fire fighting procedures by the local fire brigade officials or any other competent person in this field.
 - e) Any hydrocarbons will be removed from the potential fire path.
 - f) A minimum of 5 000L of water shall be available at every mining site.
 - g) Workers will be informed of water sources on the farm that can be utilized during a fire outbreak.
 - h) DVD Engineering shall have a water tanker on standby permanently.
 - i) DVD Engineering shall on receipt of a report of a fire outbreak, immediately engage into a plan of action with the fire brigade and affected farmer.
 - j) The neighbouring landowners will be notified of the fire and applicable numbers will be included in the fire fighting plans.
 - a) Implementation of a freighting plan will be for the account of DVD Engineering.
 - b) Provisional fire fighting plans will be established with every farm owner on commencement of invasive mining.
 - c) Fire fighting plans and contact details will be posted inside the caravan onsite.
- Liability insurance will be in place before mining commences.
- In the event that veld fires caused by DVD Engineering's mining activities causes the loss of grazing, such farmer will be compensated for either fodder that must be obtained or hiring of additional land or for the loss of grazing of that particular section of the farm as per assessment of an independent and appropriately qualified official from the Department of Agriculture.
- Lighting and noise disturbance or any other form of disturbance that might have an effect on the landowner, shall be kept to a minimum.
- The landowner will be notified at least two weeks (MPRDA requirement) prior to

moving onto any farmland.

- The mining manager will liaise with the landowner on a monthly basis for the first six months regarding any problems that mining causes or environmental impacts that have not been foreseen. From that period onwards a six monthly meeting should be scheduled.
- During mining and at closure all fences and gates will be maintained/left in the same state as prior to the commencement of mining.
- No staff member of DVD Engineering or any contractor employed by DVD Engineering will have access to abutting land and the privacy of landowners will be upheld at all times. If this condition is violated, the required disciplinary steps will be taken. If a specific employee engages in similar behaviour a second time, such person will be dismissed or removed from the mining area.
- If the presence of DVD Engineering's employees or its activities results in bodily harm of any landowner/family member or his employees/animals, such employee will immediately be dismissed or the activity assessed and amended respectively and DVD Engineering will compensate the landowner for any financial and social costs resultant of such incident.
- Prior to commencement of mining, a written agreement will be reached with the landowner. This agreement will stipulate all reasonable requirements of the landowner that he deems necessary to protect his/her interests, as well as to facilitate sound environmental practises on such land. However, if any unreasonable demands are received, the landowner will be informed as such and the matter will be referred to the DMR for decision-making and mining will proceed without an agreement, until the matter was resolved by the DMR. Please refer to rights of applicant embodied in the MPRDA.
- If the landowner is detrimentally affected by mining activities the landowner will bring it to the attention of the mining manager in writing and a copy thereof must be submitted to the DMR. The Regional Manager shall within 5 working days address such matter and issue the necessary instructions in terms of section 93 of the MPRDA 28 of 2002.
- Landowner will, as a minimum, be compensated for disturbed areas as per the guidelines issued by the Department of Agriculture and will be worked out per LLSU/SLSU per hectare.
- The landowner will receive compensation promptly at month end which will be based on the contents of the signed agreement. If any dispute arises in this regard, the matter will be taken for arbitration or settled in a court of law.

- If DVD Engineering appoints people from the area, care should be exercised that existing farm labourers are not appointed to prevent conflict between the parties concerned.
- DVD Engineering should strive to appoint as many local unemployed people as possible to conduct its mining or related activities.
- DVD Engineering should strive to direct as much of its procurement as possible to local businesses.

15.14 SITES AND STRUCTURES OF ARCHAEOLOGICAL AND CULTURAL INTEREST

These sites represent the heritage of communities and are therefore protected in terms of current legislation. In addition, all material/buildings older than 60 years are protected. There is no known heritage or cultural sites or old buildings or ruins close to or in the study area and the impact is rated insignificant in this regard. Nevertheless, the operator of the excavator/loader should be briefed regarding this aspect to ensure that he is in a position to identify objects of interest. Considering the deposit that will be exploited, it is not anticipated to find any fossils in the area.

However, various people might historically have inhabited the study area and it is therefore possible that artefacts and concealed sites of archaeological importance could be identified onsite. Although the area is relatively disturbed and no impact is envisaged, the operators of earthmoving equipment will be informed of the applicant's obligation in this regard and to inform management when anything of interest is noted on the site. Staff and any contractor performing mining activities will be sensitised on the potential impact and what they should be able to recognise, with emphasis on graves, skeletons or fragments thereof, pottery, stone-age tools (weapons, grindstones, etc), middens and grain storage pits.

None of the observed finds at the Boskop Mine proved in themselves to be of major significance, but collectively they provide insight into the history of the area. These observations have value particularly in respect of the pottery which appears out of place away from any obvious Tswana occupation sites and they are perhaps best explained in terms of a complex social environment where individual pots could have passed into the hands of hunter gatherers using a different part of the landscape. The places with scattered pottery were almost too diffuse to warrant the term 'site' and for now it is considered that this report stands as an adequate record of them. No significant colonial era heritage traces were noted in the area examined. The farm infrastructure is seemingly all less than sixty years old and hence falls outside the provisions of the National Heritage Resources Act and the middens associated with workers are similarly young.

SAHRA requested a follow-up survey on the archaeological findings that were made at the site. Dr. Morrison of Kimberley was contacted in this regard by Mr. F. Grigor on request of SES to determine whether a follow-up investigation is necessary or whether the area in

which the findings were made must be fenced off and excluded from the mine area. Dr. Morrison indicated it would be a waste of time since the findings were insignificant.

15.15 PUBLIC PARTICIPATION

Current legislation (section 27(5) of the MPRDA) requires that interested and affected parties will be consulted and as part of the public participation process.

Consultation with interested and affected parties

The following consultation process was/will be followed:

- The standard media advertisements were placed the DFA (21 July 2010); Volksblad (29 July 2010) & Kuruman Bulletin (29 July 2010). Notices were placed at various prominent sites on 29 July 2010 inviting persons to register. The closing date for registration of any parties who intended registering as an I&AP was on 30 August 2010.
- Registered letters with limited Background Information Document (BID) were sent to the following abutting landowners for comment on the project:

Neighbours adjacent to the proposed mining site:**Owner of Portion 4 of Macarthy 559:**

Mr. CH Kotze
PO Box 1,
Olifantshoek, 8450
Tel: +27 53 321 4384

Owner of Portion 2 of farm 558, farm 672, Macarthy 559, Katgame, Mokaning, Jenkins:

Mr Nick Steyn
PO Box 799
Kathu
8446
Tel: +27 53 321 4203 Cel: 084 207 9820

Owner of Vlakwater and Marokwa:

Mr Nicky Steyn
PO Box 944

Kathu

8446

Cel: 082 879 7531

Owner of Portion 5 of MaCarthy 559:

Mr. Swanepoel

Tel: +27 53 832 9175

Owner of Portion 1 of Farm 671:

Mr. Leon Venter

Tel: +27 53 739 1239

Owner of Farm 672:

Mr. Jannie Claassens

Tel: +27 53 385 8269

Owner of Remainder of Mokaeng and Macarthy 559:

Assmang

Mr Paul Henderson

PO Box 782058

Sandton

2146

Tel: +27 11 779 1103

Fax: +27 11 779 1031

Owner of Jenkins portion 1:

Kumba Iron Ore

Charman Naidoo

Po Box 9679

Centurion, 0046

Tel: +27 12 683 7000

Mineral Right Holders:

Mineral rights holder of Remainder of Macarthy 559:

COZA Mining

Mr Neil Claasens

Po Box 66215

Highveld, 0169

Tel: +27 12 665 4163

- Registered letters with Background Information document (BID) were sent to the following Government and Non-Government Departments for comment on the project:

Department of Mineral Resources (DMR) Northern Cape:

Regional Manager

Mr Pieter Swart

Private Bag X 6093

Kimberley 8300

Tel: +27 53 807 1700

Fax: +27 53 832 5631

Department of Environmental Affairs and Conservation/Department of Environmental Affairs and Nature Conservation: HQ:

T-Floor and 1st Floor

Metlife Building/Post Office Building

Private Bag X 6120

Kimberley 8301

Tel: +27 53 807 7300

Fax: +27 53 807 7328

Department of Water Affairs:

Mr Kobus Streuder

Private Bag X 6101

Kimberley, 8301

Tel: +27 53 830 8800

Fax: + 27 53 831 5682

Department of Agriculture:

Mr M Mothibi

Private Bag X 5018

Kimberley, 8300

Tel: +27 53 838 9129

Fax: +27 53 831 3635

Department of Roads and Public Works:

Private bag 5065

Kimberley 8300

Tel: +27 53 839 2100

Fax: +27 53 839 2290

Kgalagadi District Municipality:

Municipal manager

Mr Sipho Sebusho

PO Box 1480

Kuruman 8460

Tel: +27 53 712 1002

Fax: +27 53 712 2502

Kgalagadi District Municipality:Local Economic Development:

Mr Billy Moseki

PO Box 1480

Kuruman 8460

Tel: +27 53 712 1002

Fax: +27 53 712 2502

Electricity supply:Eskom:

Mr A Cloete

PO Box 606

Kimberley, 8301

Tel: +27 53 830 5775

Transnet:

Mr Willie de Beer

Room 3519A

Carlton Centre

150 Commissioner Street

Johannesburg

Tel: +27 11 308 1526

WESSA:

Mrs S Erasmus

PO Box 316

Kimberley, 8300

Tel: +27 53 839 2717

- No persons registered as Interested and Affected Parties.
- No comments were received from any of the addressed parties regarding the BID.

•There are no tribal areas involved, therefore no consultation with Tribal Leaders or Department of Land Affairs is required.

Formal and informal consultation processes have been followed with the landowner, Mr. L. Venter, through his attorney and meetings culminated in a series of requests which have to be considered. It appears that the most significant request is regarding payment for minerals to be removed.

With regards to the Boskop Mine, royalties for minerals are reserved to the State, but to accommodate the landowner, he was made a substantial offer for surface use which exceeds proceeds that could stem from farming the property - taking into consideration the badly degraded state of the mine area *per se*. A formal agreement to this effect was recently presented to the landowner for acceptance, but no response was received to date. The applicant will continue with engaging with the landowner on the matter. Should no agreement be reached, the matter will be referred to the DMR for consideration and possibly for referral for arbitration.

At closure, the abutting landowners and affected departments will be consulted on the end result of rehabilitation.

Inspections and monitoring

- Regular monitoring of all the environmental management parameters and implementation of measures will take place and the holder of the mining right shall carry out certain components thereof to ensure that the provisions of this programme are adhered to.
- Ongoing and regular reporting on the progress of implementation of this programme will be done. All shortcomings, if any, must be listed and remedial measures with time frames given.
- Burden/spacing assessment, as well as risk assessment, shall be done on a regular basis to ensure that the safety standards are upheld during blasting.
- The blasting design will be evaluated on a regular basis to 1) facilitate precise rock positioning to reduce diameter of blast, 2) ensure that all blasts are directed away from the R325, and 3) to ensure that adequate stemming is used to reduce fly rock.
- Various compliance areas will be identified with regards to the various impacts that the operations will have on the environment.
- Inspections and monitoring shall be carried out on a regular basis with specific emphasis on profiling of disturbed areas, re-vegetation progress, die-off of established vegetation and prevention of water quality deterioration and prevention of spreading of alien vegetation.

Compliance reporting / Submission of Information

- Layout plans will be updated annually or should mining operations change drastically, updated copies will be submitted to the DMR.
- The mine development plan should be evaluated and updated every 5 years if necessary, or should mining operations change drastically, copies will be submitted to the DMR for approval.
- Any environmental emergency/accident will immediately be reported to DMR and where applicable, to DWAF/DEA.

- Should the assessment of environmental impacts in future be proved incorrect or should impacts have been unknown when the programme was compiled, additional assessments shall be carried out and added as an amendment and where applicable, a second opinion will be sought.
- All environmental hazards, unforeseen impacts identified, pollution incidents or environmental failures will be reported to the DMR and other relevant Departments immediately.
- A six-monthly performance assessment will be compiled and submitted to the DMR in June and December for evaluation and acceptance.
- Once extraction is completed, a closure program will be compiled to ensure that rehabilitation will be completed as per the EMP and applicable environmental legislation.
- A final performance assessment report will be submitted at closure to ensure that all potential impacts are covered, that procedures followed were in line with the conditions of the management plan and that rehabilitation was completed in accordance to the management plan. Should any major shortcomings be detected, an amendment to the EMP/closure plan will be drafted and submitted for approval by the DMR.

The following site specific monitoring will be executed:

- An environmental monitoring checklist should be developed immediately after approval to facilitate a formal assessment process. It should be in line with environmental matters addressed in the EMP.
- The entire quarry will be monitored on a weekly basis until closure is granted.
- The mining/rehabilitation activities will be regularly visited by the holder/manager to ensure that mining is taking place within approved boundaries, that production faces are profiled and stabilized, vegetated and fertilised and that no erosion or dumping of waste on unauthorised areas are taking place on site.
- That vegetation cover and species diversity is adequate.
- The minimum vegetation is removed ahead of the mining face.
- Re-vegetation process is successful and that alien/intrusion vegetation is removed.
- The area will be regularly visited by the holder/manager to ensure that the handling of hydrocarbons is according to approved guidelines and that the necessary precautionary measures for spills are adequate.
- General waste is handled correctly and effectively removed from the property.

- Dust control at the site and on the roads at the quarry is effective to limit air pollution and possible health impacts.
- Monitoring of occupational health of workers on an annual basis.
- That the mine is clean and tidy.
- Burden/spacing assessment shall be done as well as risk assessment on a regular basis.
- The blasting design will be evaluated on a regular basis.
- Should any remedial measure fail, it will be adapted to suit circumstances or alternatives would be found in conjunction with the officials in affected Departments or with private experts.
- An environmental awareness programme can be introduced to make employees and contractors aware of EMP requirements.
- Should serious environmental misconduct by workers occur, the specific activity would be ceased until the problem has been remedied and financial penalties will be imposed.

QUARRY AREAS

1. Profiling of Phase 1: Block 1 continuous with mining of Phase 1: Block 2.
2. Weekly spreading of oversize boulders and/or overburden, if any.
3. Re-vegetation of Phase 1: Block 1 must be completed prior to the commencement of Phase 1: Block 3. The same scenario would apply to the rest of the Blocks in Phase 1.
4. Phase 1: Block 1 must be rehabilitated within 6 months after completion of mining of Block 4.
5. Profiling of Phase 2: Block 1 continuous with mining of Phase 2: Block 2.
6. Re-vegetation of Phase 2: Block 1 must be completed prior to the commencement of Phase 2: Block 3. The same scenario would apply to the rest of the Blocks in Phase 2.
7. The same scenario would apply to the rest of the Phases with associated Blocks.
8. Submit a closure plan & risk assessment three months before each Phase of the mining operations is to cease, in order to complete partial closure throughout the lifespan of the mine. Full closure application will be made within 6 month after the final phase has been exhausted.
9. Aftercare/maintenance – Two years after rehabilitation was successfully completed.

GENERAL

1. Quarterly eradication of alien/invaser vegetation until closure certificate is issued
2. Light application of fertilizers in March and September for duration of mining, rehabilitation and aftercare phases.

18 CLOSURE OBJECTIVES

Closure objectives will be based on the following:

1. Identify the key objectives for mine closure to guide the project design, development and management of environmental objectives;
2. Provide broad future land use objective(s) for the site; and
3. Provide proposed closure cost;
 - The mine area will be rehabilitated back to a sustainable environment. The ecology of the area will be improved by establishing grass species and eradicating invader vegetation within the area and thereby creating an improved ecological niche.
 - All the raw materials will be dumped back into completed excavations, thus backfilling the excavation site to about 60% capacity.
 - Production faces of the quarry will be profiled through profile blasting and a cut and fill method to 1:2 slopes and the edge rounded off to create a flowing landscape. If the excavation is deeper than 10m, a bench will be cut at 5 m. The horizontal platform will be no less than 10-15m.
 - Faces will not remain vertical, but will be profiled in such a manner that soft lines are created and sharp corners are prevented in order to blend the quarry with surrounding mining landscape.
 - The rehabilitated area will be kept clear of alien and invader plant species.
 - The new access roads, if any, will be ripped, top dressed with topsoil and seeded. It will be rehabilitated back to grass land.
 - The area would be litter free.
 - There will be no remaining stockpiles, equipment, waste or scrap metal/redundant equipment left in the mining environment.
 - There will be no remaining constructed facilities left in the mining environment.
 - Hydrocarbons and contaminated soil, if any, will be safely removed from site.
 - Safe drainage of the mine must be achieved without causing erosion of the slopes and the quarry floor.
 - Some animals will be able to return safely to the site
 - The mining sites will not become prone to unauthorised dumping.
 - The proposed land-use will be achieved within 2 years after rehabilitation has been completed.
 - Nearby residents will not be subjected to any post closure social or environmental impacts.

- At closure it is anticipated that the landowner would have full use of about 57% of Phase 1, about 80% use of \pm 17% of Phase 2; and about 65% use of \pm 26% of Phases 3-4.
- "Pocket mining" will be limited to the minimum and where it needs to take place, a dedicated effort will be made to link such areas to achieve post closure land use objectives.

19 CONTENTS OF CLOSURE PLAN

Closure would be affected by the submission of the following documents to the DMR 60 days before cessation of mining activities.

- An application for closure form,
 - A risk assessment,
 - A closure plan
 - Once the site is rehabilitated a final performance assessment will be done
-
- (a) a description of the closure objectives and how these relate to the mine operation and its environmental and social setting;
 - (b) a plan contemplated in Regulation 2(2), coordinated according to generally accepted standards, showing the land or area under closure;
 - (c) a summary of the regulatory requirements and conditions for closure negotiated and documented in the environmental management programme or plan;
 - (d) a summary of the results of the environmental risk report and details of identified residual and latent impacts;
 - (e) a summary of the results of progressive rehabilitation which were undertaken;
 - (f) a description of the methods to decommission each mining component and the mitigation or management strategy proposed to avoid, minimize and manage residual or latent impacts;
 - (g) details of any long-term management and maintenance expected;
 - (h) details of financial provision for monitoring, maintenance and post closure management, if required;
 - (i) a plan or sketch at an appropriate scale describing the final land use proposal and arrangements for the site;

It is anticipated that the following aftercare will be provided over one year:

- Vegetation cover – reseeds bare areas or replant shrubs and trees. – September to March
- Stability of production faces – Reshape affected areas, compact - May to August - Seeding done as from September to March
- Eradication of alien/invaser vegetation – Quarterly

26. POST-CLOSURE AESTHETIC ACCEPTABILITY

The quarry area at Phase 1-2 will resemble a large depression, no deeper than 1.5 m in the landscape, and a valley cut between the hills at Phase 3 & 4, with sloped faces reflecting gentle gradients. The area will display a homogeneous grassland, which will align the site with the surrounds. The anticipated change in landform will after re-vegetation not be clearly noticeable and from an aesthetic point of view the landscape will have a higher aesthetic quality than what is currently the case. With the rehabilitation approach to be adopted, the objective is to reach 60% of remaining indigenous species diversity within 5 years and 80% within 10 years time.

If rehabilitation is not afforded adequate time and finances the above assessment will change dramatically and the area will revert to a heavily invested area reflecting poor quality landscape and extensive erosion.

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

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

I, Dion van Dyk, take cognisance of the following penalties should I transgress any section of the MPRDA or any other Act governing any other activity on the two quarry sites or any condition of the EMP and will abide thereby.

Section of Act	Penalties for failure to comply with the provisions of the MPRDA 28 of 2004	Penalty in terms of Section 99
5(4)	No person may prospect, mine, or undertake reconnaissance operations or any other activity without an approved EMP, right, permit or permission or without notifying land owner	R 100 000 or two years imprisonment or both
19	Holder of a Prospecting right must: lodge right with Mining Titles Office within 30 days; commence with prospecting within 120 days, comply with terms and conditions of prospecting right, continuously and actively conduct prospecting operations; comply with requirements of approved EMP, pay prospecting fees and royalties	R 100 000 or two years imprisonment or both
20(2)	Holder of prospecting right must obtain Minister's permission to remove any mineral or bulk samples	R 100 000 or two years imprisonment or both
Section of Act	Legislated Activity/ Instruction/ Responsibility or failure to comply	Penalty in terms of Section 99
26(3)	A person who intends to beneficiate any mineral mined in SA outside the borders of SA may only do so after notifying the Minister in writing and after consultation with the Minister.	R 500 000 for each day of contravention
28	Holder of a mining right or permit must keep records of operations and financial records AND must submit to the DG: monthly returns, annual financial report and a report detailing compliance with social & labour plan and charter	R 100 000 or two years imprisonment or both
29	Minister may direct owner of land or holder/applicant of permit/right to submit data or information	R 10 000
38(1)(c)	Holder of permission/permit/right MUST manage environmental	R 500 000 or ten years

	impacts according to EMP and as ongoing part of the operations	imprisonment or both.
42(1)	Residue stockpiles must be managed in prescribed manner on a site demarcated in the EMP	A fine or imprisonment of up to six months or both
42(2)	No person may temporarily or permanently deposit residue on any other site than that demarcated and indicated in the EMP	A fine or imprisonment of up to six months or both
44	When any permit/right/permission lapses, the holder may not remove or demolish buildings, which may not be demolished in terms of any other law, which has been identified by the Minister or which is to be retained by agreement with the landowner.	Penalty that may be imposed by Magistrate's Court for similar offence
92	Authorised persons may enter mining sites and require holder of permit to produce documents/ reports/ or any material deemed necessary for inspection	Penalty as may be imposed for perjury
94	No person may obstruct or hinder an authorised person in the performance of their duties or powers under the Act.	Penalty as may be imposed for perjury
95	Holder of a permit/right may not subject employees to occupational detriment on account of employee disclosing evidence or information to authorised person (official)	Penalty as may be imposed for perjury
All sections	Inaccurate, incorrect or misleading information	A fine or imprisonment of up to six months or both
All sections	Failure to comply with any directive, notice, suspension, order, instruction, or condition issued	A fine or imprisonment of up to six months or both

23. UNDERTAKING: IMPACT ASSESSMENT

I, D. Van Dyk, on behalf of DVD Quality Engineering (Pty) Ltd, declare that the above information in my opinion is true, complete and correct. I undertake to implement the measures at the Boskop Mine as described in all sections of this document. I understand that this undertaking is legally binding and that failure to give effect hereto will render me liable for prosecution in terms of Section 98 (b) and 99 (1)(g) of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002). I am also aware that the Regional Manager may, at any time but after consultation with myself, make such changes to this plan, as he/she may deem necessary.

Signed on TWENTY December 2010



.....
Signature of applicant

Department of Water Affairs – Environmental Data.

Siyanda District Municipality Integrated Development Plan

Kgalagadi District Municipality Integrated Development Plan

Northern Cape State of the Environment Report

National State of the Environment Report

Department of Environmental Affairs: National Biodiversity Strategy and Action Plan & EMPAT.

Musina & Rutherford

Council for Geoscience

SANBI – Environmental data.

Adrian Odgers

CEN

Department of Mineral Resources

Minnie Farrell consultants

CSRI

25. UNDERTAKING

I, D. Van Dyk, on behalf of DVD Quality Engineering (Pty) Ltd, the undersigned, have studied and understand the contents of this document in its entirety and hereby duly undertake to adhere to the conditions as set out therein, including the conditions of approval as stipulated by the Regional Manager.

Signed in Kuruman on TWENTY December 2010.



.....
Signature of applicant

APPROVAL

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

Signed at Kuruman on this.....day of.....2010.

.....
REGIONAL MANAGER
NORTHERN CAPE

Stellenryck Environmental Solutions cc as environmental consultant to DVD Quality Engineering (Pty) Ltd for the establishment of Boskop Manganese Mine on the farm Macarthy 559 do hereby declare that:

1. The environmental impact assessment and proposed mitigation measures contained in this document reflect the independent views of the author.
2. Stellenryck has not perform any work for the client in the past
3. Stellenryck has gained no interest in downstream developments as a result of Stellenryck's involvement in the project.
4. Payment of Stellenryck for work completed is not subject to approval by regulating authorities.
5. Stellenryck has no interest, legally or financially in DVD Quality Engineering (Pty) Ltd.

I, owner of Stellenryck Environmental Solutions cc, hereby declare that I am fully conversant with Government Notice No. R1182 and that failure to comply with it fully may constitute an offence in terms of the Environmental Conservation Act 73 Of 1989.



19 December 2010

J. A. Van As
STELLENRYCK



This document remains the property of Stellenryck Environmental Solutions, subject to its use by DVD Quality Engineering (Pty) Ltd for the particular project to which this appointment relates.





SCALE 1:25 000

2523 m

Image
© 20

Imagery Dates: Jul 20, 2003 - May 6, 2005

lat -27.949310 lon

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SCALE 1:2 500



PLANT IDENTIFICATION
KURUMAN DISTRICT
PROPOSED BOSKOP MANGANESE MINE
THORNVELD

<i>Asparagus africanus</i>	– Katdoring
<i>Sansevieria aethiopica</i>	– Bowstring Hemp
<i>Viscum rotundifolium</i>	– Red Mistletoe
<i>Cadaba aphylla</i>	– Swartstormbos
<i>Kalanchoe rotundifolia</i>	
<i>Acacia erioloba</i>	– Kameeldoring
<i>Acacia mellifera</i>	– Swarthaak
<i>Rhus lancea</i>	– Karee
<i>Rhus ciliata</i>	
<i>Gymnosporia buxifolia</i>	– Common Spikethorn
<i>Gymnosporia species</i>	
<i>Grewia flava</i>	
<i>Englerophytum manalimontanum</i>	– Stemvrug
<i>Euclea undulata</i>	– Guarri
<i>Solanum supinum</i>	– Bitterappel
<i>Sutera aurantiaca</i>	
<i>Kleinia longiflora</i>	
<i>Pentzia viridis</i>	– Skaapbossie
<i>Tarchonanthus camphorates</i>	– Vaalbos

Boscia albitrunca

- Shepherds's tree

Themeda trianda

Aristida diffusa

Stipagrostis uniplumis

Digitaria eriantha

Brachiaria serrata

Eragrostis lehmaniana

A quantity of specimens was received on 09-10-2010 of which the above was identified. There were four species unidentified since, with the drought and time of year, these specimens revealed almost no leaves and no flowers that made identification very difficult.

I was informed that the site of the proposed Manganese Mine was on an area of dense, impenetrable thornveld, comprising level plain and rocky outcrops. Specimens from both the plains and outcrops have been joined together.

No plants collected are considered as being endangered, but *Acacia erioloba* is protected.

ADRIAN ODGERS

11th October 2010



Cape Vulture - <i>Gyps Coprotheres</i>	>19.9
African Whitebacked Vulture - <i>Gyps Africanus</i>	18.2-33.2
Lappetfaced Vulture - <i>Torgos Tracheliotos</i>	>28.5
Tawny Eagle - <i>Aquila Rapax</i>	13.3-24.9
Martial Eagle - <i>Polemaetus Bellicosus</i>	>16.6
Lesser Kestrel - <i>Falco Naumanni</i>	2.0-7.1
Blue Crane - <i>Anthropoides Paradiseus</i>	7.7-22.5
Corncrake - <i>Crex Crex</i>	>3.5
Kori Bustard - <i>Ardeotis Kori</i>	>28.5
Ludwig's Bustard - <i>Neotis Ludwigii</i>	11.8-24.9

<i>Next Threatened</i>	
Blue Korhaan - <i>Eupodotis Caerulescens</i>	
Blackbellied Korhaan - <i>Eupodotis Melanogaster</i>	
Chestnutbanded Plover - <i>Charadrius Pallidus</i>	
Yellowthroated Sandgrouse - <i>Pterocles Gutturalis</i>	
Melodious Lark - <i>Mirafra Cheniana</i>	

<i>Conophytum Achabense</i>
<i>Conophytum Auriflorum turbiniforme</i>
<i>Conophytum Burgeri</i>
<i>Conophytum Herreanthus Herreanthus</i>
<i>Conophytum Phoeniceum</i>
<i>Conophytum Roodiae Sanguineum</i>
<i>Conophytum Schlechteri Schwantes</i>
<i>Conophytum Semivestitum</i>
<i>Conophytum Smorenskaduense Hermarium</i>
<i>Conophytum Smorenskaduense Smorenskaduense</i>
<i>Conophytum Vanheerdei</i>
<i>Aloe Buhrii</i>
<i>Aloe Chlorantha</i>
<i>Aloe Comosa</i>
<i>Aloe Dabenorisana</i>
<i>Aloe Khamiesensis</i>
<i>Aloe Meyeri</i>
<i>Aloe Pearsonii</i>
<i>Aloe Pillansii</i>
<i>Aloe Ramosissima</i>
<i>Aloe Striata Komaggasensis</i>

Amaryllis Paradisicola

Burnsvigia Herrei

Burnsvigia Radula

Gethyllis Lata Lata

Gethyllis Lata Orbicularis

Gethyllis Pectinata

Haemanthus Graniticus

Haemanthus Namaquensis

Hessea Pusilla

Hessea Tenuipedicellata

Namaquanula Bruce-bayeri

Strumaria Aestivalis

Strumaria Perryae

Strumaria Unguiculata

Asclepiadaceae: Extinct & Threatened

Ectadium Virgatum

Asteraceae: Extinct & Threatened

Athanasia Spathulata

Euryops Mirus

Euryops Rosulatus

Euryops Subcarnosus

Euryops Vigatus

Felicia Deserti

Felicia Diffusa

Lasiopogon Minutus

Othonna Cacalioides

Othonna Cakilefolia

Othonna Rechingeri

Pteronia Pillansii

Senecio Albopunctatus

Acanthosicyos Horridus

Carex Acocksii

Spiloxene Ambraticola

Disa Macrostachya

Disperis Purpurata

Conophytum Armianum

Conophytum Auriflorum auriflorum

Conophytum Blandum

Conophytum Carpianum

Conophytum Concavum

Conophytum Ernstii Ernstii

Conophytum Frutescens

Conophytum Khamiesbergense

Conophytum Lithopsoides

Conophytum Loeschianum

Conophytum Praesectum

Conophytum Regale

Conophytum Rugosum

Conophytum Velutinum

Conophytum Verrucosum

Aloes: Lower R55

Aloe Arenicola

Aloe Falcata

Aloe Krapohlana

Amaryllidaceae: Lower R55

Brunsvigia Pulchra

Brunsvigia Striata

Crinum Variabile

Cyrtanthus Herrei

Gethyllis Multifolia

Haemanthus Amarylloides

Haemanthus Dasyphyllus

Haemanthus Pubescens Arenicola

Hessea Incana

Hessea Pilosa

Hessea Pulcherrima

Hessea Stenosiphon

Strumaria Barbarae

Strumaria Bidentata

Strumaria Discifera

Strumaria Karooica

Strumaria Massoniella

Strumaria Merxmulleriana

Strumaria Picta

Strumaria Pubescens

Strumaria Pygmaea

Strumaria Villosa

Strumaria Watermeyeri Botterkloofensis

Strumaria Watermeyeri Watermeyeri

Adenoglossa Decurrens

Anitihrixia Favicoma

Arctotis Bolussi

Euryops Marlothii

Helichrysum Jubilatum

Helichrysum Micropoides

Helichrysum Pulchellum

Helichrysum Rutilans

Helichrysum Tricostatum

Iasiopogon Ponticulus

Osteospermum Armatum

Othonna Abrotanifolia

Othonna Armiana

Othonna Retrorsa

Phymaspermum Schroteri

Senecio Haworthii

Senecio Sacroides

Trichogyne Lerouxiae

Ursinia Pygmaea

Roella Bryoides

Wahlenbergia Minuta

Wahlenbergia Namaquana

Trianoptiles Stipitata

Empodium Namaquensis

Saniella Occidentale

Spiloxene Serrata

Spiloxene

Lobelia Pinifolia Pinifolia

Corycium Deflexum

Corycium Ingeanum

Disa Spathulata Spathulata

Eulophia Tabularis

Holothrix Aspera

Holothrix Filicornis

Pterygodium Schelpei

Cliffortia Arborea

Agathosma Namaquensis

Gnidia Leipoldtii

Passerina Nivicola

Conophytum Lithopsoides Boreale

Gethyllis Britteniana Bruynsii

Gethyllis Britteniana Herrei

Ceropegia Occidentalis

Helichrytum Leptorhizum

Senecio Erysimoides

Senecio Trachylaenus

Wahlenbergia Buseriana

Wahlenbergia Floribunda

Wahlenbergia Lasiocarpa

Wahlenbergia Rara

Wahlenbergia Roelliflora

Wahlenbergia Tumida

Cyphia Longiflora

Cyphia Longilobata

Cyphia Ranunculifolia

Toads - *Genus Bufo Laurenti*

Kassinias - *Genus Kassina Girard*

Bubbling Kassina - *Kassina Senegalensis*

River Frogs - *Genus Afrana Dubois*

Sand Frogs - *Genus Tomopterna*

Tremolo Sand Frog - *Tomopterna Cryptotis*

Boettger's Dainty Frog - *Cacosternum Boettgeri*

Common River Frog - *Afrana Angolensis*

Dainty Frogs - *Genus Cacosternum Boulenger*

Red Hartebeest - *Alcelaphus Buselaphus*

Springbok - *Antidorcas Marsupialis*

White Rhinoceros - *Ceratotherium Simum*

Blue Wildebeest - *Connochaetes Taurinus Taurinus*

Giraffe - *Giraffa Camelopardalis*

Klipspringer - *Oreotragus Oreotragus*

Gemsbok - *Oryx Gazella*

Steenbok - *Raphicerus Campestris*

Common Duiker - *Sylvicapra Grimmia*

Kudu - *Tragelaphus Strepsiceros*

Rock Hyrax - *Procavia Capensis*

Black-backed Jackal - *Canis Mesomelas*

Caracal - *Caracal Caracal*

Yellow Mongoose - *Cynictis Penicillata*

Black-footed Cat - *Felis Nigripes*

African Wild Cat - *Felis Silvestris*

Slender Mongoose - *Galerella Sanguinea*

Small-spotted Genet - *Genetta Genetta*

Striped Polecat - *Lotonyx Striatus*

Bat-eared Fox - *Otocyon Megalotis*

Leopard - *Panthera Parclaus*

Aardwolf - *Proteles Cristatus*

Suricate - *Suricata Suricata*

Cape Fox - *Vulpes Chama*

Cape Serotine Bat - *Neoromicia Capensis*

Egyptian Free-tailed Bat - *Tadarida Aegyptiaca*

Cape Hare - *Lepus Capensis*

Savannah Hare - *Lepus Saxatilis*

Chacma Baboon - *Papio Ursinus*

Namaqua Rock Mouse - *Aethomys Namaquensis*

Short-tailed Gerbil - *Desmodillus Auricularis*

Hairy-footed Gerbil - *Gerbillurus Paeba*

Spectaded Dormouse - *Graphiurus Ocularis*

Porcupine - *Hystix Africaeaustralis*

Large-eared Mouse - *Malacothrix Typica*

Multimammate Mouse - *Mastomys Coucha*

Brants' Whistling Rat - *Parotomys Brantsii*

Springhare - *Pedete Capensis*

Striped Mouse - *Rhabdomys Pumilio*

Pouched Mouse - *Saccostomus Campestris*

Cape Ground Squirrel - *Xerus Inauris*

Round-eared Elephant-shrew - *Marcoscelides Proboscideus*

Aardvark - *Orycteropus Afer*

Honey Badger - *Mellivora Capensis*

Lesueur's Wing-gland Bat - *Cistugo Lesueri*

Schreibes' Long Fingered Bat - *Miniopterus Schreibersii*

Dent's Horseshoe Bat - *Rhinolophus Denti*

Littledale's Whistling Rat - *Parotomys Littledalei*

Black Rhinoceros - *Diceros Bicornis Bicornis*

Reddish-grey Musk Shrew - *Crocidura Cyanea*

Lesser Red Musk Shrew - *Crocidura Hirta*

Bushveld Gerbil - *Tatera Leucogaster*





**SOUTH AFRICAN HERITAGE
RESOURCES AGENCY**

111 HARRINGTON STREET, CAPE TOWN, 8000
PO BOX 4637, CAPE TOWN, 8000
TEL: (021) 462 4602 FAX: (021) 462 4606

DATE: 29 September 2010
ENQUIRIES: Ms Mariagrazia Galimberti
Archaeology, Palaeontology and Meteorite Unit
E-mail: mgalimberti@sahra.org.za
Web site: www.sahra.org.za

DMR REF: NC 30/5/1/2/3/2/1/271 EM
OUR REF: 9/2/055/0002

DVD Quality Engineering
15 Industrial Ave,
Kuruman
8460;

Dear Sir or Madam,

**CONSULTATION IN TERMS OF SECTION 40 OF THE MINERAL AND
PETROLEUM RESOURCES DEVELOPMENT ACT 2002 (ACT 28 OF 2002) IN
RESPECT OF MANGANESE ORE AND IRON ORE ON PORTION 1 OF FARM
MACARTHY NO. 559, SITUATED IN THE MAGISTERIAL DISTRICT OF
KURUMAN, NORTHERN CAPE REGION**

We have received notification of your application for an environmental management plan in respect of mining right for manganese and iron ore.

In terms of the National Heritage Resources Act (NHRA), no 25 of 1999, heritage resources, including archaeological or palaeontological sites over 100 years old, graves older than 60 years, structures older than 60 years are protected. They may not be disturbed without a permit from the relevant heritage resources authority. This means that before such sites are disturbed by development it is incumbent on the developer (or mine) to ensure that a **Heritage Impact Assessment** is done.

SAHRA has already received and commented upon the Archaeological Impact Assessment undertaken by Mr Morris at the McGregor Museum in Kimberley (Archaeological and Heritage Phase 1 Impact Assessment for the Portions Boskop on Macarthy 559, north of Postmasburg, Northern Cape).

The Archaeological Review Comment is attached to this letter too.

SAHRA thanks you for your co-operation in preserving South African heritage.

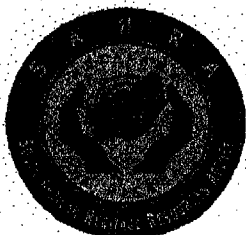
Yours sincerely

Mfalimbati

pp Mrs Nonofho Ndobochani
SAHRA: Archaeology, Palaeontology and Meteorite Unit
For: CHIEF EXECUTIVE OFFICER

Copies: PHRA Northern Cape
Mr Malatjie (DMR)

Appendices: SAHRA's ARC.



SOUTH AFRICAN HERITAGE RESOURCES AGENCY
 111 HARRINGTON STREET, CAPE TOWN, 8001
 PO BOX 4637, CAPE TOWN, 8500
 TEL: 021 462 4502 FAX: 021 462 4509

FOR ATTENTION: PHRA: Northern Cape	
FOR OFFICIAL USE ONLY:	
SAHRA File No:	9/2/055/0002
Date Received:	15 April 2010
Date of Comment:	26 July 2010
Sent to Peer Review:
Date to Peer Review:
SAHRA Contact Person:	Marlagrazia Galimberti
DME Ref No:	NC 30/5/1/1/3/2/1/100 EM

REVIEW COMMENT ON ARCHAEOLOGICAL IMPACT ASSESSMENT

BY ARCHAEOLOGY/ PALAEOLOGY UNIT OF THE HERITAGE RESOURCES AGENCY

South Africa has a unique and non-renewable archaeological and palaeontological heritage. Archaeological and palaeontological sites are protected in terms of the National Heritage Resources Act (Act No 25 of 1999) and may not be disturbed without a permit. Archaeological Impact Assessments (AIAs) and Palaeontological Impact Assessments (PIAs) identify and assess the significance of the sites, assess the potential impact of developments upon such sites, and make recommendations concerning mitigation and management of these sites. On the basis of satisfactory specialist reports SAHRA or the relevant heritage resources agency can assess whether or not it has objection to a development and indicate the conditions upon which such development might proceed and assess whether or not to issue permission to destroy such sites.

AIAs and PIAs often form part of the heritage component of an Environmental Impact Assessment or Environmental Management Plan. They may also form part of a Heritage Impact Assessment called for in terms of section 38 of the National Heritage Resources Act, Act No. 25, 1999. They may have other origins. In any event they should comply with basic minimum standards of reporting as indicated in SAHRA Regulations and Guidelines.

This form provides review comment from the Archaeologist of the relevant heritage resources authority for use by Heritage Managers, for example, when informing authorities that have applied to SAHRA for comment and for inclusion in documentation sent to environmental authorities. It may be used in conjunction with Form B, which provides relevant peer review comment.

- A. PROVINCIAL HERITAGE RESOURCES AUTHORITY: **Northern Cape**
 - B. AUTHOR(S) OF REPORT: **Mr David Morris**
 - C. ARCHAEOLOGY CONTRACT GROUP: **McGregor Museum, Department of Archaeology**
 - D. CONTACT DETAILS: **PO Box 316, 8300 Kimberley, 053 839 2706; mmkarchaeology@yahoo.co.uk**
 - E. DATE OF REPORT: **April 2010**
 - F. TITLE OF REPORT: **Archaeological and Heritage Phase 1 Impact Assessment for the Portions Boskop on Macarthy 559, north of Postmasburg, Northern Cape.**
 - G. Please circle as relevant: Archaeological component of EIA / EMP / HIA / CMP
 Other (Specify)
 - H. REPORT COMMISSIONED BY (CONSULTANT OR DEVELOPER): **Mr Dion van Dyk, DVD Quality Engineering (Pty) Ltd**
 - I. CONTACT DETAILS: **15 Industrial Ave, Kuruman 8460; Private Bag X 1532, Postnet Suite 109, Kuruman, 8460. Tel: 0828256452, 0824461159**
 - J. COMMENTS:
- Please see comment on next page*

REVIEW COMMENT ON ARCHAEOLOGICAL IMPACT ASSESSMENT

David Morris on behalf of McGregor Museum, Kimberley

Dated: April 2010, received: 15 April 2010.

Archaeological and Heritage Phase 1 Impact Assessment for the Portions Boskop on Macarthy 559, north of Postmasburg, Northern Cape.

INTRODUCTION

On Portion Boskop of the Farm Macarthy 559 some prospecting has already taken place.

Few archaeological resources were identified on the farm: mostly they are scattered stone tools not in-situ with therefore very low significance. However, a series of scattered thick and grit-tampered potsherds were identified at the side of the hill on a sandy patch in association with some jaspilite flakes. According to the author, the proximity of these two types of remains might indicate an interaction between a farmer and a hunter-gatherer community.

SAHRA RECOMMENDATIONS

The SAHRA Archaeology, Palaeontology and Meteorite Unit supports the recommendations of the specialist that the proposed prospecting, and possibly mining, may proceed. However, the scatter of combined potsherds and stone tools should not be disturbed during prospecting or mining. For this reason it is suggested that the area is cordoned off during these activities, unless test excavations have been carried out to establish the significance of the scatter.

CONCLUSION

If the recommendations made in the specialist report and in this comment are adhered to, the SAHRA Archaeology, Palaeontology and Meteorite Unit has no objection to the development (in terms of the archaeological component of the heritage resources). If any new evidence of archaeological sites or artefacts, palaeontological fossils, graves or other heritage resources are found during development, construction or mining, SAHRA (Mrs Nonofho Ndobochani, Mariagrazia Galimberti: Tel: 021 462 4502) and a professional archaeologist must be alerted immediately.:

Decisions on Built Environment (e.g. structures over 60 years) and Cultural Landscapes and associated Living Heritage (e.g. sacred sites) must be made by the Northern Cape Provincial Heritage Resources Authority (Mr. Joas Sinthumule: jsinthumule@ncpg.gov.za) to whom this Archaeological Review Comment will be copied.

SIGNATURE OF ARCHAEOLOGIST PROCESSING REPORT: M Galimberti

EMAIL: mgalimberti@sahra.org.za

SIGNATURE OF SAHRA HEAD ARCHAEOLOGIST: [Signature]

EMAIL: nndobochani@sahra.org.za

NAME OF HERITAGE RESOURCES AGENCY: SAHRA.....

PLEASE NOTE THAT THE COMMENT (ABOVE OR APPENDED) CONSTITUTES THE COMMENT OF THE HERITAGE RESOURCES AGENCY ARCHAEOLOGIST AND THAT ANY DEVELOPMENT THAT INVOLVES DESTRUCTION OF ANY ARCHAEOLOGICAL/PALAEONTOLOGICAL SITE IS STILL SUBJECT TO A PERMIT/PERMISSION FOR DESTRUCTION OF SUCH SITE GIVEN TO THE DEVELOPER BY THE RELEVANT HERITAGE RESOURCES AGENCY ARCHAEOLOGICAL AND PALAEONTOLOGICAL PERMIT COMMITTEE (THIS WILL BE SUBJECT TO APPROVAL OF THE PHASE 2 OR ARCHAEOLOGICAL/ PALAEONTOLOGICAL MITIGATION AS NECESSARY). THIS REPORT MAY BE

TAKEN ONLY AS APPROVAL IN TERMS OF SECTION 35 OF THE NATIONAL HERITAGE RESOURCES ACT. THE PROVINCIAL MANAGER OF THE HERITAGE RESOURCES AUTHORITY MUST ADVISE AS TO APPROVAL IN TERMS OF HERITAGE ISSUES ENCOMPASSED BY OTHER ASPECTS OF THE LEGISLATION, SUCH AS ISSUES OF THE BUILT ENVIRONMENT (STRUCTURES (E.G. FARM HOUSES), OVER 60 YEARS), INDIGENOUS KNOWLEDGE SYSTEMS OR OF CULTURAL LANDSCAPES AS THIS IS NOT WITHIN THE SCOPE OF THE ARCHAEOLOGIST.



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

Private Bag X6093,
Kimberley,
8300,
Tel: (053) 807 1700,
Fax: (053) 8325 631

29-31 Currey Street,
Kimberley
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Directorate Mineral Regulation: Northern Cape.
Enquiries: Mr.L.S Malatjie E-Mail: livhuwani.malatjie@dmr.gov.za
Sub Directorate: Mine Environmental Management Ref: NC30/5/1/2/3/2/1/ 271EM

Date: 29th July 2010

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

Attention: Mary Leslie

CONSULTATION IN TERMS OF SECTION 40 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT 2002, (ACT 28 OF 2002) IN RESPECT OF MANGANESE ORE AND IRON ORE ON PORTION 1 OF FARM MARCATHY NO.559, SITUATED IN THE MANAGERIAL DISTRICT OF KURUMAN, NORTHERN CAPE REGION.


APPLICANT: DVD QUALITY ENGINEERING (PTY) LTD

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

It would be appreciated if you could forward any comments or requirements your Department may have to this office and to the applicant before **30th August 2010** as required by the Act.

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

Your co-operation will be appreciated.


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REGIONAL MANAGER: MINERAL REGULATION
NORTHERN CAPE REGION

