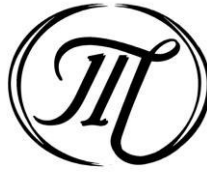


**DRAFT SCOPING
REPORT
COMMENTS**

VAN DER MERWE,

B



MOUTONSHOEK

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6 February 2019

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Cc Jaap de Villiers, Head of the Office, Ministry of Environmental Affairs,
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Cc Adv Martin Coetzee-marcec@mweb.co.za

OBJECTIONS AND COMMENTS REGARDING BONGANI MINERALS DRAFT SCOPING REPORT

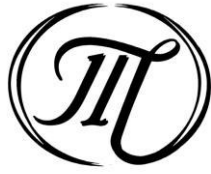
BONGANI MINERALS (PTY) LTD// APPLICATION FOR A MINING RIGHT IN TERMS OF SECTION 22 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 TO MINE TUNGSTEN AND MOLYBDENUM ON PORTION 21 OF THE FARM NAMAQUASFONTEIN 76; THE REMAINING EXTENT OF PORTION 6 OF THE FARM NAMAQUASFONTEIN 76; AND PORTION 1 OF THE FARM NAMAQUASFONTEIN 297 IN THE MAGISTERIAL DISTRICT OF PIKETBERG

Further to my comments on the BID, the following are my personal contributions in my capacity as landowner immediately adjacent and Director of the property in the application area. Adv Martin Coetzee will be making further representation on our behalf on or before 12 Feb 2019.

Notification letter by Bongani Minerals dated 4 December 2018.

I hereby go on record that the first time I have ever seen the letter that Bongani allegedly sent to me was on 5 February 2019, when I turned my attention to the Draft Scoping Report (DSR). I did not receive an electronic nor a paper copy. I would like to receive any proof that this letter was ever sent to me?

Nevertheless, I will now attend to the detail therein.



MOUTONSHOEK

Re: Notification, consultation and request for access with landowner

The letter claims that Bongani is the registered Prospecting Right Holder with reference no. WC 30/5/1/1/2/434PR. As stated in my comments in the BID, this claim is under severe dispute. Our Adv Martin Coetzee formally challenged the granting of such a PR, that has in any case lapsed.

We are awaiting feedback on the challenge that has been widely published.

There is mention of “a sense of conflict and mistrust between the landowners and the applicant”, which they “sincerely like to change”:

They must be joking!! They embark on yet another bungled campaign on a fictitious/and or lapsing Prospecting Right, which was contested (with the outcome still pending), consulted only one of the competent authorities for a Protected Environment, sent out the BID and DSR just before the Christmas break, failed to send letters to some of the affected landowners, and then expect the relationship to improve?

No consultants, specialists or any person will be given access to our land.

EXECUTIVE SUMMARY (p.2)

Paragraph 2 again erroneously refers to the DMR as the only competent authority. Department of Environmental Affairs is the other.

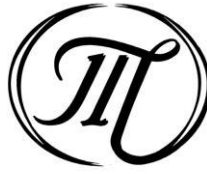
The Applicant glibly refers to a PR that lapsed in December 2018. It did not lapse nor exist, and it was contested. It also quotes a different PR number than that on the front of the document? Which is it?

Now the real shocker: “owing to the prospecting outcome”! What prospecting outcome? The applicant drilled one illegal hole until they were stopped by an interdict.

Now they want to mine? They got nowhere near the required number of prospecting sites to get even close to a SAMREC level description of the Reserve. All they did was analyse the old historic samples in Piketberg. How dare they even apply for a mining right based on this? Their own ally Prof Rozendaal and all others pull it to pieces as being of low grade, too deep for an open cast mine and too shallow for a conventional mine. Have the applicants lost the plot? Please explain in minute detail.

They go on to say “should the MR be issued”

1. Site establishment/ construction phase- which refers to buffer no-go -zones such as watercourses, wetlands etc. THE PROPOSED PIT IS IN A WATERCOURSE WETLAND!! The whole area should be a NO-GO ZONE! Please explain in minute detail how this could be mitigated?
2. Incline shafts? In this substrate? Please explain how at all possible?
Please explain in detail how Ammonium Paratungstate (ATP) will be produced?



MOUTONSHOEK

Public Participation (p.3)

Please furnish evidence of the on-site notices? We are always on the lookout and have never seen any.

Plan of Study (p.4)

5. Engineering Services Report?

8. Again only one of the 2 relevant authorities is mentioned.

11) Description of activities to be undertaken.

PROJECT PROPOSAL (p.17)

Again, the prospecting outcome after an illegal drilling of one site?? What outcome?

(5) Operational phase (p.18) refers to the incline shafts but fails to mention the two significant aquifers that will fill the excavation with water after destroying the aquifers. Please elaborate?

e) Policy and Legislative context (p.23)

First box referring to Bergrivier Municipality as stated before. We are the owners of Namaquasfontein 297 portion 1 under which the bulk of the tungsten reserve is situated. We are not interested in applying for a deviation of land use. The same applies to LUPA at the bottom of the page.

f) Need and desirability of the proposed activities (p.26)

Again, the farcical "outcome of the prospecting operation" is mentioned. Everything known about the deposit is well described (including the environmental horrors that rare earths and associated heavy metals in the deposit hold for the area in terms of contamination and toxicity). Walker, Rozendaal and several others have done exhaustive studies, and all have come to the same conclusion as Anglo and Union Carbide: i.e. low grade, uneconomical and fraught with environmental hazard, not least being unmitigable damage to the geohydrological contamination of surface water.

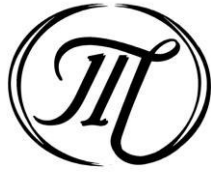
Suddenly the ±170 employment positions from the BID has jumped to 211 employees. As stated and proved, a comparable deposit in Canada employs 74 people. How on earth would you employ 211? Detailed explanation please?

PHYSICAL ENVIRONMENT (p.79?)

The proposed area receives an average 600 mm rain and the catchment above in excess of 800 mm rain per annum.

FUANA (p.87)

What are "pheasants" that Withers found?



MOUTONSHOEK

6) Description of the current land uses (p.95)

Again Portion 1 of farm 297 is mentioned - this is our farm.

We have NO intention of applying for a deviation of land use nor appointing an entity to do so on our behalf. It is important that you make this fact clear to all I&AP's and institutions as it clearly wastes everybody's time.

SITE SPECIFIC HYDROLOGY (p.98)

Please remember that NO persons will be given access to Portion 1 of farm 297 Namaquasfontein.

SITE SPECIFIC MATTERS WITH REGARDS TO THE MOUTONSHOEK PROTECTED ENVIRONMENT

The Applicant glibly skims over this part and implies that the DMR Minister simply has to consult with a Cabinet Minister to give the go-ahead for the Mining Right (MR) to be awarded in a PROTECTED ENVIRONMENT. If it were that simple, it would make a mockery of Protected Environments. And if that were the case, why did the judges lambaste both the DMR Minister and the Environmental Minister for not applying their minds when awarding a MR in the Mabola Protected Environment, as they set the decision aside in the High Court with costs and without leave to appeal? (Attached article Moneyweb).

The proposed project is a very high profile one and is in a Protected Environment in the headwaters of a RAMSAR site, the Verlorenvlei. Do the applicants really think they can sneak this past the eyes of the good people of South Africa and indeed The World?! The Courts would simply set a bad decision aside.

Impacts identified (p.103)

SITE ESTABLISHMENT

Increased dust – partial mitigation. How?

Visual Intrusion as a result of the site establishment- Partial mitigation? Please explain?

Potential loss of/ negative impact on wetlands in affected area Rating: medium. Fully mitigated.

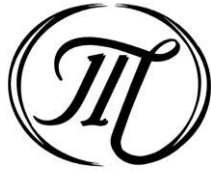
You must be joking?! There cannot be a pit in the area without destroying the wetland and drainage.

Increased work opportunities to local residents (positive)

Such a proposed mine employing 74 odd people (including management) will result in the LOSS of literally thousands of jobs in the agricultural sector due to dust pollution, ground water destruction and surface water contamination. It will also be unprofitable, resulting in an ecological disaster with a bankrupt Applicant/ licence holder.

Dust nuisance caused by disturbance of the soil – rating low to medium. Fully mitigated.

Yet again you must be joking? Please explain?



MOUTONSHOEK

Potential flooding of opencast pit/ work areas. Rating low. Partial mitigation.

Whoever made this statement has never been here. The proposed pit is in a DRAINAGE GULLY.

It should read: Rating- extremely high! Mitigation – NOT AT ALL!

UNDERGROUND MINING

Potential impact on groundwater sources. Rating -high. Degree of mitigation: Fully mitigated.

Whoever compiled this, falls well into what our Adv Martin Coetzee described in response as a “not so well written piece of fiction”.

Due to the presence of groundwater and aquifers sensitive to blasting, this is unmitigable.

And potential contamination of surface runoff as a result of spillage, falls into the same category as above.

Sorry, I cannot continue with this nonsense. I hereby dispute ALL claims of mitigation made by the applicant. Not enough time in the day to address them individually, other than to say that it is farcical.

But on the alleged positives;

There would be a massive net loss of work as eloquently expressed by so many.

More detail is required before such an outlandish claim can be remarked upon.

Increased income from a low-grade sub economic source mined by a company that has not once proven it's economic bona fides? Is this fiction?

What about the massive loss of products produced in Moutonshoek for export?

Economic development: see above

Export: see above

Water storage in the pit: This has now gone beyond farcical, through to the realms of ridiculousness!! Along with Tungsten and Molybdenum, the bedfellows are rare earths, other heavy metals more toxic than tungsten and contaminants that will leave an ever-filling dam of toxic waste water.

It is impossible to take this DSR seriously! I am only responding to this in the fear that somebody else might consider it seriously. This DSR should be treated with the utmost contempt!

Slimes dam ??? see above comments.

l) Possible mitigation measures that could be applied and the level of risk



MOUTONSHOEK

Potential relocation of affected landowner/occupants

The whole project falls down right here. Top quality racehorses have been bred by Moutonshoek, a stud farm that has been in operation for 15 years following successful farming in the area since 1728. Racehorse breeding relies heavily on the natural beauty of the area and natural resources of the farm. Potential buyers of our racehorses visit the farm and 'buy into' the brand and all the good things it stands for. Along with our neighbour Wilgerbosdrift we have established the Moutonshoek Valley as the premier racehorse breeding area in the country. It is a reputation that we have earned through many years of breeding since 1998. Between us we have bred several Group1 Durban July winners, G1 J&B Met winners, G1 Sun Met winner, several G1 Cape Guineas winners, G1 Champions Challenge winners etc. Our brand is locally and internationally recognised. Our clients include internationals such as the rulers of Dubai and others and our local market is extensive. We cannot relocate. For this and many other reasons we will not allow people to do studies, nor apply for a deviation in land use. The applicant would be best served to cut its losses at this stage and stop wasting time and money.

Dust emissions

Spraying of water is recommended in a water sensitive area?? How does the dust from blasting get sprayed with water get mitigated? The area is prone to strong south winds every day which would result in the whole valley under dust! Please explain?

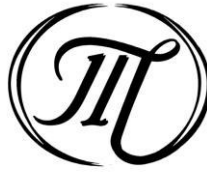
Weather conditions: If blasting and other operations are to be limited to wind still days the life of mine shall have to be extended to at least three times the proposed time – resulting in an already marginal to uneconomic mine becoming properly uneconomical!!

Potential impact on wetlands within the area: This person has obviously never been here! Flooding is common and the catchment directly above the area has the highest rainfall for 100km in any direction. The proposed pit is right in the line of the biggest drainage gully as clearly demonstrated by the aerial picture. It makes a mockery of the DSR. The same applies to storm water handling.

Potential impact on groundwater sources: This is plain outrageous! What will a water sample from a borehole help if the aquifers have been blasted to smithereens?! The damage would have been done. Please pay particular attention to the historic GEOSS report. These factors are impossible to mitigate and will have an irreversible massively detrimental impact on the immediate and far-lying areas. It is an insult to have such a nonsensical paragraph regarding such an important matter.

Potential seepage from the slimes dam: Is this the dam you want to store useable water in?

Rehabilitation of the excavated area: Again. A ridiculous paragraph that does not in any way address the horror that would be in there! No reference to toxic substances, destroyed aquifers etc. Please don't insult us.



MOUTONSHOEK

m) the outcome of the site selection. Final site Layout plan: Again, this reference to one illegal drilling site? With a pit with angles hopelessly steep for vehicles, right in a drainage area, and one filled with aquifers and underground water? Please explain?

f) The Stages at which the Competent Authority will be consulted: The Department of Environmental Affairs must be consulted throughout, if not first.

7) NEMA (p144)

Potential relocation of the people: For reasons explained earlier this will not be considered. Stop the Application and stop wasting everyone's time and money.

Public participation: There is no timeline on the notice at the R366 turnoff. It did not last a day! It was never seen by me or any of my staff. (It really looks pathetic as dwarfed by the big Moutonshoek Protected Environment sign- ironic).

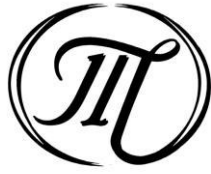
In summary

We have become accustomed to this generic sub-standard type of BID and DSR from Bongani. Having already stated that I cannot hide my disappointment at this poor attempt. This DSR is a disgrace and an insult to all who have to read it.

There is a wealth of knowledge on the Riviera tungsten Deposit dating back to 1975. Anglo and Union Carbide did prospect here as stated. Even in the years of South Africa's isolation they walked away from the project as the deposit was deemed unprofitable due to the low-grade Tungsten, too deep for an open cast mine and too shallow for a conventional mine and above all, too much underground water to mitigate.

They donated the project to the Geology Faculty of the University of Stellenbosch. (It must be remembered that US does not have a Mining Faculty). As a result, several studies have been done subsequently and several MSc theses have been written on the deposit. Previous scoping reports contain opinions and options. Walker and their own Prof Rozendaal warned about the marginality of the deposit. Our world class geologists and geohydrologists in Dr Herman Grutter, Dr MF Winter and Julian Conrad of GEOSS, have made massive contributions. They warned about stripping rates, degrees of incline to get to the depth of 230m and the negative impact on the area's groundwater. (A proposed 55 -90 ha open cast mine pit was deemed too small (steep) for the trucks to get down to the ore – now the Applicants propose to go down into a pit of only 18ha!!)

So, what do the Applicants do? They find an Environmental Practitioner (there have been several) that can cope with the application in terms of Public Participation in a 'tick the boxes' kind of way. They can make tables in a 'bull**** baffles brains' kind of way, where they simply sweep all the core issues of the DSR under the mat, and DON'T ADDRESS THEM IN ANY MEANINGFUL WAY!



MOUTONSHOEK

Of this veritable mountain of information on Riviera Tungsten, they cherry-pick some bits of information from a Desk-top study by SRK, while ignoring the whole wealth of information in a thinly disguised attempt to make this proposed project look like it is remotely feasible! They are either grossly incompetent or deliberately trying to mislead the good people of this country.

There is a very good reason why the Applicants have only drilled one illegal hole in their quest to describe a SAMREC Compliant Reserve. They have failed miserably to convince anyone of the merit of what they want to do. They failed to prospect (even the PR they had was subject to challenge). Now they just want to blunder ahead and mine in a Protected Environment! Do they really think they can dupe all of the DMR, DEA, DEADP, Agriculture, CapeNature, Bergriver Municipality, the Courts, not to mention the good people of the area, into supporting their project?

According to the DMR spokesperson, the 2009 MR application fizzled out “due to environmental concerns”. Why would this be any different? (attach New Revelations article).

So: an unknown entity with a very chequered past, have found an Environmental Practitioner to sweep the key issues under the mat and focus on ticking boxes in an attempt to mine in a Protected Environment, where the information in the Public Domain flashes hundreds of red warning lights.

We cannot let this happen. We will not let this happen.

I agree with CapeNature in insisting that this Application be given no further consideration.

Dr Benjamin de Wet van der Merwe

Mineweb

High Court refuses mining company's leave to appeal

A strategic water source area already protected by law is protected by the courts.

Sasha Planting / 23 January 2019 00:41  4 comments



Mining companies have left a heavy imprint on Mpumalanga, a biodiverse region vital to SA's water supply. Civil society is fighting back. Image: Supplied

Yesterday the North Gauteng High Court refused mining company Atha Africa leave to appeal the court's decision to set aside permissions for a new coal mine inside a declared protected environment.

This is a victory for the eight civil society organisations represented by the Centre for Environmental Rights (CER), which have opposed the mining venture since 2015. At the time, then minister of mineral resources Mosebenzi Zwane and the late minister of environmental affairs, Dr Edna Molewa, granted Atha-Africa Ventures – an Indian-owned mining company – the right to mine coal in an area in Mpumalanga that was declared a Protected Environment in January 2014.

Known as the Mabola Protected Environment, it was declared such by the Mpumalanga provincial government as part of more than 70 000 hectares of protected area in the Mpumalanga grasslands. This followed years of research and planning by a number of government agencies, including the department of environmental affairs, the South African National Biodiversity Institute and the Mpumalanga Tourism & Parks Agency.

Dubious decision

In 2016, without public consultation and without notice, the two ministers gave their permission for a large 15-year coal mine to be built inside the Mabola Protected Environment.

This move was greeted with dismay by South Africa's green lobby.

The Mabola Protected Environment is situated outside Wakkerstroom in Mpumalanga and falls within what has been classified as one of 22 Strategic Water Source Areas by the South African National Biodiversity Institute, a government body, and the Council for Scientific and Industrial Research (CSIR). Strategic Water Source Areas constitute just 8% of SA's land but provide more than 50% of our freshwater.

"The organisations opposing this particular mine do so because the proposed mine would be inside a declared protected area and a strategic water source area: with acid mine drainage estimated to require water treatment until 2097, the mine would threaten water security not only in the local area but in the region," says CER attorney Catherine Horsfield. "The damage that this mine would do to water resources cannot be undone. The organisations that have brought this action are deeply committed to job creation and improving the quality of life of local people, but we also know that instead of bringing wealth and livelihoods, coal mining has devastated the lives, health and well-being of communities across the Highveld."

In November 2018 the Pretoria High Court set aside the ministers' approval and referred the decision back to them for reconsideration.

Relying on the decisions of others

The court set aside the decision on the basis that the decision-making process was not transparent, was procedurally unfair (there was no public participation process) and the ministers failed to independently and distinctively apply their minds to the decision, instead relying on the decisions of other decision-makers in relation to other approvals.

In light of the lack of transparency and public participation, the court handed down a punitive costs order against the ministers and the MEC.

Yesterday, the court heard Atha Africa's application for leave to appeal the November decision to a full bench of the high court. The court refused Atha's application and awarded costs against it.

The ministers of mineral resources and environmental affairs, as well as the Mpumalanga MEC, had also applied for leave to appeal the court's decision but withdrew their application yesterday. The court ordered that the state pay the coalition's wasted legal costs in preparing to oppose that application.

The coalition that brought the court application to set aside permissions for the proposed coal mine comprises the Mining and Environmental Justice Community Network of SA, groundWork, Earthlife Africa Johannesburg, BirdLife SA, the Endangered Wildlife Trust, the Federation for a Sustainable Environment, the Association for Water and Rural Development, and the Bench Marks Foundation.

AUTHOR PROFILE



Sasha Planting

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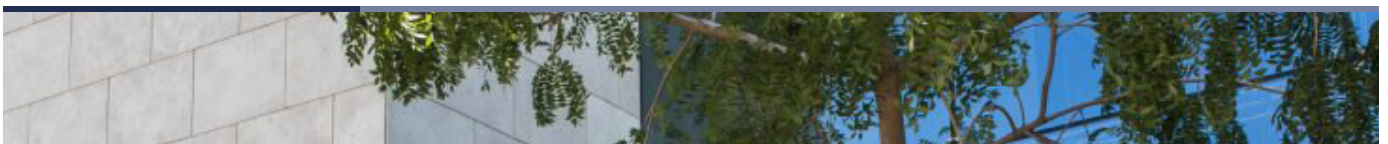
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News

New revelations in mineral rights controversy

Lionel Faull

A businessman involved in a controversial bid to mine tungsten in an environmentally sensitive area of the Cape's west coast has close personal ties with the mineral resources department official who was responsible for processing the mineral prospecting rights at the time, the *Mail & Guardian* has learned.

Phemelo Sehunelo, the founder of controversial empowerment mining vehicle Imperial Crown Trading 289 (ICT), confirmed that Duduzile Kunene, the department official, is his girlfriend, *Business Day* reported on Thursday.

The newspaper speculated that the relationship between the two might explain how ICT managed to obtain the mineral rights applications of rival bidder Kumba for a 21.4% stake in the Sishen Mine.

ICT subsequently blindsided Kumba's application and received the prospecting rights from the department. Kumba is now contesting the allocation of the rights in court.

In a new development that raises further questions about the integrity of the department's mineral prospecting rights process the *M&G* can reveal that Kunene was the department's acting regional manager in the Western Cape from February 2009 to February 2010 — exactly the period during which a company linked to Sehunelo, Bongani Minerals, applied for mineral prospecting rights in the environmentally sensitive Moutonshoek Valley.

Such rights applications are handled by the department's regional office and Kunene's responsibilities would have included receiving and processing the community's objections to the proposed mine.

As early as 2006 Sehunelo represented Bongani Minerals at public meetings held to deal with the outraged objections of Moutonshoek locals to the company's mining plans there, according to a May 2009 report in *Nosweek*.

It is unclear whether Kunene ever declared her relationship to Sehunelo and, indirectly, to Bongani Minerals. This week she declined to comment, but department spokesperson Bheki Khumalo said the department did not award mining rights to Bongani Minerals in 2009 and withdrew the mineral right completely because of environmental concerns.

"As to whether Kunene's handling and processing of Bongani Minerals's prospecting right was ethical or not, you will have to put those questions in writing," Khumalo said on Thursday.

According to *Business Day* Sehunelo and Kunene co-own a house in Eldoraigne, Pretoria.

Sehunelo admitted, through his lawyer Ronnie Mendelow, that he and Kunene enjoy an "ongoing close personal relationship" but denied that either of them had any access to the decision-making process in the department with regard to mineral rights.

But Kunene also has a direct link to an official involved in the mineral rights application process. The same *Business Day* report revealed that she has been in business with a colleague in the department, Thozama Basi, through a close corporation called 10 Miles 8182 Investments, which was registered in 2006.

Basi confirmed in a supporting affidavit appended to ICT's legal documents in the dispute with Kumba that she received ICT's application for mineral rights in 2010.

Mendelow said Kunene and Basi had lost contact when Kunene left the department's Kimberley office, where Basi worked, in 2006, and added that the close corporation had never traded and had been deregistered.



The M&G Centre for Investigative Journalism, supported by M&G Media and the Open Society Foundation for South Africa, produced this story. All views are the centre's.

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Christine Fouche

From: Bennie & Jacqui van der Merwe <namaquas@intekom.co.za>
Sent: 12 February 2019 11:16
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Cc: Martin Coetzee
Subject: Further comments and objections to draft scoping report- Bongani Minerals -next Objection, comments on Scoping Report MR19 Further - Dr BDW van der Merwe, Moutonshoek.pdf; VC Letter to DME 19 June 09.doc; VC Comments on Final Scoping Report.pdf; VC Objection DMR 26Oct09.pdf
Attachments:

Categories: Piketberg

To: Christine

Please find attached further objections and relevant documents.

The files may be too large to be attached at the same time. I will space them.

Please note the Personal Liability for the decision makers who may not apply their minds.

Yours sincerely

Dr Bennie van der Merwe

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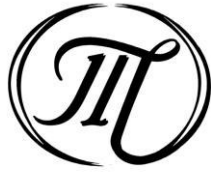


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WHERE THE HORSE COMES FIRST



MOUTONSHOEK

12 February 2019

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FURTHER OBJECTIONS & COMMENTS REGARDING BONGANI MINERALS DRAFT SCOPING REPORT

BONGANI MINERALS (PTY) LTD// APPLICATION FOR A MINING RIGHT IN TERMS OF SECTION 22 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 TO MINE TUNGSTEN AND MOLYBDENUM ON PORTION 21 OF THE FARM NAMAQUASFONTEIN 76; THE REMAINING EXTENT OF PORTION 6 OF THE FARM NAMAQUASFONTEIN 76; AND PORTION 1 OF THE FARM NAMAQUASFONTEIN 297 IN THE MAGISTERIAL DISTRICT OF PIKETBERG

Even further to my comments on the draft scoping report, I am adding further objections and comments on previous PR and MR applications by the same individuals. These are as relevant now as they were before.

It is my firm belief that this application should be given no further consideration and should be dismissed. It should be declared a NO-GO ZONE without further delay.

Should mining proceed in the Moutonshoek valley, it will be a much bigger financial disaster than the current Elandsfontein phosphate mine on the West Coast. (R2 billion has already gone to waste there). It would be a 1000- fold bigger ecological disaster, as the Elandsfontein mine is in the middle of nowhere, whereas Moutonshoek is an active and productive agricultural area in the headwaters of the Verlorenvlei Ramsar site.

We hereby insist that ALL previous objections from 2005 be included in the Final Scoping Report.

Yours sincerely

Dr Benjamin de Wet van der Merwe



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1 June 2009

Mr Withers

**OBJECTIONS TO AND COMMENTS ON DRAFT SCOPING REPORT AND PUBLIC PARTICIPATION MEETING OF 30 APRIL 2009 AT KAROOKOP BY WEC
in regard to the Application for a Mining Right by Bongani Minerals (Pty) Ltd.
(DME reference number WC 30/5/1/2/2/328MR for Portions 1, 6 and 13 of the farm Namaquasfontein no.76 and Portion 1 of Namaquasfontein no. 297 in the magisterial district of Piketberg, Western Cape**

Herewith our objection in the strongest possible terms to the proposed tungsten and molybdenum mining in the Moutonshoek valley.

We want to start with the Public Participation (PP) Meeting.

The meeting was an insult to all of the interested and affected parties (IAP) as to how the meeting was conducted. The notice period was hopelessly too short and the obvious 'ticking of boxes' or 'following the Process' was disgusting. Participants travelled far and wide and most had to sacrifice a whole day's work to listen to (in our opinion) pro forma generic drivel. We object to this and will not tolerate such interaction in the future. Do not even attempt to waste our time with such poorly researched rubbish. We agree with the lady who suggested you fire your secretary for preparing such a poor powerpoint presentation for you. We are fighting for our lives and for generations to come. The least you can do is treat us with the respect we deserve.

The Draft Scoping Report (DSR)

Opportunities (p.ii)

We object to the first point viz 'the high level of unemployment in the Piketberg Magisterial District' Unemployment in this district is 400% less than the national average of 23%. The single biggest challenge to farming in the district is the massive lack of labour. We farmers all have to fetch labourers as far afield as Kuruman, Prince Albert, Ceres and Cape Town for example. Table Grape farms in the immediate area of Piketberg employ over 6000 staff alone (BTPV). (This without the Expofruit packshed, PPC Cement and the many other fruit farms on top of the mountain.). Alpha Civils (Worcester) could not comply with the prescribed 20% local content of their workforce. This means that they could not find 10 local employees in the agricultural 'off' season. We insist that you remove this opportunity from the list.

We also object to the second point 'the high level of under development in Piketberg'. It is an unqualified statement that is not backed up in any way. Through Agriculture (fruit, grain, livestock, racehorses), Industry (PPC, Expofruit etc) and Business (Potatoes SA, Andrag, KaapAgri, lawyers etc) it is more developed than most rural areas in the Western Cape or the rest of South Africa. This point must be removed from the list.

We object to opportunity 3 'to clear alien species.' We have been clearing alien species in the Krom Antonies River for 14 years using biological means (galls) and chemical and physical means for 4 years. We have had

phenomenal results that have been felt all the way down to the Verlorenvlei. It is a classic case study of a great model of success! By the time Bongani propose to start mining in 2011, there will be very few alien trees to clear. I insist that you also remove this item from your list of opportunities.

We object to point 4 of your opportunities 'related to socio-economic opportunities'. Those emanate from point one which is grossly inaccurate, leading to this point also being so. The destruction of farms and jobs and homes will negate any benefits. We insist that point 4 be removed as well.

I am on record at the PP meeting of 30 April of saying that I don't object to 'profits for mine bosses'. I have changed my mind – I object to that too.

Our research shows that the most current tungsten mine is in Tasmania. It has 3 -7% tungsten ore. The mine proposed by Bongani has 0,2 – 0,3 % ore with severe environmental constraints. How can both be profitable? Mr. Van der Walt from Batla's answer at the PP meeting of 30 April that "He thinks they (Batla/Bongani) have enough money" to mine here (Despite the severe environmental constraints) is unacceptable You may however leave point 5 under the potential opportunities, but will have to substantiate it in detail.

Under constraints (p.iii):

We object to the casual way in which you refer to the underground water in the proposed pit area of the mine. You should deal with them in this way: **"WARNING – AQUIFERS – EXTREME DANGER HERE"**. To casually mention (by yourself and Mr Visser of SRK) aquifers as if they are small hosepipes that are in the proposed pit area SIMPLY WILL NOT DO. We have done our homework. They contain vast quantities of water on its way somewhere. I spoke to a legal expert involved in the Magaret Shaft in the KOSH area. After a 100 odd years of blasting big holes in that area, they now only have somewhat of an idea as to how the aquifers interconnect etc. To blast open these aquifers is an unreasonable risk for anyone to take. The legal onus is on your scientists to prove ABSOLUTELY that the water in those aquifers was NOT heading somewhere else, and can be safely abstracted without negatively impacting anyone. (The Verlorenvlei being a logical area, but it can very easily be the entire Sandveld or even Namaqualand). Your suggestion that 'a high degree of certainty' is good enough will not do! Period. (For brevity's sake We will merely refer to this paragraph as 'ref AQUIFER', as this point pops up all over the generic document.

(p.iv)

The last bullet point under Further Studies ref AQUIFER. This much further afield than Verlorenvlei – Graafwater, Wittewater, Nieuwoudtville etc. Also no mention is made of studies in relation to the seismic effects of the proposed underground blasting. By your own admission in the PP meeting of 30 April, will "sterilise" the whole narrow valley. The expert who asked the question explained to me that this means that not only will it cause major damage to all the sandstone structures above ground (outcrops, San paintings etc), but also crush the underground structures like aquifers into an homogenous crumbled mass. This is entirely unacceptable. We insist on a very detailed study on this point.

(p.v)

Access was denied as the scientists were trespassing while the Bongani Prospecting Right Application was *sub judicæ* – pending a Judicial Review.

(p.1)

Your last paragraph on page 1 states that WEC were appointed "subsequent" to the Bongani Mineral Right Application being accepted on 25 March 2009. What were you then doing here in 2007 and why were you trespassing on 22 October 2008?

On page 4 point 1.3, you refer to a lease area. What is that? What does this mean?

On page 4 point 1.4 you refer to Process Followed to Date. The heading should have been “Process NOT followed to date”.

Page 5 has one of the many grave mistakes. The last line states “The EMP which had been submitted on the 18th of October 2006”. The EMP submitted on 18 October 2006 did not contain page 18a – a diagram containing three proposed holes in the ROAD RESERVE. This page 18a miraculously found its way into the (already accepted) EMP in January 2007 – one of Bongani’s second PR application’s MANY fatal flaws. (An original copy without p18a can be viewed at Candice Meyer ‘s office at Webber Wentzel Bowens in Cape Town). This is part of the reason why Bongani’s second PR application was subject to Judicial Review. (That was never heard in court due to the fact that, despite assurances to the contrary, DME accepted Bongani’s MR application somewhere between 10 and 25 March 2009.) We find this situation very disturbing, because when DME gave us these assurances on 26 February 2009, they would already have been in possession of Bongani’s Social and Labour plan. Our rights in this matter are reserved.

On page 5 point 3 you again refer to being “subsequently appointed”, which again begs the question of your site visits in 2007 and 2008.

On page 10 you make reference to the toxic slimesdams. We will not fall for the pathetic two card trick of drawing the extremely, hopelessly too small slimesdams right next to the river so that you can barter at a later stage. There will be no toxic slimesdams in this valley. Period. We will refer to that later under Air Quality and Pollution.

On page 13 in the second paragraph you make reference to the “perennial Krom Antonies River”. This year was the first in decades that this river flowed through the summer- hardly perennial!

In paragraph 4 you again make reference to the reluctance of the landowners to allow the scientists onto the land. Never do you mention that Bongani’s first PR application was rejected on grounds of pollution amongst others, that the second application was subjected to a Judicial Review, nor that you and the scientists were in fact trespassing on 22 October 2008.

On page 14 you make reference to Figure 7. This figure shows no permanent crops in the area. There has been fruit/ wine farming on top of the mountain for at least 50 years and in this valley for at least seventy! This does nothing for the credibility of the Draft Scoping Report.

On page 18 par. 1, it is implied that irrigation return flow adds to the salinity of the river. This is not the case. Return flow in areas with bad agricultural/irrigation return flow would be a problem. We do not have this problem. We are also surprised that JN Rossouw states that water quality measurement is poor. How does he know that?

On page 21 in par.3, there is reference to “pheasants”. What are they? Spurfowl? Francolin? Are these scientists? We also object strongly to the last paragraph under 5.1.6. The Krom Antonie Conservancy has set its goals to return FAR more than the nationally accepted norm of 10% of total farm surface area to its natural state. This has been achieved by many farms. The farm belonging to Namaquasfontein Boerdery Trust has 60% of its surface area untilled and undisturbed.

The last paragraph is also disturbing. The Verlorenvlei Redfin (*Galaxia*) occurs ONLY in the Krom Antonie River up to around the tar road. This information has been available for about a year! Why does she not know that? We have lovely pictures of specimens. (Johan Burger CN)

The first paragraph on page 23 ties in beautifully with one of the key objectives of the Krom Antonies Conservancy (KAC). We are in discussions with CapeNature to achieve just this as we have found that on farms with large herbivores (cows). Alien removal is more effective, and channel management more realistic. Species like Hippo will fit in nicely here-much better than a mine!

On page 24 par.1 5.8.3 insert AQUIFERS and add – especially given the MAJOR GEOGRAPHIC FAULT under the main riverbed, very close by, the risk of polluting a massive watersource is simply too high.

On page 25 the last paragraph, the legal onus is on the scientists to prove BEYOND ALL DOUBT that the groundwater models are absolutely correct.

Page 29 further studies: Due to the nature of aquifers it is hopelessly inadequate to restrict the study to the Krom Antonie River valley. They should be done for a radius of AT LEAST 150 KM – ref AQUIFERS.

5.2 SOCIAL AND LABOUR

At the outset we believe that Prof Johnathan Bloom was probably chosen to add *gravitas* to the study. In our opinion the opposite is true. We are of opinion that Prof Bloom is embarrassment to the unfortunate institution that made him a professor. The pathetic, pro forma, generic garbage that he presented and which is included in the DSR, deserves to be treated with contempt. It is insult to the intelligence of everyone in this valley. For a so-called specialist to kick off from the premise of rife unemployment where the actual figures show that the area has unemployment figures 400% lower than the national average! Either this man is incredibly stupid or very close to dishonest! This would be the logical conclusion as he kicks off on the wrong footing ALL his assumptions and models are gravely incorrect.

He claims he spoke to people at the Bergriver Municipality. The Bergriver Municipality deny this! (Riaan de Vries)

The very Introduction on page 30 is so offensive that Prof Bloom was in real danger of being harmed at the PP meeting of 30 April. To tell a group of people what Bongani will do as a result of LEGISLATION, is openly confrontational at best, given that:

- We started a Rugby Club 15 years ago. The Club is still supported in terms of transport etc.
- We paid a Social Worker for 10 years to aid social upliftment and spiritual needs (Chris Croukamp).
- ABET and basic literacy have been offered on an ongoing basis for over 10 years (Lilian van Louw, PALA)
- Computer literacy courses for adults have been offered at Karookop school for the past 3 years.
- We donated 6 ha of land opposite the Karookop School 6 years ago, for a Sports facility, Garden project and Community hall. These facilities are in the process of being built with financial assistance from Lotto and logistics from the farmers in the valley. The Provincial Department of Agriculture is very involved as well (Hannes Pienaar). The netball/ tennis court is 90% complete and the automatic irrigation system is been installed for the rugby field. Indigenous trees have been planted and the first vegetables were harvested in the summer of 2008/2009. Through the massive efforts of the local Headmaster Henk Brand (2007 winner of Primary Headmaster in Western Cape and 2nd nationally), the children of Karookop School will also soon have good sports facilities.
- Both corners of the valley have good creches at Namaquasfontein and Kromvlei.

- All this NOT because we are forced by legislation, but because we WANT TO. It ranks very highly in our mission statements from 15 years ago.
- We also get audited three times a year by independent auditors for Good Agricultural Practice and Tesco Nature's Choice (These two mainly for traceability of sprays, good agricultural practice and some social responsibility) and then the Ethical Trading Audit, which focuses mainly on labour issues viz safety in the workplace, conditions of service, etc. and includes interviews with staff and site inspectors of the workplaces and staff homes. The results are posted on a website. Our staff occupy positions throughout the levels, right up to Senior Management.
- Our skills development ledgers are perused and verified, and course attendance checked. We live 100% transparent lives from that perspective. Happily – because we are an interdependent COMMUNITY, that is standing in line to be shattered by the proposed mine.
Are you starting to understand why this chapter with its bogus numbers offends us so?

We insist on a DETAILED job description of what every one of these people on the mine will do. Nowhere in our research could we find more than 150 people employed by such a highly mechanised mine (which incidentally was the number Mr An Cornelissen from Bongani gave us on 22 October 2005).

AIR QUALITY (page 35)

Impact 6.1.1

We are not talking about dust like sand on a windy beach here. We are talking about a cocktail from hell here! Molybdenum that is toxic to plants in high levels and other heavy metals toxic to plants, animals and humans are all likely here.

To try and mitigate this with water is in our opinion impossible here. This is a blind ending valley with mountains on three sides. On the (many) windless days the toxic dust will hang around the entire valley. How can all the irrigating and spraying in the world help once this toxic dust has been blasted into the sky?

Also the toxic fog that was discussed at length at the PP meeting is not dealt with here. Jacques Tredoux that builds slimesdams amongst others for a living, described in detail how a toxic fog would rise over the slimesdams as the wind blows, carrying it for kilometres in a toxic blanket. Withers agreed that this was possible. Unless frequent rehabilitation means instant rehabilitation, it is not good enough. The wind does blow in this valley and it will pick up toxic fog even if the slimesdams are rehabilitated weekly.

Landuse (6.3.1 Impact)

Many farms are destroyed and the impact is only MODERATE?? What about EXTREME!

Botanical Assessment (p.36, 6.4.1 Impact)

This is refuted. Refer to the mission and achievements of the Krom Antonies Conservancy as already stated.

Mitigation (6.4.2)

This is also refuted. We have dealt with this under our own alien clearing company of the last 14 years etc.

Hydrogeological and Hydrological Impacts (p.37, 6.7)

You want to bust into two aquifers with a pit full of heavy metals and other toxins right near a massive geological fault under the Krom Antonies River and you expect the impact to be LOW? Ref AQUIFER. If Dr Day can use sealants etc, I suggest she rushes off to the Margaret Shaft and seals the aquifers to resolve the heavy litigation going on there.

Traffic (p.38)

Other than the obvious humans and products transported, the single access road also transport millions of rands worth of racehorses. The negative impact on them will be HIGH.

(p.39)

We hold by our opinion that only a man that has by his own admission never been into the valley at the time of the PP meeting on 30 April, and does not even know that the biggest challenge to Agriculture (the biggest employer in the Western Cape) is the lack of labour, can state that this proposed project will potentially have a HIGH positive impact. Only he can make such a statement, given that wages are a farming operation's single biggest outlay. Wages paid to predominantly previously disadvantaged (PD) women. Hundreds of PD women that take their earnings as far afield as the former Transkei. (As opposed to mining that spend much more on fuel, maintenance etc). Only he can predict that the loss of jobs of these hundreds of women and the destruction of their homes, families and communities is a HIGHLY positive social and labour impact! Shame on him!

(p.40)

Regional papers here are Die Burger, Tempo and Die Piketberger. Nobody reads the Swartlander here (it is Malmesbury based) nor the Weslander (West Coast). Because of the likely deleterious effects very far afield WEC will have to identify papers in the Sandveld, Redelinghuys and Elands Bay for starters. This is an inadequate system as Redelinghuys for example only gets the Rapport on Sundays.

Hydrogeology (p.43, 8.1.1.3)

A reminder – the legal onus is on WEC's team to prove all parameters absolutely – nothing less.

Also research into the seismic activity on surface structures and groundwater (ref STERILISING THE VALLEY).

Air Quality (p.44, 8.1.1.7)

Reminder – toxic mist and dust from hell!

(p.46)

Swartlander or Weslander paper is no good! Find other options.

(8.3.2)

Karookop School will remain hopelessly too small!

Also page 16 of Charlie Boucher's report.

Fig.11. The disturbance/ alteration was done by Provincial Government as a result of a landslide caused by a fire and subsequent high rainfall in the upper reaches of the Krom Antonie catchment. It was done to try and prevent flooding of the bridge.

With reference to your tabulated summaries:

The Table heading states it is a summary of the NEMA process. My understanding is that NEMA has not started, but only MPRDA. Which is it?

Nonetheless, other than already dealt with above, point 5.1 on page 7, Prof van der Riet's statement stands. (Unless you do not own a television set nor read the newspaper).

My information is that the MR application is already fatally flawed. This because nobody may grant an extension to the handing in of the DSR. Your extension to 4 May 2009 was unlawful.

With all of the above taken into consideration, this application must be rejected for the reasons above and this short summary:

1. Financial

A quick Google search proves that, of current mines, none operate with such a low grade ore (0,2-0,3%), but all much higher. At the PP meeting of 30 April Mr Van der Walt of Batla claimed the Bruto worth of the tungsten was around R20 billion. With the current exchange rate it would near R16 billion. Batla is Frenchoning 49% of Bongani. Thus near R8 billion does not come back into South Africa. He also claims that Batla may purchase another 26% of Bongani. (I do not know how this is possible – BEE) then only R4 billion will remain. Who would take the chance with all these constraints for such a small return, with such a high chance of failure?

2. Water Issues

Both abstraction and pollution of surface and groundwater. Dealt with. Nobody DARE risk these precious resources for such a relatively small return with such a high chance of failure. Also the legal entity that controls water in this valley is the KAWUA. We are not aware that they have been contacted.

3. Air issues

Both dust and toxic fog from slimesdams. See above.

4. Socio Economic Issues

The destruction of farms and communities and the nett job and money loss. Dealt with. Other than stating that due to the mere process more than 100 jobs have not been created due to the uncertainty, as 10 ha of table grapes have not been planted. We insist on a DETAILED SOCIO ECONOMIC SUSTAINABILITY STUDY.

We insist that all these issues be dealt with in detail.

Yours sincerely

Dr Bennie van der Merwe

Trustee

cc:

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Paul Herselman (Provincial Department of Agriculture)

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Comments, questions and objections to the Draft Scoping Report conducted in terms of Regulation 49(2) of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) (“MPRDA”) for the mining of tungsten ore and molybdenum ore on Portions 1, 6, 13 of the farma Namaquasfontein No. 76 and Portion 1 of Farm No. 297, Piketberg dated April 2009 (Job No. 07/11/1190, DME Ref. No. WC 30/5/1/2/2(328) MR)

1. We refer to the Draft Scoping Report compiled in terms of Regulation 49(2) of the MPRDA for the mining of tungsten and molybdenum ore the abovementioned portions of Namaquasfontein and Farm 297, Piketberg, dated April 2009.
2. The comments, questions and objections listed below are submitted on behalf of the Verlorenvallei Coalition, a broad-based coalition of labour, civic organisations, environmental groups and local residents. A full list of Coalition members is attached as **Annexure A** to this document.
3. At the outset, the Verlorenvallei Coalition registers its profound and unequivocal objection to any proposal of mining in the Verlorenvallei. This area is a productive, profitable and economically growing part of the Bergriver Municipality that not only provides agricultural products for the Western Cape economy and for export, but employs hundreds of people, most of whom will lose their jobs and housing if the proposed mine goes ahead.
4. Many current businesses and residents rely on ground and surface water in the Verlorenvallei, which will at serious risk of pollution by the mine. In addition, the mine is directly upstream from the Verlorenvlei wetland, a site internationally recognised under the Ramsar Convention on Wetlands 1971 and in respect of which South Africa, as a contracting party, has an international law obligation to protect.
5. Perhaps more importantly, the Coalition is extremely concerned about the following irregularities arising from the Draft Scoping Report:
 - a. non-compliance with Regulations 46 and 49 of the MPRDA Regulations;
 - b. the misrepresentation that there is a “high level of unemployment” in the Piketberg area (which the mine will allegedly address) when statistics from Statistics SA relied on by the specialist concerned clearly indicates that the unemployment rate in the Bergriver municipal area is just over 5%, compared to the national average which exceeds 20%. A statement that an unemployment of rate of just over 5% constitutes a “high level of

unemployment” constitutes inaccurate, incorrect and misleading information within the meaning of Section 98(b) of the MPRDA;

- c. the glaring omission of the estimated volume of water that the mine will use in this extremely water-sensitive geographical area; and
- d. inadequate notice and public consultation to date, and inappropriate and racist references to coloured members of the community at the one and only public consultation meeting to date.

LEGAL ISSUES

The MPRDA

6. Regulation 49(d) of the Regulations issued under the MPRDA (Government Notice R.527 in Government Gazette No. 26275, 23 April 2004) requires the scoping report to:

“identify and describe reasonable land use or development alternatives to the proposed operation, alternative means of carrying out the proposed operation, and the consequences of not proceeding with the proposed operation”

7. There are three separate aspects to this requirement, namely:
- a. Identification and description of *“describe reasonable land use or development alternatives to the proposed operation”*;
 - b. Identification and description of *“alternative means of carrying out the proposed operation”*; and
 - c. Identification and description of *“the consequences of not proceeding with the proposed operation”*.
8. Only the second requirement has been addressed in the Draft Scoping Report (DSR), namely on page ii, as part of the Executive Summary, which describes alternative design alternatives for the mine.
9. The third requirement is addressed in a single line, namely *“The no-go alternative will also be considered, in which the status quo for the area will remain, viz. that of agriculture and livestock farming”* (DSR p. ii). Unfortunately it is not sufficient for compliance with Regulation 49(d) to defer this description to the environmental impact assessment – Regulation 49(d) specifically requires the consequences of not proceeding with the proposed operation to be identified and described in the Scoping Report.
10. Land-use of the affected area is well established, with the livelihood of many existing businesses and workers dependent on existing land-use, namely agriculture. It is particularly problematic that alternatives to the proposed mine, and the many positive consequences of not proceeding with the mine, are not identified and described as required by the Regulations. This means that the Department is not provided with all relevant facts to make a decision on this application. This non-compliance with Regulation 49 taints the remainder of the

DSR by ensuring inadequate and misleading representation of the facts applicable to the proposed mining area through omission of relevant information.

11. In addition, Regulation 46(a) requires the Social and Labour Plan (Appendix 7) to contain “*a preamble which provides background information of the mine in question*”. Appendix 7 contains no such preamble, and no information at all on the mine or the mining company itself, such as what other mines Bongani Minerals Pty Ltd owns. All that we do know about Bongani Minerals Pty Ltd from the Social and Labour Plan is its employment equity statistics, indicating that all 6 of its top management positions are held by whites.
12. It is therefore submitted that the DSR itself is non-compliant with both Regulations 46 and 49 and should be rejected on this basis alone.
13. It is further submitted that the procedure followed thus far has not provided interested and affected parties (I&APs), including the Verlorenvallei Coalition, with sufficient notice and time for meaningful consultation in accordance with Regulation 3 of the MPRDA Regulations. The reasons for this are as follows:
 - a. A notice was published in *Die Swartlander-Weslander* on 22 April 2009, a public holiday due to national and provincial elections scheduled for that day.
 - b. The notice in *Die SwartlanderWeslander* on 22 April 2009 and in *Die Burger* on 23 April 2009 gave no more than 7 calendar days’ notice of the public consultation meeting on 30 April 2009. This is despite the fact that a number of the I&APs on the provisional I&AP list (and see criticism of the compilation of this list in the comments submitted by Coalition member **Nick Taylor**) are clearly not resident in the Piketberg area. This is even more problematic because, at this stage, there was still an application for review of the Department of Minerals and Energy’s decision to grant a prospecting right over the affected properties to Bongani Minerals Pty Ltd. The authors of the DSR would have been well aware of this pending court application and the bitter opposition of members of the Verlorenvallei Coalition to the prospecting right.
 - c. In any event, the mining right application was accepted by the Department of Minerals and Energy on 26 March 2009. From this date, it took nearly a month to place the advertisements in *Die SwartlanderWeslander* and *Die Burger* on and 23 April 2009 respectively (the first being a public holiday), giving I&APs only 7 calendar days’ notice of the public consultation meeting on 30 April 2009. This last-minute notice was either given deliberately to prejudice I&APs, or more likely illustrates the lax approach of the applicant to public consultation and the views of I&APs.
 - d. Although the published notices themselves state that the DSR was available from Withers Environmental Consultants or in the Piketberg Library from 23 April 2009, many I&APs were not aware of the application or the DSR until a number of days later. Some I&APs received the report via a journalist at the *Cape Times* on 29 April 2009. The DSR comprises **[271HOW MANY]** pages.

e. On 20 May 2009, faced with the enormous task of reviewing the entire DSR plus all the specialist reports attached to the DSR within less than one month, at least two I&APs requested a week's extension to submit comments, forcing Coalition members to request a week's extension (which was granted).

14. See also other and more detailed procedural complaints in the comments of Coalition member **Nick Taylor**. Note, in particular, his complaint about inadequate I&AP registration facilities, audio-visual facilities and the manner in which the meeting on 30 April 2009 was conducted, including an inappropriate and racist reference to coloured delegates at the meeting as "die volk".

The Constitution

15. On page 2 of the DSR, it is alleged that "the proposed Open-Cast mining development strives towards upholding" Section 24 of the Constitution.

16. The DSR then proceeds to quote – inaccurately – Section 24 of the Constitution:

Section 24(b)(iii) as represented in DSR page 2	Accurate version of Section 24(b)(iii)
<p>"... every person shall have the right to the following: (a) An environment that is not harmful to their health nor well being; and (b) To have that environment protected for the benefit of present and future generations, through reasonable legislative and other measures, which:</p> <ul style="list-style-type: none"> • prevents pollution and ecological degradation; • promotes conservation; and • secures justifiable economic and social development and use of natural resources while promoting justifiable economic and social development." 	<p>"Everyone has the right - (a) to an environment that is not harmful to their health or well-being; and (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that - (i) prevent pollution and ecological degradation; (ii) promote conservation; and (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development."</p>

17. We will assume that this was a typographical error by the authors of the DSR. The difficulty is that it is a fundamental error. With respect, it is hard to imagine how a twenty-year open-cast mine will "*protect the environment for the benefit of present and future generations*". The DSR itself points out many potentially detrimental environmental impacts of the proposed mine, making it extremely unlikely (a) to constitute ecologically sustainable development and use of natural resources, and (b) to prevent pollution and ecological degradation.

The National Environmental Management Act

18. The DSR makes no mention of the environmental management principles contained in Section 2 of the National Environmental Management Act, 1998 (Act

107 of 1998) (NEMA). This is crucial, because the MPRDA explicitly makes itself subject to those principles in its Section 37(1)(b), and provides that the principles apply to all prospecting and mining operations, as the case may be, and any matter relating to such operation; and serve as guidelines for the interpretation, administration and implementation of the environmental requirements of the MPRDA.

19. These principles include the following:

- “(2) Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably.*
- (3) Development must be socially, environmentally and economically sustainable.*
- (4)(a) Sustainable development requires the consideration of all relevant factors including the following:*

 - (i) That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;*
 - (ii) that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;*
 - (iii) that the disturbance of landscapes and sites that constitute the nation’s cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;*
 - (iv) that waste is avoided, or where it cannot be altogether avoided, minimised and reused or recycled where possible and otherwise disposed of in a responsible manner;*
 - (v) that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;*
 - (vi) that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;*
 - (vii) that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and*
 - (viii) that negative impacts on the environment and on people’s environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.*

- (b) *Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.*
- (c) *Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.*
- (d) *Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human wellbeing must be pursued and special measures may be taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination.*
- (e) *Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle.*
- (f) *The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured.*
- (g) *Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognising all forms of knowledge, including traditional and ordinary knowledge.*
- (h) *Community wellbeing and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means.*
- (i) *The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment.*
- (j) *The right of workers to refuse work that is harmful to human health or the environment and to be informed of dangers must be respected and protected.*
- (k) *Decisions must be taken in an open and transparent manner, and access to information must be provided in accordance with the law.*
- (l) *There must be intergovernmental coordination and harmonisation of policies, legislation and actions relating to the environment.*

- (m) *Actual or potential conflicts of interest between organs of state should be resolved through conflict resolution procedures.*
- (n) *Global and international responsibilities relating to the environment must be discharged in the national interest.*
- (o) *The environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage.*
- (p) *The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment.*
- (q) *The vital role of women and youth in environmental management and development must be recognised and their full participation therein must be promoted.*
- (r) *Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure."*

20. On page 2 of the DSR, the suggestion appears to be that the application for an environmental authorisation in terms of Section 24 of NEMA in relation to activities listed in terms of R.386 and R.387 must be made to the Department of Mining. This is correct only insofar as it relates to "[r]econnaissance, exploration, production and mining as provided for in the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), as amended in respect of such permits and rights" (Activity 7). All other listed activities associated with the mining operation, such as road building (Activity 5) or dam building (Activity 6) will require an environmental authorisation from the Department of Environmental Affairs and Development Planning in the Western Cape.

21. As at the date hereof, the Coalition has not received formal notice of any such application.

The National Environmental Management: Biodiversity Act

22. On page 3 of the DSR, it is stated that "[i]t is not expected that the footprint of the proposed Open-Cast mine will impact on any nationally protected vegetation types."

23. Firstly, it is important to note that the actual "footprint" of the mine is stated to be 555 ha, which is the total "mine lease area" required for the pit area and all the structures and facilities associated with the mine, including waste dump, slimes dam and plant area (DSR page 4).

24. Secondly, members of the Coalition report sightings in the Verlorenvallei of a number of species listed on the Threatened and Protected Species lists issued under the National Environmental Management Biodiversity Act, 2004 (Act 10 of 2004), including:

- a. blue crane (*Anthropoides paradiseus*) (photograph available);
- b. leopard (*Panthera pardus*) (the presence of leopard in the Verlorenvallei area was also confirmed by a 1981 survey by Stuart (in CSIR Research Rep. 431.)
- c. Cape clawless otter (*Aonyx capensis*) (photograph available)
- d. whitefish (*Barbus andrewi*)
- e. Clanwilliam yellowfish (*Labeobarbus capensis*)
- f. Cape fox (*Vulpes chama*)
- g. four-toed elephant shrew (*Petrodromus tetradactylus*)
- h. pangolin (*Manis temminckii*)

25. For more information on the biodiversity status of the Verlorenvlei, see the comments submitted by Verlorenvallei Coalition member **WESSA (Philippa Huntly)**.

26. In addition, Appendix 4 to the Scoping Report makes repeated references to areas that have endangered statuses in terms of the IUCN's Red List of Threatened Species and the National Spatial Biodiversity Assessment (2004). For example:

- a. "All Swartland Shale Renosterveld areas are conservation priorities as they are "Critically endangered" nationally, but particularly important are the slopes around the northwest base of the Piketberg, which have produced a number of new species in the last few years." (page 10)
- b. "The Leipoldville Sand Fynbos vegetation type is classified as "Endangered" nationally primarily as a result of it being heavily targeted for agriculture..." (page 10)
- c. "The Cape Lowland Alluvial vegetation is classified nationally as being a "Critically endangered" vegetation type. Every effort should be made to restore as much as possible of the transformed areas potentially supporting it." (page 15)
- d. "The Verlorenvlei wetlands support an undescribed 3 m tall species of *Psoralea* that is endemic to the Sandveld, and is Red Data listed as Endangered" (page 17)

National Environmental Management: Air Quality Act

27. The DSR fails to record that the metallurgical plant will require an atmospheric emissions licence under the National Environmental Management: Air Quality Act,

2004 (Act 39 of 2004) (AQA). AQA also imposes other general legal obligations in relation to air quality, including emissions to air from mining and metals processing.

28. As at the date hereof, the Coalition has not received formal notice of any such application.

National Environmental Management: Waste Management Act

29. The DSR fails to record that both the mine and the metallurgical plant will require a waste management licence under the National Environmental Management: Waste Management Act, 2008 (Act 59 of 2008) (WMA). The WMA also imposes other general legal obligations in relation to waste generation and management.

30. As at the date hereof, the Coalition has not received formal notice of any such application.

Environment Conservation Act

31. The DSR lists the Environment Conservation Act, 1989 (Act 73 of 1989) as part of the legal framework applicable to the proposal, but fails to mention that this act has been repealed by the WMA, which comes into effect on 1 July 2009.

Land Use Planning Ordinance

32. On page 45 the DSR refers to a “temporary change in land use” from Agriculture Zone I to Industrial Zone II in terms of the Land Use Planning Ordinance, 1995 (Ordinance 15 of 1985) (LUPO) to operate the mine. Presumably this “temporary change” is in fact for the life of the mine, i.e. 18-19 years.

33. As at the date hereof, the Coalition has not received formal notice of any such application to the local authority.

Ramsar International Convention on Wetlands

34. The Convention on Wetlands of International Importance (commonly known as the Ramsar Convention) came into force on 21 January 1975 and provides a framework for the conservation and wise use of wetlands and their resources. There are presently 118 contracting parties (including South Africa, who became a member on 12 March 1975). The DSR, however, neglects to mention this international treaty under the section “Legal and Policy Framework”.

35. The obligations of the parties joining the Ramsar Convention are:

- a. to designate at least one wetland for inclusion in the List of Wetlands of International Importance (Ramsar List);
- b. to promote the wise use of all wetlands;
- c. to stem the loss of wetlands;
- d. to promote the training of personnel; and
- e. to promote the implementation of parties’ obligations under the Ramsar Convention.

36. The benefits of a Ramsar status for a wetland include:

- a. recognition at a national level and by the international community as being of significant value not only for the country, or the countries, where they are located, but for humanity,
- b. better protection by government, through high level political commitment to maintain the sites ecological character,
- c. increased opportunities for tourism,
- d. greater access to expertise and training opportunities,
- e. implementation of management plans which include wise use of resources, and development of monitoring programmes
- f. and lastly the profile of the wetland raised through its promotion as a focal point or flagship for demonstrating conservation, good management and wise use of wetlands in the region.

37. According to the Department of Environmental Affairs and Tourism:

“Wetlands are highly productive ecosystems that provide resources that are of economic and social importance. They provide significant benefits to humans in general because of the ecological functions they perform in the global ecosystem. People may benefit directly from wetlands products such as fish, rice, timber, fuelwood, reeds, and medicine or indirectly from their functions such as flood control, nutrient cycling, erosion control, storm protection and ground water recharge. The most important resource from wetlands is water that is needed for the survival of all kinds of life. Wetlands can also be utilised for recreational activities such as game viewing, hunting and fishing or just to be appreciated for their mere existence and scenic beauty.

Wetland loss is due to ignorance and misunderstanding of their role. Many wetland areas have been lost. Direct losses are due to their conversion to intensive agricultural, industrial and residential uses, while indirect losses are due to changes in their hydrological regime.” (www.deat.gov.za)

38. 1843 wetland sites across the world have been designated under Ramsar. The Verlorenvlei is one of only 19 Ramsar wetland sites in South Africa designated since 1975 (these are De Hoopvlei, Barberspan, de Mond State Forest, Blesbokspruit, Turtle beaches/Coral reefs of Tongaland, St Lucia System, Langebaan Lagoon, Wilderness Lake System, Verlorenvlei, Orange River Mouth Wetland, Kosi Bay System, Lake Sibiya, Natal Drakensberg Park, Ndumo Game Reserve, Seekoeivlei and Nylsvley Nature Reserve).

39. According to DEAT:

“Verlorenvlei (designated 28 June 1991) is one of the most important estuarine systems in the Western Cape and one of the largest natural wetlands along the West Coast. It is also one of the few coastal fresh water lakes in the country. The wetland is regarded as one of the 10 most important wetlands for wading birds in

the south-western Cape, being a particularly important feeding area for the white pelican and supporting a number of threatened bird species.” (www.deat.gov.za)

40. Against this background, the DSR itself points out the risks that the proposed mine poses to the Verlorenvlei Ramsar site, which clearly contradicts South Africa’s international law obligations:

“Possible impacts include the deterioration in surface and groundwater water quality resulting from mining activities, affecting the Krom Antonies Rivier and the ecologically sensitive Verlorenvlei.” (page 37)

41. We also refer to a comment submitted on behalf of Coalition member WESSA:

“The internationally recognised Ramsar Site of Verlorenvlei is fed by the Krom Antonies river. With over 50% of SA’s wetlands having already been lost it is crucial that the remaining wetland systems are protected. The important ecological functions provided by wetlands, such as flood attenuation, water storage and purification cannot be ignored in light of climate change and increasing stresses on our county’s precious freshwater resources. The Krom Antonies river would be severely and negatively affected should the above proposed mining application be approved and go ahead. This would in turn negatively affect Verlorenvlei. In cases where Ramsar Sites are not managed to an acceptable standard they become in danger of losing their Ramsar Status, which is serious, both in that it is indicative of environmental degradation and in that it reflects poorly at an international political level. South Africa, as signatories to the Ramsar Convention and as a member nation of the International Union for the Conservation of Nature (IUCN) has significant responsibilities in terms of the conservation and protection of its Ramsar sites. In our view, permitting mining in the catchment that feeds Verlorenvlei, will compromise those commitments.”

FINANCIAL, SOCIO-ECONOMIC AND LABOUR ISSUES

Overall financial impact

42. On page 34 of the DSR, it is stated that “[t]he Riviera Tungsten Project will provide an initial direct investment into the local Bergrivier economy of between R1,2 and R1,5 billion over the first five years of operations.”

43. No details are provided as to how these amounts are made up, so it is exceedingly difficult to assess the accuracy of this statement. For example, is it suggested that Bongani Minerals Pty Ltd will acquire all mining equipment within the Bergrivier Municipality? It is essential for meaningful public participation that the final Scoping Report provides detailed information on how these amounts are constituted.

44. In addition, because the DSR does not comply with Regulation 49(d) and does not identify and describe “the consequences of not proceedings with the proposed operation”, it also does not provide comparative figures so that the alleged direct investment by the mine can be compared to existing capital investment in the area.

45. Page ii of the DSR lists under “Opportunities” the following: “*Opportunities related to socio-economic benefits, both to the surrounding farming community, to the Government and local Municipality (taxes, foreign revenue, rates and taxes, increased buying power of increased population etc.)*”.
46. With regard to “*increased buying power of increased population*”, what is not addressed, of course, is the impact of decreased buying power of those farmers and farmworkers who will lose their livelihoods as a result of the mine. Clearly this is information that should be included in the assessment.
47. On page ii of the DSR, as another opportunity created the mine, “*profits of the mine owners*” are mentioned in passing. No indication of the amount of such profits is given for the purpose of comparing such profits to livelihoods that will be lost as a result of the mine, or other detrimental impacts.
48. On page 31 of the DSR, it is stated that “*A need exists to align the development needs/priorities of communities with the social investment objectives of the Riviera Tungsten Project that emanate from the Local Economic Development Programme.*” This approach is of great concern to the Verlorenvallei Coalition, and confirms our fears that the mine will destroy the livelihoods and wellbeing of the Verlorenvallei communities. Is it not perhaps the project that needs to align itself with development needs/priorities of the community?
49. On page 33-34 of the DSR, it is stated that “*Umcebisi Business Advisers (Pty) Ltd believes that agglomeration benefits associated with the Riviera Tungsten Project could be a catalyst for establishing linkages between businesses, growing existing businesses internally in the area and improving the social welfare of the community. These linkages would further enhance the potential of businesses to generate additional revenue and employment for communities within the region of the Project and in the Western Cape by exploiting the inter-regional affects between the regions.*”
50. To say that the Verlorenvallei community – which will be ripped apart by the mine as farmers shut down operations and retrench workers – will be more unified as a result of the mine is far-fetched.
51. On page 39 of the DSR, it is stated that “*[t]he potential positive impacts of the mine on the socio-economic environment of the region are seen to be HIGH. It should be noted that this impact will only be felt for the approximate 20 year lifespan of the mine. The recommendations of the study, applicable impacts and mitigation will be assessed during the EIA Phase of the project. Mitigation measures will be included into the EMP.*”
52. The Verlorenvallei Coalition strongly believes that the negative social and economic impacts of the mine (including the reduction in capital investment by local business as a result of the mining application) have not been properly identified and described, and insists that these are included in the expanded studies conducted under the EIA. Note in this regard the comment of Coalition member **Nick Taylor** in his written comments submitted: “*The impact has already been felt with farms currently on the market becoming unsaleable, worker morale low due to uncertainty, and a high volume of anger and resentment preoccupying many of the local community.*”

53. Even if these negative impacts have been taken into account, it is crucial to note that, while the negative impacts will last for generations, the alleged positive impacts are, by the DSR's own admission, short-term in nature.
54. For details on the immediate anticipated impact of the mining operation on the production and export operations of those farms, as well as on the value of affected properties, see the comments submitted by Verlorenvallei Coalition member **Kromvlei Kosie van Niekerk Boerdery Pty Ltd (H.J Horne)**.
55. We also specifically refer you to the comments submitted on behalf of Verlorenvallei Coalition member the **Moutonshoek Employees' Association (Johannes Erasmus)**:

“Daar is nagenoeg vyfhonderd permanente en duisend seisoenale werkers wat amper heel jaar werk kry in die Moutonshoek Vallei. Mense is opgelei in verskeie dissiplines van Landbou. Ons beklee ook poste vanaf die laagste vlak tot middel en top bestuur op die verskeie boerderye. Ons werk met vee, resiesperde, aartappels, grane, rooibostee en uitvoer vrugte (druie en sitrus). Met die oopgroef myn sal ons almal ons werk verloor. Ons het gekies om Landbouers te wees en om in vrede hier in die pragtige natuurskoon te woon. Dit sal arrogant wees om te aanvaar, dat ons sal wil meeding vir die handjiewol gespesialiseerde poste wat 'n oopgroef myn sal aanbied.

As die myn goedgekeur word gaan al die skoolkinders van die vallei daaronder lei. Die laerskool sal moet toemaak, want dit gaan 'n gesondheid risiko wees. Die meeste werkers in die vallei is vroue, waar gaan hulle werk kry dus hoekom ons nie kan toelaat dat die myn hier kom nie. Die gemeenskap is ongelukkig oor die koms van die myn, omdat hulle bly al vir 'n leeftyd in die vallei. Ons praat van 20 na 30 jaar indien langer. Alle voordele wat ons tans besit bv. water, elektrisiteit, gratis behuising en om elke dag 'n werk te hê gaan ons verloor. Wat gaan van die bejaarde mense word? Hulle het al die jare gratis verblyf gehad, waar gaan hulle nou heen. Baie van die mense het al verblyf reg in die vallei.”

Allegations of “current unemployment” and “current underdevelopment”

56. On page ii of the DSR, the following statement is made: *“There is a high level of unemployment in the Piketberg Magisterial District”*.
57. The Social and Labour Plan (Appendix 7, p.22) shows that there is only 6.16% unemployment within 20km of the proposed mine; this goes down to 4.45% within 60km of the proposed mine and up to 5.19% for the entire Bergriver Municipality. Not by any stretch of the imagination can this be described as “high unemployment”.
58. On page ii of the DSR, the following statement is made: *“There is a high level of underdevelopment in the Piketberg Magisterial District”*.
59. However, the Social and Labour Plan (Appendix 7, p. 25) indicates that:

- a. the Bergriver economy makes a significant contribution to government income (6,14% of the turnover generated by levy-paying firms in the West Coast District in 2005-6); and
- b. the Bergriver economy grew at a rate of 10,33% from 2004-6, in contrast with the rest of the West Coast District (decline of 5.03%) - that is significantly more than the national economy.

60. In addition, farmers and other enterprises operational in the Moutonshoek area regularly complain of the lack of workers, skilled and unskilled. See, for example, an extract from a telefax from Alpha Civils dated 30 April 2009 (contact Fanie du Toit, Alpha Civils, 082 773 3242) who has been engaged to repair a bridge in the Moutonshoek area:

Figure 3: Extract from telefax from Alpha Civils dated 30 April 2009

1.1) Moutonshoek site:

On 25 February 2009 we contacted the liaison officer, Mr. Philip Daniels of the Roads Infrastructure Branch in Ceres. With his input and the help of a person only known as Elizabeth, we arranged for 10 labourers from the Redelinghuys area to start on 26 February 2009. On 26 February 2009 only two of the labourers reported for work. From 12 March 2009, none of labourers from the Redelinghuys area ever reported for work again.

On 27 February 2009 we arranged for 8 labourers from the Eendekuil area, with the help of Mr. Daniels and a person known as Christo. They could only find 4 to start on 02 March 2009, but none of the labourers reported for work. On the 2nd and 3rd of March, two labourers from the Redelinghuys-area turned up for work. On the 4th of March, 4 labourers were present.

On 7 March, we recruited and transported at our own cost six labourers from the Citrusdal area, some 40km from the site.

Despite firm commitments from the recruited labourers, very few are dependable and arrive on site for work as agreed. From the 2nd of March, we have had between 0 and 10 unskilled labourers on the site. Due to the lack of skilled labourers and the haphazard availability of unskilled labour, we have been forced to source our own labour from Worcester. This incurs additional cost to our Company as any non-local labour has to be provided with lodging.

...

The majority of labour from this area mostly employed on farms and do not seem physically capable of performing heavy manual labour to the required standard.

There is also a further cost implication as each new labourer needs to undergo an induction training course. With the staff turnover as it is currently, a lot of time and money is unnecessarily being spent on this training. We have also found that as soon as a skill has been transferred, the labourer deserts and we are left having to train another one to take his place.

From the above it is clear that we have taken all possible steps to employ local labour from the target area to meet the requirements without much success.

Employment to be created by the mine

61. On page 32-33 of the DSR, it is stated that the estimate of the employment required to establish the Tungsten Mine and erect associated facilities is approximately 320. This is misleading, since:

- a. "note once again that these jobs are of a temporary nature and will slowly fall away once construction of the infrastructure and superstructure components are completed" (Appendix 7, p.29); and
- b. even in its own estimates, the DSR (p.33) relies on no more than 20% use of local labour. 20% of the anticipated 320 jobs created during the construction phase amounts to only 64 jobs.

62. Similarly, the estimate of 407 "direct new jobs" created by the mine in its operations phase should be assessed in view of the Social and Labour Plan's own assumption of a 20% take-up of local labour. This brings the figure of 407 down to just over 81 new jobs that will likely be offered to local workers.

63. No mention is made in the DSR of research conducted or to be conducted as part of the EIA on unemployment that will be caused by the mine. Any EIA that does not include research on actual current employment that will be affected by the mine will be fatally flawed. For interest, the Verlorenvallei Coalition estimates that at least 500 people are permanently employed on the farms that will be destroyed by the mine, and the jobs of at least 1000 seasonal workers will be lost as a result of the mine. Many of these workers are women who are unlikely to be employed by the mine.

Training, skills development and the forced closure of a school

64. On page 30 of the DSR, many broad undertakings are given regarding skills development by the mine.

65. What is not mentioned, again because of the DSR's non-compliance with Regulation 49(d), is existing training and skills development programmes in the valley.

66. For example, the farm Namaquasfontein provided the following training to

workers from 1997 to 2008:

Figure 1: Training for Namaquasfontein workers 1997-2008

Boskop opleiding	Vragmotor instandhouding (Steven)	13.11.1997
Voluit Vrou	Kaapse vroue forum (Alle vroue)	Mei .2003
Tafeldruif kort kursus	Goudini SAWVV (Boon)	2003 elke jaar
Home Based care	Vroue forum (Voorvrou)	2004 en 2005
ABET Kursus	Wes kaap - Dept van onderwys	03.02.2004
Veilige hant. V Plaagdoders	Praktika (Frans April Colin)	2003 elke jaar
Trekker operateurs	Praktika (Frans April Colin)	2003 elke jaar
Noodhulp	First Aid Academy CTN (Frans,Wilma)	03.08.2006
Brandbestryding	Concordia Forest Indust. (Abraham)	01.12.2006
Arbeidswetgewing	Hopkins Calvert (Deb)	08.10.2007
Vigs opleiding en bewus	DPFT / SPT (Almal)	Mei en Sep 2007
Gesondheid en Veiligheid	Hopkins Calvert (Sophia en Magdalene)	03.07.2008
Boordmonitering	Terason (Boet en Lökkies)	15.09.2008
Sektorale vasstelling	Praktika (Almal)	03.06.2008
Vurkhyser opleiding	Piet Wessels Opl. (Steven en Frans)	20.06.2008
Sedex Opleiding	Praktika (Deb)	11.08.2008
Ethical Trading	Acert (Deb)	27.1.2009
Natures Choice Audit	PPECB / CMI	Elke jaar
Global gap Audit	PPECB / CMI	Elke jaar
Stud Managers Course	Onderspoort Pretoria	Julie 2006

67. The farm Kromvlei provided the following training to workers from 2002 to 2009:

Figure 2: Training for Kromvlei workers 2002-2009

Naam van Kursus	Opleiding Instansie	Hoeveel het bygewoon
Bestuurslisensie	Zebra Bestuurskool	1
Volwasse Onderrig	Piketberg Community Learning Center	11
Veilige Hantering van Landbou Chemikalieë	Praktika	5
Neem Leiding in Werksplek	Praktika	9
Berekeninge in Werksplek	Praktika	8
Bestem om te bestuur	Praktika	3
Rek jou Rande	Praktika	33
Vigspraatjie	Praktika	53
Veilige Hantering van Landbou Chemikalieë	Praktika	5
Volwasse Man	Praktika	18
Voluit Vrou	Praktika	12
Neem Leiding in Werksplek	Praktika	1

People's Profit	Kaapse Vroue Vorum	9
Wingerdmontering	Viking	5
New Holland Trekker Opleiding	Kosie Van Niekerk Boerdery - Werkswinkel	5
Basic Fire Training	Boland Fire Engineering	2
Higiëne en Risiko Analise	Kromvlei	53
Gesondheid en Veiligheid Kursus	Annie Tattersall Consultancy	2
Veilige Hantering van Druwe	Kromvlei Pakstoor	200
Noodhulp Opleiding	Praktika / Techilaw	2
Spanbestuurder Riglyne	Kromvlei	15
Higiëne en Risiko Analise	Kromvlei	53
Neem Leiding in Werksplek	Praktika	11
Bestem om te bestuur	Praktika	3
Spanbou Sessie	Eli	36
Arbeidswetgewing	Eli	4
Selfbestuur	Eli	36
Arbeidswetgewing	Eli	11
Spanbou - Adminpersoneel	Eli	1
Konflikhantering	Praktika	3
Higiëne en Risiko Analise	Kromvlei	53
Vurkhyser Opleiding	Praktika	1
Vurkhyser Opleiding	PW Training	1
Beroeps gesondheid en Veiligheid	Kaapse Vroue Vorum	2
Beroeps gesondheid en Veiligheid	Praktika	2
Ons Huwelik	Praktika	10
Vurkhyser Opleiding	PW Training	2
Aksie Forum Opleiding	Eli	2
Alkohol Rehabilitasie	Toevlug Sentrum - Worcester	3
Bestuurslisensie	Zebra Bestuurskool	1
Bestuurslisensie	Zebra Bestuurskool	1
Bestuurslisensie	Zebra Bestuurskool	1
Hoe dissipliner ek my kind	Praktika	30
Trekker Operateur	Praktika	5
Verhoudinge	Praktika	38
Global Gap en Nature Choice	CMI - Ceres	1
Free to Grow - Money Sense	Hopkins Calvert	22
Free to Grow - Life Skills	Hopkins Calvert	31

[IS THERE ANY OTHER TRAINING? WHO PRESENTS THE ADULT EDUCATION AT THE KAROOKOP SCHOOL? WHAT DOES IT ENTAIL? HOW MANY PEOPLE ATTEND?][See my comments BV](#)

68. In addition, and again because of non-compliance with Regulation 49(d), no mention is made of fact that the mine will force the closure the Karookop Primary School. This school, built in 1964 by local farmer Nikkie Smit, currently houses 87 children from the valley, with another 30 joining the school in 2010 when the

nearby school at Kliphoek closes. Karookop Primary School's teachers are highly regarded by the Department of Education and have received numerous awards, including second best primary school principal. The principal, Mr Henk Brand, can be contacted on admin@karookopps.wcape.school.za.

69. The school also houses a computer centre with 10 computers where adults also receive training. All other adult education in the valley is presented at this school.

70. If the proposed mine proceeds as planned by Bongani Minerals Pty Ltd, Karookop Primary School will be situated a few hundred metres from the mining site, and clearly children cannot be allowed to go to school at such an unsafe site. All 117 children will have to relocate to schools in Eendekuil or Piketberg, with concomitant transport problems created for the parents of these children.

71. We draw your attention to the following statement submitted by the owner of **Karookop Farm, Jacobus Smit** (another member of the Verlorenvallei Coalition):

“Ek maak beswaar teen die myn aangesien die Karookop SKOOL op my grond is en ook my eiendom is. Die dept. van Vervoer en Openbare Werke huur die perseel en geboue van my. My verantwoordelikheid is om te verseker dat die geboue sowel as die perseel te alle tye vir die kinders (al die vallei se kinders, voorskools, graad R en tot met graad 7 word daar gehuisves) veilig sal wees. Ek voorsien ook water aan die SKOOL.

Sou daar asgevolg van 'n myn 'n situasie ontstaan waar die kinders se gesondheid en veiligheid bedreig word waar laat dit my as die verantwoordelike persoon. Die beoogde verwerkings aanleg sal reg langs die skool wees en boonop soos die myn aan die wind op kant van die skool wees. Geraas- en stofbesoedeling sal 'n aaklige werklikheid wees.”

...

“Die kinders, ouers en onderwysers is bekommerd aangesien hierdie “Plaaskinders” weg raak in die dorpe se skole. Hulle pas baie moeilik aan want die onderwysers by Karookop se Skool is lief vir kinders en onderwys is hul roeping. Die Skoolomgewing buite hierdie vallei is totaal vreemd vir ons kinders. Ouers wat na ander plase beweeg stuur baie gou hul kinders trug na Karookopprimer want hul kinders kry nie die warmte en liefde in ander skole.”

72. No EIA will be complete without a full investigation into the provision of primary education to the children of the valley with and without the mine, in accordance with Regulation 49(d).

Vulnerable people

73. The DSR makes no reference to the existence of vulnerable people (the aged, ill and disabled people), also as result of an inadequate assessment of the status quo in the area (and as a result of non-compliance with Regulation 49(d).

Livelihoods and those who will be unemployed

74. The DSR does not in any way put forward a plan or propose further research into the following issues:

- a. What financial support will be provided to workers who will have to be retrenched by the farms destroyed by the mine?
- b. What support will be provided to the spouses of workers who will have to be retrenched? Many of these are women who work on the farm as well.
- c. Are there any plans to replace current social and welfare support for workers in the area (currently provided by the farms)?

Loss of agricultural land

75. The Verlorenvallei is a highly arable area that contributes significantly to the Western Cape's agricultural output. Products include grapes (Export and wine), citrus, potatoes, rooibos, buchu, lavender [**WHAT ELSE? Beef cattle, sheep racehorses. Wheat lucerne teff and oats GIVE US A FULL LIST**]. Despite this, the DSR contains no assessment of current agricultural production by the affected area (again, because of non-compliance with Regulation 49(d)).

76. Particularly in view of the threats posed by climate change and the current global financial crisis, the need to secure reliable local sources of food is becoming imperative. Significant productive capacity will be lost as a result of the mine, and the remaining capacity is likely to be significantly affected by the mine.

77. **[ANYTHING TO QUOTE FROM AGRI WK?]** You should have their comments

THE MINING PROCESS

78. On page 9-12 of the DSR is a brief description of the physical mining and metals processing proposed by Bongani Minerals Pty Ltd. From this we know that Bongani Minerals proposes:

- a. a open-pit mine with a depth of 200m;
- b. a metals processing plant with two operations involving hazardous chemicals (the exact chemical process has apparently not been decided);
- c. mining and processing ± 348,385 tonnes of ore in Year 2, and thereafter ± 700,000 tonnes per annum for 18-19 years.

79. However, the DSR also states that "*little information is available*" regarding the chemical processes. One has to wonder at the planning of a major mining operation based on "little information". In addition, the DSR itself points out that "[d]etails of the chemical and physical processes that are part of the proposed mining operation are required so that their potential impacts on downstream and adjacent aquatic ecosystems can be elucidated" (page iii). He does not know the water requirement, the labour breakdown nor can he disclose the Metallurgic Report or the Venmyn rand Study end Mine plan but he quotes for a magazine the EXACT mining cost @ R82/ton????

80. Other information not provided includes:

- a. estimates of the amount of water to be consumed in both the mining and metals processing;
- b. estimates of the volume of residual ore to be stored in tailings dams on the site;
- c. estimates of the volume of waste water to be produced in both the mining and metals processing, the composition and quality of such waste water and treatment proposed for such waste water;
- d. estimates of the volume of dust containing tungsten and molybdenum that will be generated by the mining process;
- e. estimates of the volume of pyrite present in the ore. Already the exposure of pyrite to water in mines all over South Africa has led to the urgent and large-scale problems caused by acid mine drainage; yet no mention is made in the DSR of the possibility that the Riviera mine could cause similar problems;
- f. a comprehensive Process Flow Diagram showing inputs, outputs, byproducts and wastes (to land, water and air). It is inconceivable that Bongani Minerals Pty Ltd has not yet developed a process flow – why is this missing from the DSR?
- g. whether Bongani Minerals Pty Ltd intends mining in the void only (starter pit area and final pit area), or the whole area demarcated as mine area?
- h. **ANYTHING ELSE REGARDING THE MINING PROCESS?** ref just above the 3 additional bits of info asked for with no result

WATER AND ENVIRONMENTAL ISSUES

General concerns

81. The potential impact of the mine on water resources – groundwater, surface water and coastal waters – is of extreme concern to the Verlorenvallei Coalition. As is apparent from the specialist reports, the water emanating from the Krom Antonies River catchment area is of a high quality (see, for example, the DSR p. 25). However, this catchment is also water-stressed.
82. See, for example, the following statements by Verlorenvallei Coalition member WESSA in their initial comments to the Department of Minerals and Energy dated 16 April 2009:

“We question the use of water for mining activities in an area that is already known to be extremely water stressed. We are in the process of calling for comment from the Department of Water Affairs and Forestry on current and future availability of water in the area and call for reference to the concept of the ecological reserve as upheld in the National Water Act.

In addition to the issues raised above with respect to Verlorenvlei we are concerned about potential pollution from mining activities to the Krom Antonies river, a system that is relatively pristine when compared to other catchments in the area.”
83. The Coalition’s concerns are supported by the specialist reports attached to the DSR, which itself lists as a constraint to the project “groundwater use and

contamination in and around the open-pit mine (the mining of the mineral resource could cause pollution not only of surface water resources but also groundwater resources)" (page iii). On page 37 of the DSR, it also states that "[p]ossible impacts include the deterioration in surface and groundwater water quality resulting from mining activities, affecting the Krom Antonies Rivier and the ecologically sensitive Verlorenvlei. The impacts on the surface and groundwater water quality could potentially be HIGH to VERY HIGH."

84. We refer you to the detailed comments on the issue of water impacts submitted separately by the following Coalition members:

- a. **Odette Curtis** (MSc), Renosterveld Management Project, CapeNature & TMF-WWF, Board Member, Breede-Overberg CMA;
- b. **Unifrutti Matroozefontein** (Simon Baty);
- c. **Kromantonies Water Users' Association** (Jacobus Smit);
- d. **WESSA** (Philippa Huntly);
- e. **Verlorenvlei Fragrant Products CC**;
- f. **Kromvlei Kosie van Niekerk Boerdery Pty Ltd**;
- g. **DID I MISS OUT ON SOMEONE'S COMMENTS?! SOMEONE WHO COMMENTED IN SPECIFIC DETAIL ON WATER ISSUES? Bennie AQUIFERS NB the major Geographic Fault under the KAR potential source of masses of water that can easily be polluted**

Risks of water pollution by the mine

85. Surface water flows in the Verlorenvlei catchment tend to be primarily limited to event-driven, short-duration episodes,¹ and groundwater plays a strong role in maintaining the Kruis River/Verlorenvlei river system. Malan and Day note that extensive lengths of the rivers in this arid area are characterised by hyporheic (i.e. subsurface) flow from a multitude of intersecting groundwater outflows (springs and seeps). This alludes to the importance of the ground water flows.²

86. Extensive dewatering of the excavated pit would be required through the mining operation, with water stemming from both the primary (surface) aquifer and from faults running through the underlying rock layers (Appendix 5, p. 20). This suggests that the pit will intercept, and attract, water from the aquifers.

87. Dr L Day (Appendix 5, p. 23) suggests that sealants or linings to be used to prevent inflows into the pit, or that cut-off trenches are used to divert groundwater flows into existing stream systems – this is not, in our view, practical nor

¹ Department of Water Affairs and Forestry (DWAf) 2003. Sandveld Preliminary (Rapid) Reserve Determinations: Langvlei, Jakkals and Verlorenvlei Rivers, Olifants-Doorn WMA G30. DWAf Project no. 2002-27. Prepared by GEOSS for the Department of Water Affairs and Forestry, Pretoria

² Malan, H. and Day, J.A. 2005. Assessment of trophic status in aquatic resources with particular reference to the water quality reserve. WRC Report No 1311/2/05.

possible. Neither are cut-off drains, in our opinion, feasible. Whilst cut off drains may in places be able to intercept the surface alluvial aquifer, it could not do so for the deeper confined or semi-confined aquifer(s).

88. The SRK report (Appendix 6) investigates the hydrogeology of the area, focusing on groundwater usage and inputs. They refer to the two-aquifer system. It seems clear that the presence of the pit, in the middle of the main recharge area for the groundwater for the valley, also the area with the highest rainfall, will attract all water to it. They talk about dewatering and reintroducing this pumped the water into the system. This is presumably after the water has been in contact with what could be heavy minerals which may exist in the hole and the nitrogen residues from the blasting operation. SRK suggests that the secondary aquifer is expected to extend to well below the orebody.
89. The DSR quotes in bold from Appendix 6 that, *“if prevented, contained and managed by good housekeeping and design, the ground water contamination risk is deemed low”* (page 28). This refers only to *“accidental chemical and/or fuel spillages where the site is underlain by a layer of less permeable compacted clay or sandy clay.”* This does not apply everywhere, and certainly not to the pit.
90. The DSR (page 29) states that *“[f]acilities which pose a contamination risk to the groundwater should be located as far as possible from highly transmissive fault structures to minimize the risk of contaminant propagation along these zones.”* The SRK report (Appendix 6, page 15) states that *“the granite pluton is terminated on its western periphery by a major fault system, the Krom Antonies Fault, which has a possible downthrow of ~450m to the west (Rozendaal et al, 1994). Drilling has indicated that a fault also occurs on the eastern boundary of the pluton, although it shows hardly any displacement of the orebody.”* The DSR also recommends that all rock and earth dump areas and slimes dams must be kept well away from the 1:100 year flood levels of rivers and streams, and that all water used in the mining and processing operation must be recycled and must be stored in water tight reservoirs to prevent any pollution of groundwater or surface water.
91. It is therefore both puzzling and alarming that, on the current Site Plan (Figure 7 in the DSR), both the spoil dump and the slimes dam are situated right next to the Krom Antonies River.

Impact of polluted groundwater

92. Should groundwater be polluted by the mine, it would have catastrophic consequences for those who rely on groundwater for both drinking water and irrigation (a substantial amount of irrigation in the Verlorenvallei is supplied by groundwater):
- a. Water supplied by the Redelinghuys Municipality derives from an artesian well in a valley above Matroozefontein just outside Redelinghuys at a rate of 31 liters/second (977,616 m³/annum). This presumably emanates from the semi-confined aquifer through which the pit will be excavated. Any changes to the quality and availability of the water from the fountain will

have serious health, welfare and development implications for the town.

- b. Verlorenvallei Coalition member **Kromvlei Kosie van Niekerk Boerdery Pty Ltd** states the following about impacts of polluted groundwater and explosives on groundwater resources:

“Op grond van inligting wat ons ontvang het van Whithers Environmental Consultants is dit duidelik dat die beoogde mynaktiwiteite katastrofiese gevolge mag inhou vir die plaas en sy bestaande boerdery bedrywighede. Ons boorgate op die plaas wat die primêre waterbronne is van besproeiing is ongeveer 90 meter diep en lewer so in die ordegrootte van 80 kubieke meter water per uur. Uit die Whithers verslag is dit duidelik dat die beoogde myn tot op 'n diepte van 200 meter gemyn gaan word. Dit is dus logies om die afleiding te maak dat die beoogde myn katastrofiese gevolge op die ondergrondse watervlakke gaan veroorsaak en dit die voortbestaan van die plaas en sy waterbronne bedreig.

Aangesien die myn plofstof gaan gebruik in sy aktiwiteite is dit logies om die afleiding te maak dit verskuiwing in die ondergrond uiters negatief en selfs katastrofies kan impakteer op die ondergrondse water bronne.”

- c. Coalition member **Unifrutti Matroozefontein** points out the following about impacts of polluted groundwater on its operations:

“Matroozefontein is situated 28.5 km's from the proposed mine site as the crow flies.

The Moutons Hoek valley is an important catchment area for the Veloren Vlei and for replenishing underground water in the Sandveld. This is the best quality water source for the Veloren Vlei and replenishing underground water. The other catchment areas provide water that is high in salts.

Matroozefontein obtains its water from 15 boreholes on the farm.

Matroozefontein has a permit to withdraw more than 2 million cubic meters of water/annum. Unifrutti has spent a considerable sum of money investigating the long term sustainable yield and quality of the water from the boreholes on the farm before it purchased the farm in 2004. The tests were done by De Villiers Visser Besproeiing and analyzed by SRK consulting (Compiled by A.C. Woodford). This was for the purpose of future citrus and table grape plantings on the farm. Any negative impact to the water resources on the farm will jeopardize the current and future developments on Matroozefontein. This will have negative implications on the long term profitability of the farm and negatively impact on employment in the area. Matroozefontein employs a large number of seasonal and permanent people (in excess of 250 people).

Currently Matroozefontein is monitoring its boreholes (levels and water quality) on a monthly basis. It is also using electronic divers to check the

long term levels of the underground water.”

93. Two other water pollution issues are not mentioned or discussed in the DSR at all.

- a. The first is the potential radioactivity of tungsten and molybdenum are heavy metals. If this is correct, what impact does this have on materials discarded into stockpiles or tailings dams, or contaminated water re-entering the system?
- b. The potential presence of bismuth in the ore, commonly associated with tungsten and molybdenum, particularly in the Northern Cape towards Namibia. Bismuth is both toxic and slightly radioactive. The Coalition would like information on whether this metal occurs in the affected mining area.

Surface water salinity

94. On page 17-18, the DSR states that *“[s]alinity in the three key rivers appeared to be quite different. Salinity, measured as electrical conductivity and total dissolved solids, in the Hol River and Kruismans Rivers was about 4.5 and 5.5 times higher respectively than in the Krom Antonies River. This indicated that the Hol and Kruismans Rivers were more saline than the Krom Antonies River. Salinity in the Krom Antonies River also changed in a downstream direction. In the upper reaches of the river near Moutonshoek, the TDS concentration was 70 mg/l and just before the confluence it was 294 mg/l, a four-fold increase in salinity. ... The elevated salinity in the Hol and Kruismans Rivers is probably due to the underlying geology (Malmesbury shales) of the region and due to the effects of irrigation return flows. The increase in salinity along the length of the Krom Antonies River is also possibly the result of irrigation return flow. ... Despite this, the water quality of the Krom Antonies River would be classified as “ideal” for irrigation purposes and in the Hol and Kruismans River it would be classified as “acceptable” for irrigation purposes.”*

95. And on page 18: *“JN Roussouw surmised that the Krom Antonies River is probably the river that controls the salinity in Verlorenvlei by diluting the salts brought in by the Hol and the Kruismans Rivers. “*

96. The Coalition would like to clarify any suggestion that current irrigation is affecting the salinity in the Krom Antonies River. Irrigation backflow would not add to the salinity, but would add nitrates; yet the DSR reports that nitrate levels were insignificant. The salinity lower down in the river is due to the salinity of the soils that the river flows through.

River diversion

97. On page iii of the DSR, the risks of diversion “of even minor tributaries of the Krom Antonies River, resulting in increased downstream velocities, loss of ecosystem processes that are considered beneficial in terms of water quality amelioration or management of sedimentation and/or erosion” are listed as a “constraint”. On page 36 of the DSR, the following is stated: *“Mining activities may*

also have HIGH impacts on riparian vegetation should the course of the Krom Antonies River or its smaller tributaries be changed.”

98. Despite this, on page ii of the DSR, “whether to construct a river diversion for the opencast mining operations” is listed as a design alternative being considered by Bongani Minerals Pty Ltd and their appointed consulting engineers.

Current water use and impacts on water quality

99. Again, as a result of the non-compliance with Regulation 49(d), no effort was made in the DSR to describe current water use in the affected area in any detail. Such information is available, inter alia, from the Kromantonies Water Users’ Association (KWUA), a registered water users’ association under the National Water Act, 1998. The KWUA chair, Jacobus Smit, provides the following information:

“Alle gebruike tans is of huishoudelik of landbou. Die toepassing van die vereniging se verantwoordelike is bloot 'n gegewe en 'n voorreg. Die rede: Die huidige gebruikers is die KAWGV. Alle inwoners word op die vereniging verteenwoordig en almal het dieselfde doelwitte nl. om die HULPBRON OPTIMAAL TE BESTUUR. Daar is dus geen botsende belange en verantwoordelike gebruik is die norm.

Wat landbou se gebruike betref die volgende. Dit is na my mening die enigste Watergebruikersvereniging in SA, waar alle landbougebruike met behulp van 'n Neutron vogmeter geskeduleer word. Die inligting wat op hierdie wyse bekom word stel die KAWGV om nie net akkurate onttrekkings syfers te verskaf maar ook om te kan sien wat word van die water nadat dit besproei is. Dit het nie net optimale besproeiing tot gevolg maar is die enigste metode om loging sinvol te voorkom.

Mnr. Withers se gevolgtrekking dat daar wel loging in die Krom Antonies plaasvind is onwaar en sal in die toekoms as gevolg van bogenoemde nooit hoef plaas te vind nie. Wat die onwaarheid betref net die volgende. Die mms lesing wat toeneem, tot met die samevloeiing, is 'n natuurlike proses asgevolg van die water se natuurlike roete deur Skallie gronde aan die Oostekant van die vallei. Dit kan gesien word in die feit dat die verhoogde mms asgevolg van Chloriede is en nie Nitrate. Nitrate is die eerste aanduiding van loging deur Landbou praktyke. Volgens mnr. Withers se eie verslag was die nitrate so laag dat die ontleding dit nie eens kon optel nie.”

100. The statement on nitrates referred to by Smit above appears at page 15 of the DSR: “*Nutrient concentrations – The phosphate concentrations (total and ortho-P), nitrate/nitrite nitrogen, and ammonia nitrogen concentrations were below the detection limits of the CSIR laboratory. Nutrient enrichment does not appear to be a serious concern in the system.*”

101. The DSR (page 15) also records that “Most... trace metals were below the detection limits of the CSIR laboratory and for those that measured greater than the detection limit, the concentrations were well within the guideline values for

irrigation and domestic water supply use”.

102. It is therefore apparent that the impact of current water use – primarily for irrigation for agriculture - on water quality is negligible.

Vegetation

103. On page 36 of the DSR, it is stated that “[i]mpacts on vegetation and fauna within the boundaries of the site identified for the potential Riviera Tungsten Open-Cast Mining Project are likely to be LOW due to the fact that, with the exception of suitable habitat along the Krom Antonies River, the area has nearly been totally disturbed by farming activities and thus supports an extremely low floral biodiversity and limited breeding habitats.”

104. As mentioned above, however, a number of vegetation types are listed as threatened and endangered - a fact that is confirmed by Bongani Minerals Pty Ltd’s own specialist (see Appendix 4).

Alien and invasive species

105. On page ii of the DSR, “the opportunity to clear alien vegetation and rehabilitate stretches of the Krom Antonies River and river valley river course modification being a recipe which encourages the dominance by alien invader species and dramatic movement of large volumes of sand during floods” was listed as an “opportunity” to be created by the mine.

106. However, had there been compliance with Regulation 49(d) and the DSR had properly identified current land use, the DSR would have reported the extensive measures taken by landowners in the Verlorenvallei since 2005 to address the problems of alien and invasive species. The following information is provided by Jacobus Smit in this capacity as chair of the **Kromantonies Water Users’ Association**: [Also the Biological control that started 14 years ago](#)

“Ons het gedurende 2000 besluit om iets te doen aan die probleem van Bloekoms en Port Jacson in die rivier. Die rivier was toegegroeï van hierdie indringers wat ’n groot negatiewe effek op die vloei sowel as hoeveelheid water gehad het. Dit het ook die natuurlikke plantegroei verdring en gelei tot erosie van die oewer.

Verskeie amptenare van DWAF en ander kundiges het verstommende gegewens gegee oor die hoeveelheid water wat asgevolg van die indringers verlore gaan. Om fondse en kundigheid te bekom om die probleem aan te spreek het vyf jaar geneem. Gelukkig het Hannes Pienaar van dept. Landbou op Moorreesburg die omvang en erns van die probleem besef en het dept. Landbou dit as ’n Landcare projek aanvaar.

Ons kon uiteindelik in Mei 2005 begin om die indringers te verwyder. Landbou het geld vir arbeid gegee en die grondeienaars het die res verskaf wat die volgende behels.

- 1. Alle logistiek omtrent die werk, soos vervoer van werkers.*
- 2. Alle toerusting.*

3. Alle chemiese middels. Hierdie middels is streng gekeur en word slegs onder toesig gebruik.

4. Opleiding van werkers asook noodhulp opleiding van sekere spanlede.

Aangesien werkloos gebruik is waar moontlik, is daar 'n groot omset van personeel wat volgehoue opleiding vereis. Dit het egter tot gevolg dat alle werkloos in die omgewing nou gekwalifiseerde boom verwyderaars is. Baie van die permanente arbeiders het ook al gedurende hul vakansies gehelp en so hulself beter bekwaam.

Gedurende die eerste somer nadat met die projek begin is het die gebied 21 mm reën vanaf November tot Maart gehad. Daar het toe 221 mm reën in die winter geval voordat die rivier by Vrede ('n plaas teen die rivier) begin loop het. Dieselfde hoeveelheid reën het in die volgende somer gedurende die somer maande geval. Slegs 65 mm reën het toe geval voordat die rivier by Vrede begin loop het.

Die afgelope somer het die rivier nooit gaan staan tot waar dit die Verlorevlei binne gevloei het nie. Niemand kan onthou wanneer laas dit gebeur het nie. Dit was weliswaar die natste winter wat ons gehad het sedert daar met metings begin is, maar die verwydering van die indringers het 'n deurslaggewende bydrae gemaak.

Al hierdie werk is nie gedoen omdat iemand dit van ons verwag het nie, maar was bloot hierdie gemeenskap se bydrae om ons verantwoordelikheid teenoor die hulpbron na te kom."

Avifauna, invertebrate, mammal and fish species

107. The DSR, on page 21, contains a long list of avifauna, invertebrate, mammal and fish species found to occur in the affected area. Paragraph 24 above also lists a number of nationally listed threatened, endangered and protected species that have been sighted in the Verlorenvallei area.

108. However, the DSR then proceeds to state that "*ijt may however be reasonably surmised that the number and diversity of animals breeding on the properties making up the site would be minimal. This may be attributed to the fact that, with the exception of suitable habitat along the Krom Antonies River, the area has been totally disturbed by farming activities and thus supports an extremely low floral biodiversity and limited breeding habitats.*"

109. ANY OTHER COMMENTS ABOUT FAUNA? SOMETHING FROM BIRDLIFE? Their report is in

Freshwater ecosystems

110. On page 21 of the DSR, it is stated that "*Dr. Day found the **Krom Antonies River to be of potentially high importance** in terms of the ecological health or integrity of the downstream Verlorevlei system and that water quality, including sediment, nutrient and dissolved solid loads and concentrations could all have implications for the downstream system. Dr. Day however also highlighted that in*

its own right the Krom Antonies River is also a system that could potentially be of high conservation importance. The extent to which indigenous fish occur within the river is not yet known, and neither is the extent to which alien fish populations in the system may be having an impact on both indigenous fish and macroinvertebrate populations.”

111. As mentioned in paragraph 24 above, Coalition members report sightings of two nationally listed species in the Krom Antonies, namely whitefish (*Barbus andrewi*) and Clanwilliam yellowfish (*Labeobarbus capensis*). The Verlorenvlei Redfin occurs only in a very small area inside the valley. and nowhere else on earth
112. Dr Day’s opinion on the potential impacts of the proposed mine on freshwater ecosystems are listed on page 36-7 of the DSR, summarised to be potentially “*high to very high*”. She then proceeds to list some proposed mitigation measures to be included into the Environmental Management Plan, including “*a detailed stormwater management plan, plans for active upgrading and rehabilitation of the riverine ecosystems associated with the Krom Antonies River (through establishment of effective riverine and other wetland buffers or setback areas, establishment of corridors for the movement of fauna along the river, between the mountains and the Verlorenvlei system downstream, management of alien fauna (fish) and flora and setting abstraction of surface and groundwater flows at sustainable levels).*”
113. The difficulty is that mitigation measures are designed to reduce, lessen or diminish harmful impacts; for example, a stormwater management plan will be designed to minimise the risk of polluted water entering stormwater drainage systems. However, experience has shown that the existence of such a plan is no guarantee of prevention of such a pollution incident, the consequences of which can be disastrous. The reality is that all these impacts can be avoided by not proceeding with the mine (one of the issues that should have been pointed out by the DSR in compliance with Regulation 49(d)).

The Verlorenvlei Ramsar wetland

114. See the comments in paragraph 34 to 41 above.

Land use and soil

115. Page 35 of the DSR reports that the impacts for land use and soil “*could be potentially HIGH to VERY HIGH for the proposed open-cast mining area. Potential impacts will result from the standard open-cast mining methods, which involve the removal of large volumes of topsoil, overburden and rock in order to expose the ore body. The fragmented overburden stockpiles are exposed to oxidation and un-weathered faces could potentially make contact with groundwater, affecting its quality. Topsoil is also stockpiled and replaced many years later during rehabilitation, which negatively affects soil structure, soil fertility and thus post-mining land capability. Post-mining changes to the topography will however be insignificant as the site is located in a fairly flat area.*”
116. The only details provided of rehabilitation to be “*included in the EMP*” are that

they will draw on “specialist knowledge, the latest scientific literature and on the Chamber of Mines of South Africa’s 1981 Handbook of Guidelines for Environmental Protection, Volume 3/1981. The Rehabilitation of Land Disturbed by Surface Coal Mining in South Africa.”

117. On page 35, the DSR also glibly reports that “[d]uring the mining process the current land use of the potential open-cast mining area is progressively decommissioned before mining and could thus theoretically be re-established after the cessation of mining. Since mining is temporary (± 20 years), agricultural activities could theoretically take place once decommissioning and rehabilitation has taken place.”

118. These statements are both superficial and unsubstantiated: how does Bongani Minerals Pty Ltd intend filling and rehabilitating the mining void to enable agriculture to be resumed? How will it avoid the post-mining void simply filling up with water of unknown quality?

Waste management

119. The issue of waste management is also glossed over in the DSR. On page 10, the DSR states that “[w]aste rock, overburden and topsoil will be separately stockpiled at the surface, near the edge of the open-pit (the specific locations still need to be determined) (Figure 5). These stockpiles are also known as waste dumps. The waste dumps will be tiered and stepped, to minimise degradation (erosion).”

120. However, Figure 5 indicates the proposed location of a waste dump.

121. Regarding tailings from the metals processing plant, the DSR states the following on page 10: “Ore which has been processed in the metallurgical plant produces waste known as tailings, and is generally a slurry. This is pumped to a tailings dam or settling pond, where the water evaporates. Tailings dams can often be toxic due to the presence of unextracted sulfide minerals and/or toxic minerals in the gangue (sand, rock, and other impurities surrounding the mineral of interest in an ore). Specific management of the tailings will be included in the EMP and EIA reports to ensure that there are no long-term negative effects, especially on groundwater quality (groundwater plays a strong role in maintaining the quality of surface water in the Kruis River/Verlorenvlei river system) (Figure 5).”

122. Needless to say, the design, location and management of a tailings dam containing toxic slurry is of major concern to the Verlorenvallei Coalition. As pointed out in paragraph 909087 above, the DSR itself points out that the tailings dam should be situated as far as possible from “highly transmissive fault structures” and well away from the 1:100 year flood levels of rivers and streams (page 29). However, on Figure 5 the tailings dam seems to be situated directly next to the Krom Antonies River!

123. The Coalition therefore requires information on the design, location and management of a tailings dam, including what tailings thickener will be used.

Air, dust and noise

124. Many Coalition members have independently raised questions about the amount of dust and air pollution that will be caused by the mine. The DSR itself states:

- a. On page iii: *“Mining operations will cause dust and noise pollution of the surrounding area, which could have a negative health effect on the surrounding farmers and their labourers”.*
- b. On page 35: *“The impacts of dust on the agricultural industry could potentially be MEDIUM TO HIGH (e.g. setting of fruit, amongst others). The only effective dust suppressant in mining operations is the use of water, by wetting roads, employing mist sprays at the primary crusher and a rock and earth dumps. Slimes dams will need to be regularly rehabilitated with topsoil and vegetation to prevent dust pollution. A permanent irrigation system will need to be employed on the rehabilitated rock and earth dumps and slimes dam.”*

125. Needless to say, any dust suppression mechanism involving water adds to the water requirements of the mine, which information has been omitted from the DSR. [Also Dust from blasting is in air BEFORE you can pour water on it](#)

126. Coalition Member **Kromvlei Kosie van Niekerk Boerdery Pty Ltd** states the following about impacts of dust on their operations (also see comments by other Coalition members on this issue):

*“Gesien in die lig dat dit ’n oopgroef myn gaan wees en daar ongeveer 10 miljoen ton grond verskuif gaan word oor ’n periode van 20 jaar is dit na ons mening logies om die afleiding te maak dat verskuiwing van soveel grond met groot vragmotors ’n groot stof probleem gaan veroorsaak. Uit gesprekke met The Grape co ,wat tans alle uitvoere van tafeldruive hanteer, is dit katagories gestel dat die **regulasie** t.o.v. uitvoere duidelik bepaal dat alle druive vry van stof en reste moet wees. Ons is van mening dat die geringste hoeveelheid stof met reëns reste op die korrels gaan veroorsaak. Stof op die vrugte kan ook veroorsaak dat die vrugte nie geskik is vir uitvoere nie.*

Dit is ook duidelik uit die verslag dat daar vir wolfram en molibdeen gemyn gaan word. Aangesien molibdeen ’n mikro element is wat op plante gebruik word is dit onbekend tot watter mate ’n oorvloed molibdeen die plante kan beïnvloed.

Wat die verbouing van wyndruive aanbetref is ons deur die onderskeie kelders, wat ons produk hanteer, naamlik Tulbagh Kelder en Schenkfontein Kelder, ingelig dat alle produkte wat by hulle gelewer word vry moet wees van stof en reste. Aangesien die druive wat op Kromvlei verbou word in die premie klasse val is dit uiters noodsaaklik dit die vrugte vry moet wees van bogenoemde om sodoende ’n premie te verdien.”

127. See also the comments from Coalition member **Nick Taylor**:

“The strong winds from both north and south actually box the compass often due

to temperature and topographical influences. As a sailor who uses binoculars with a built in compass, I have marveled at aware of the capricious nature of the so called prevailing winds in regard to direction, velocity funnels, gusts up to 35 knots on the water and catabatic forces experienced both on the vlei and traveling in a wide area north of the Piketberg. This alone could influence the spread of dust from mining to areas not investigated by direct studies at various points. I point this out as a positive comment which should the proposal go further might help to make any study more comprehensive.

Studies monitoring dust can only give an indication of what might happen in an actual mine. Levels of dust, increased wind velocities and literally dozens of wild card factors could turn this into a nightmare that could take years of studies and trial and error to fix. Meanwhile livelihoods from Moutonshoek to Elands Bay and Leipoldville could be destroyed in one hot dry summer.

Will the preliminary dust monitoring stations be able to establish what effect dust coming off the workings will have on water in the vlei, water that will duly flow out and impact on the crayfish and tourism industries that are the only alternatives to farming in the Verlorenvallei? Unless they do we will have to assume that included in the inevitable fallout from this proposed mine, will be the way of life of yet another community, black coloured and white.”

Climate change

128. The crucial issue of climate change and the consequential impacts of climate change on water resources, in particular, is completely ignored in the DSR, the attached specialist reports and the EIA Plan of Study.

HERITAGE ISSUES

129. The Coalition is perturbed by the fact that the DSR (page 38) describes the potential impacts of the proposed mine on heritage resources as “low”. This conclusion has been reached despite not even a desktop review having been done on existing heritage and archaeological resources in and around the affected area.

130. WE NEED SOME INFORMATION HERE ABOUT SAN PAINTINGS ETC? The 50/50 crew visited 2 of the sites

WAY OF LIFE AND SENSE OF PLACE

131. Many Coalition members have raised the impacts that the proposed mine will have on the way of life and sense of place of the Verlorenvallei. Some members also link this to other development initiatives less destructive than a mine, such as tourism. Because of the DSR's non-compliance with Regulation 49(d), none of these issues have been identified and described as required.

132. Coalition member **Kromvlei Kosie van Niekerk Boerdery Pty Ltd** puts it as follows:

“Die invloed wat die beoogde myn op die natuurskoon ,een van die vallei se groot bates, gaan hê, gaan veroorsaak dat die toerisme potensiaal wat ons tans aan die ontwikkel was, in totaliteit gaan verdwyn.

Ons wil u ook versoek om te alle tye eerlik en opjektief te wees, om sodoende te voorkom dat ’n groot klomp mense die hartseer en trauma van werksverliese, wat aan die orde van die dag is, gespaar word. Na 20 jaar word ’n pragtige vallei wat vir geslagte heen boere en families huisves met een groot onooglike gat nagelaat terwyl ’n klein groeple mense verryk word.

Sosiale strukture wat oor jare en geslagte ontstaan het word in een oorwink uitgewis. Families wat al geslagte lank op die plaas werk, wat al verblyfsreg het staan nou die kans om alles te verloor. Bejaardes wat van die plaas afhanklik is se toekoms is ook nou in die weegskaal.”

133. Coalition member the **Moutonshoek Employees’ Association (Johannes Erasmus)** commented as follows:

“Hier is baie families op die plase wie se voorgeslagte op die plase begrawe is. Die emosionele letsels wat dit gaan laat om jou afgestorwene families te verlaat, sal ’n groot knou vir baie mense wees.

Hierdie myn aansoek wat tans ingedien is maak groot inbraak op ons godsdienste, leefwyse en kulturele erfenis. Die belange van die kerke moet ook in ag geneem word, oor ’n baie lang tydperk was daar gebou aan ’n gemeente om inwoners in die vallei rigting te gee, ten opsigte van hulle leefwyse. Hoekom moet dit wat ons opgebou het nou afgebreek word.”

PLAN OF STUDY FOR EIA

134. Firstly, the Verlorenvallei Coalition expects all recommendations contained in the specialist reports attached to the DSR and all recommendations referred to in the DSR to be contained in the terms of reference for all specialist studies under the EIA (whether or not such recommendations are repeated in these comments or the comments of individual Coalition members, and whether or not these recommendations are included in the terms of reference in the DSR themselves). A failure to do so will be regarded as a fatal flaw to the EIA Report.
135. Secondly, the Verlorenvallei Coalition expects all recommendations made and questions raised in these comments as well as in the comments of individual Coalition members, also to be included in the terms of reference for all specialist studies under the EIA. Again, a failure to do so without adequate reason will be regarded as a fatal flaw to the EIA Report in accordance with MPRDA Regulation 50(f).
136. Thirdly, we draw your attention to MPRDA Regulation 50, stipulating the contents of the EIA Report. Any non-compliance with Regulation 50 will be regarded as a fatal flaw to the EIA Report, and the Verlorenvallei Coalition reserves all its rights in advance to challenge the Report on this basis in due course. In particular, we draw your attention to the fact that the EIA Report must contain:

- a. *“an assessment of the nature, extent, duration, probability and significance of the identified potential environmental, social and cultural impacts of the proposed mining operation, including the cumulative environmental impacts”* (regulation 50(c)); and
- b. *“a comparative assessment of the identified land use and development alternatives and their potential environmental, social and cultural impacts”* (regulation 50(d)).

137. Fourthly, as outlined above, very limited information regarding the mining and metals processing processes is provided in the DSR, and the Coalition regards this as a fundamental flaw of the DSR. It is actually not possible to assess the proposed terms of reference for the specialist studies, particularly the impact on downstream ecosystems, without more information on these processes. The Coalition has therefore requested copies of the metallurgist's report and the Vermyn Rand Mine Plan and Concept Study (referred to in the DSR).

138. Other than the study on Freshwater Ecosystems, the list of specialist studies in the EIA Plan of Study seems to exclude any study on fauna that occur in and around the affected area, and how this will be impacted by a large open-case mine. This includes avifauna, reptiles, invertebrates and mammalian species **[HAVE I COVERED EVERYTHING?]** not included under Freshwater Ecosystems. Considering the requirements of Regulation 50, any EIA Report that does not deal with these issues would be fatally flawed.

139. The DSR (page 38) recommends that a Traffic Impact Assessment be done for the area: *“The cumulative impacts of the proposed mining development will need to be assessed in terms of the current and future road infrastructure and what cumulative impacts the mining will have on the road system (wear and tare [sic]) and what impacts it would have on the agricultural community. Traffic counts would need to coincide with the harvesting of the various agricultural products produced in the valley. The recommendations of the study, applicable impacts and mitigation will be assessed during the EIA Phase of the project and will be considered by the Town Planners and Civil Engineers in their design of the project.”*

140. However, such a Traffic Impact Assessment is not mentioned again under the EIA Plan of Study. Considering the wide range of issues arising from traffic impacts (pollution, social impact of noise, road impact on ecosystems and animal corridors, risks of traffic accidents and injuries, the potential of increased crime, additional impacts on destinations like Saldanha), the Coalition regards such an Assessment as essential to the EIA Plan of Study (and will regard the EIA report as inadequate without such an assessment).

141. Below are additional comments on the terms of reference (TORs) for specialist studies listed in the DSR.

- a. Vegetation: In addition to the three bullet points listed under these TORs, at least the following TORs should be added (in accordance with recommendations in Appendix 4):

- i. a detailed vegetation survey (including all-year sampling) of the site affected by the Proposed Riviera Tungsten Open-Cast Mine has to be undertaken in order to accurately pin-point the distribution of the remnant vegetation types and to provide a comprehensive inventory of all species, including the presence and distribution of threatened plants present on any site supporting indigenous vegetation in the highly disturbed Krom Antonies River Valley (recommended on pages 20 and 36 of the DSR);

b. Freshwater Ecosystems

- i. As mentioned above, the Coalition does not accept that baseline studies can be done as part of the EIA Report – it is our view that baseline studies fall within the requirement of Regulation 49(1)(b) applicable to scoping. Be that as it may, we draw your attention to the fact that, in Appendix 5, Dr Day makes detailed recommendations for a baseline study to be done as part of the EIA Report. These recommendations (repeated on page 22-23 of the DSR) include:
 - 1. A detailed stormwater management plan for the site, including specific measures to reduce the rate of runoff into freshwater ecosystems, and to manage the quality of runoff;
 - 2. Details of the depth of excavation, as well as the maximum anticipated footprint;
 - 3. Detailed measures for dewatering, including estimates of water volume;
 - 4. Details of the chemical and physical processes that are part of the proposed mining operation, so that their potential impacts on downstream and adjacent aquatic ecosystems can be elucidated;
 - 5. Detailed breakdown of groundwater quality, particularly if dewatering into surface systems is required;
 - 6. Details regarding areas for the storage or disposal of spoil generated from the site, as well as details of all built and constructed aspects of the proposed mining works;
 - 7. Details of dust suppression methods;
 - 8. Details of additional infrastructure that would be required as part of the proposed mining operation – for example, new or upgraded roads, sewage and/or water pipelines, electricity pylons or substations;
 - 9. details of water supply requirements and proposed water sources;

10. details of proposed management / disposal of both on- and off-site sewage and other waste;
 11. surveys of fish populations both within the Krom Antonies River system, and in the Verlorevlei River system up- and downstream of the Krom Antonies River confluence;
 12. detailed surveys of macroinvertebrate fauna at strategic points along the Krom Antonies River system, to establish inter alia the possible presence of the endemic bivalve *Unio caffer* along the river, as well as to obtain a clearer understanding of changes in aquatic invertebrate community structure along the river, in relation to changes in habitat quality and structure and water quality;
 13. detailed assessment of the Krom Antonies River along its length, to allow an assessment of Habitat Integrity at a scale that will allow future monitoring of the impacts of the proposed mining activities, if approved; and
 14. collection of data relating to algal assemblages along the river.
- ii. According to Dr Day:
1. data gathered would need to be interpreted with reference to surface and groundwater water chemistry and flow data, as well as to botanical information;
 2. the following sites should be selected for the baseline study: the Kruismans River just upstream of the confluence with the Krom Antonies and Hol Rivers, and a site between the confluence of the Krom Antonies River and the confluence of the Hol River. In addition, a more suitable reference site (in terms of an ecological perspective) should also be selected in the Verlorenvlei catchment and proposed a site in the Bergvallei River;
 3. data gathered from these sites should then be compared to that collected from the Verlorevlei River, both upstream and downstream of the confluence of the Krom Antonies River system; and
 4. baseline data should be collected on at least a three monthly basis, over a minimum period of one year (assuming that water quality and flow data are collected at more frequent intervals [i.e. at least monthly]).
- iii. The DSR (page iii) lists three additional “constraints” to be detailed by “specialist study”: increases in sedimentation of the Krom Antonies River system; increases in erosion within the Krom Antonies River or its associated tributaries; and encroachment into riverine buffer areas. These issues are not included in the TORs for

the specialist study on Freshwater Ecosystems, and should be included.

c. Water Quality and Hydrogeology (surface and groundwater)

- i. In addition to the many bullet points under the TORs on pages 43-44 of the TORs, the following should be included:
 1. a detailed hydrocensus needs to be undertaken of boreholes, springs and dug wells in the Krom Antonie River Valley to determine current groundwater users and abstraction, borehole yields, groundwater levels and quality. This will allow for, inter alia, a comprehensive groundwater contour plan to be generated (page 25 of the DSR);
 2. detailed measures for dewatering are needed, including estimates of water volumes required by the mine (page iii of the DSR);
 3. a detailed stormwater management plan is needed for the site, including specific measures to reduce the rate of runoff into freshwater ecosystems, and to manage the quality of runoff (page 3 of the DSR);
 4. it is critical that the irrigation abstractions and return flows are accurately modeled to develop a representative flow record at the estuary. Return flows from irrigation that uses groundwater must also be accounted for as these return flows may result in elevated low flows at the estuary (page 16 of the DSR);
 5. "This desktop assessment uses the daily flow record at G3H001 on the Kruis River to disaggregate the current day monthly flows generated at the estuary to current day daily flow. This process assumes that flow characteristics (or the pattern of flow) at each location are similar. Should the flow at G3H001 not be representative of the flow at the estuary then the ACRU Model should be used to generate daily flows at the estuary. It is recommended that the observed flow record at G3H001 be carefully assessed to ascertain the accuracy of both low and high flow, and that flow measurement near the estuary be undertaken for a similar period of time to that in the upper Krom Antonies River for comparative purposes with the flow record at G3H001. This comparison will enable a decision to be made regarding model selection (ACRU or WR90) (page 16 of the DSR);
 6. An assessment of the impacts on drinking water, such as the water supplied to the Redelinghuys community.

7. Studies on Aquifers to be intensive and AT LEAST 150 km radius

d. Socio-Economic Study

- i. The TORs for this Study are focused entirely on the direct and indirect consequences of the mining project. Other than “to describe the regional and local level economic and social environment”, there is no proper assessment of the status quo and, as required by Regulation 50(a) and (b), of the environment likely to be affected by the proposed mining operation and/or the identified alternative land use or developments. These TORs should therefore include at least the following:
 1. a. A detailed analysis of current employment in the Verlorenvallei (with reference to age and gender);
 2. b. A detailed analysis of the skills of those currently employed in the Verlorenvallei (with reference to age and gender);
 3. c. A detailed consideration of which employees would be likely to be employed by the proposed mine (with reference to age and gender);
 4. d. A detailed analysis of all residents dependent on those currently employed in the Verlorenvallei, including but not limited to children, spouses and the aged;
 5. e. A detailed analysis of current skills development programmes and training provided in the Verlorenvallei, including both school education and adult education;

6. ANYTHING ELSE?

e. Air Quality

- i. Due to the variability of winds in the Verlorenvallei, the study area for this study should be broadened to include a radius of at least 100km from the proposed site;
- ii. A weather station needs to be employed in the valley to measure wind data, air quality, temperature, rainfall and humidity. A number of dust monitoring stations will also need to be positioned at various key localities in the valley (page 44 of the DSR);
- iii. “Baseline data needs to be collected for at least a year before mining commences. This data will need to be used for the EIA process. Prevailing wind data and dust monitoring will be important for deciding where to locate mine infrastructure and spoil areas” (page 35 of the DSR);
- iv. Details of dust suppression methods and dust monitoring are required (page iii of the DSR).Also effect of toxic fog from slimesdams

f. Visual Impact

- i. A 3-D terrain model may be required to assess the key observation points from which the proposed mine infrastructure will be visible (page 39 of the DSR).

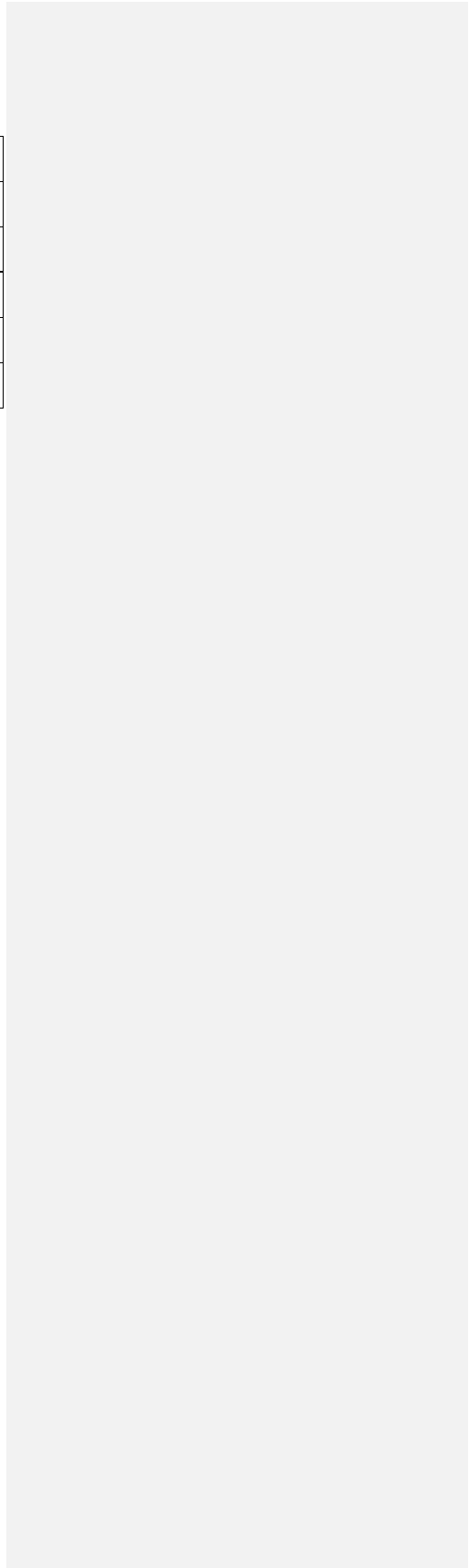
[SIGNATURE]

Verlorenvallei Coalition

Signed by Interim Chairperson

Copies to: [PLEASE CAN SOMEONE FIND FAX NUMBERS FOR ALL THESE PEOPLE?]

The Honourable Minister of Water and Environmental Affairs, Ms Buyelwa Sonjica	
The Honourable Minister of Mining, Ms Susan Shabangu	
The Honourable Minister for Environmental Affairs and Development Planning, Mr Anton Bredell	
The Honourable Minister for Agriculture, [NAME]	
The Honourable Minister for Trade and Industry, [NAME]	
The Honourable Minister for Labour, [NAME]	
The Director-General, Department of Water and Environmental Affairs, Pretoria	
The Regional Manager, Department of Mining Western Cape	
The Regional Manager, Department of Water and Environmental Affairs Western Cape	
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Comments, questions and objections to the Draft Scoping Report conducted in terms of Regulation 49(2) of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) (“MPRDA”) for the mining of tungsten ore and molybdenum ore on Portions 1, 6, 13 of the farma Namaquasfontein No. 76 and Portion 1 of Farm No. 297, Piketberg dated April 2009 (Job No. 07/11/1190, DME Ref. No. WC 30/5/1/2/2(328) MR)

1. We refer to the Draft Scoping Report compiled in terms of Regulation 49(2) of the MPRDA for the mining of tungsten and molybdenum ore the abovementioned portions of Namaquasfontein and Farm 297, Piketberg, dated April 2009.
2. The comments, questions and objections listed below are submitted on behalf of the Verlorenvallei Coalition, a broad-based coalition of labour, civic organisations, environmental groups and local residents. A full list of Coalition members is attached as **Annexure A** to this document.
3. At the outset, the Verlorenvallei Coalition registers its profound and unequivocal objection to any proposal of mining in the Verlorenvallei. This area is a productive, profitable and economically growing part of the Bergriver Municipality that not only provides agricultural products for the Western Cape economy and for export, but employs hundreds of people, most of whom will lose their jobs and housing if the proposed mine goes ahead.
4. Many current businesses and residents rely on ground and surface water in the Verlorenvallei, which will at serious risk of pollution by the mine. In addition, the mine is directly upstream from the Verlorenvlei wetland, a site internationally recognised under the Ramsar Convention on Wetlands 1971 and in respect of which South Africa, as a contracting party, has an international law obligation to protect.
5. Perhaps more importantly, the Coalition is extremely concerned about the following irregularities arising from the Draft Scoping Report:
 - a. non-compliance with Regulations 46 and 49 of the MPRDA Regulations;
 - b. the misrepresentation that there is a “high level of unemployment” in the Piketberg area (which the mine will allegedly address) when statistics from Statistics SA relied on by the specialist concerned clearly indicates that the unemployment rate in the Bergriver municipal area is just over 5%, compared to the national average which exceeds 20%. A statement that an unemployment of rate of just over 5% constitutes a “high level of

unemployment” constitutes inaccurate, incorrect and misleading information within the meaning of Section 98(b) of the MPRDA;

- c. the glaring omission of the estimated volume of water that the mine will use in this extremely water-sensitive geographical area; and
- d. inadequate notice and public consultation to date, and inappropriate and racist references to coloured members of the community at the one and only public consultation meeting to date.

Legal issues

The MPRDA

6. Regulation 49(d) of the Regulations issued under the MPRDA (Government Notice R.527 in Government Gazette No. 26275, 23 April 2004) requires the scoping report to:

“identify and describe reasonable land use or development alternatives to the proposed operation, alternative means of carrying out the proposed operation, and the consequences of not proceeding with the proposed operation”

7. There are three separate aspects to this requirement, namely:
 - a. Identification and description of *“describe reasonable land use or development alternatives to the proposed operation”*;
 - b. Identification and description of *“alternative means of carrying out the proposed operation”*; and
 - c. Identification and description of *“the consequences of not proceeding with the proposed operation”*.
8. Only the second requirement has been addressed in the Draft Scoping Report (DSR), namely on page ii, as part of the Executive Summary, which describes alternative design alternatives for the mine.
9. The third requirement is addressed in a single line, namely *“The no-go alternative will also be considered, in which the status quo for the area will remain, viz. that of agriculture and livestock farming”* (DSR p. ii). Unfortunately it is not sufficient for compliance with Regulation 49(d) to defer this description to the environmental impact assessment – Regulation 49(d) specifically requires the consequences of not proceeding with the proposed operation to be identified and described in the Scoping Report.
10. Land-use of the affected area is well established, with the livelihood of many existing businesses and workers dependent on existing land-use, namely agriculture. It is particularly problematic that alternatives to the proposed mine, and the many positive consequences of not proceeding with the mine, are not identified and described as required by the Regulations. This means that the Department is not provided with all relevant facts to make a decision on this application. This non-compliance with Regulation 49 taints the remainder of the DSR by ensuring inadequate and misleading representation of the facts applicable to the proposed mining area through omission of relevant information.

11. In addition, Regulation 46(a) requires the Social and Labour Plan (Appendix 7) to contain “a preamble which provides background information of the mine in question”. Appendix 7 contains no such preamble, and no information at all on the mine or the mining company itself, such as what other mines Bongani Minerals Pty Ltd owns. All that we do know about Bongani Minerals Pty Ltd from the Social and Labour Plan is its employment equity statistics, indicating that all 6 of its top management positions are held by whites.
12. It is therefore submitted that the DSR itself is non-compliant with both Regulations 46 and 49 and should be rejected on this basis alone.
13. It is further submitted that the procedure followed thus far has not provided interested and affected parties (I&APs), including the Verlorenvallei Coalition, with sufficient notice and time for meaningful consultation in accordance with Regulation 3 of the MPRDA Regulations. The reasons for this are as follows:
 - a. A notice was published in *Die Weslander* on 22 April 2009, a public holiday due to national and provincial elections scheduled for that day.
 - b. The notice in *Die Weslander* on 22 April 2009 and in *Die Burger* on 23 April 2009 gave no more than 7 calendar days’ notice of the public consultation meeting on 30 April 2009. This is despite the fact that a number of the I&APs on the provisional I&AP list (and see criticism of the compilation of this list in the comments submitted by Coalition member **Nick Taylor**) are clearly not resident in the Piketberg area. This is even more problematic because, at this stage, there was still an application for review of the Department of Minerals and Energy’s decision to grant a prospecting right over the affected properties to Bongani Minerals Pty Ltd. The authors of the DSR would have been well aware of this pending court application and the bitter opposition of members of the Verlorenvallei Coalition to the prospecting right.
 - c. The DSR was only made available to **[WHO, ON WHAT DATE?]**. The DSR comprises **[HOW MANY]** pages.
 - d. On 20 May 2009, faced with the enormous task of reviewing the entire DSR plus all the specialist reports attached to the DSR within **[PERIOD FROM DATE WHEN DSR BECAME AVAILABLE]**, at least two I&APs requested a week’s extension to submit comments, forcing Coalition members to request a week’s extension (which was granted).
14. See also other and more detailed procedural complaints in the comments of Coalition member **Nick Taylor**. Note, in particular, his complaint about inadequate I&AP registration facilities, audio-visual facilities and the manner in which the meeting on 30 April 2009 was conducted, including an inappropriate and racist reference to coloured delegates at the meeting as “die volk”.

The Constitution

15. On page 2 of the DSR, it is alleged that “the proposed Open-Cast mining development strives towards upholding” Section 24 of the Constitution.
16. The DSR then proceeds to quote – inaccurately – Section 24 of the Constitution:

Section 24(b)(iii) as represented in DSR page 2	Accurate version of Section 24(b)(iii)
<p>“... every person shall have the right to the following:</p> <p>(a) An environment that is not harmful to their health nor well being; and</p> <p>(b) To have that environment protected for the benefit of present and future generations, through reasonable legislative and other measures, which:</p> <ul style="list-style-type: none"> • prevents pollution and ecological degradation; • promotes conservation; and • secures justifiable economic and social development and use of natural resources while promoting justifiable economic and social development.” 	<p>“Everyone has the right -</p> <p>(a) to an environment that is not harmful to their health or well-being; and</p> <p>(b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that -</p> <p>(i) prevent pollution and ecological degradation;</p> <p>(ii) promote conservation; and</p> <p>(iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.”</p>

17. We will assume that this was a typographical error by the authors of the DSR. The difficulty is that it is a fundamental error. With respect, it is hard to imagine how a twenty-year open-cast mine will “protect the environment for the benefit of present and future generations”. The DSR itself points out many potentially detrimental environmental impacts of the proposed mine, making it extremely unlikely (a) to constitute ecologically sustainable development and use of natural resources, and (b) to prevent pollution and ecological degradation.

The National Environmental Management Act

18. The DSR makes no mention of the environmental management principles contained in Section 2 of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA). This is crucial, because the MPRDA explicitly makes itself subject to those principles in its Section 37(1)(b), and provides that the principles apply to all prospecting and mining operations, as the case may be, and any matter relating to such operation; and serve as guidelines for the interpretation, administration and implementation of the environmental requirements of the MPRDA.

19. These principles include the following:

- “(2) Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably.
- (3) Development must be socially, environmentally and economically sustainable.
- (4)(a) Sustainable development requires the consideration of all relevant factors including the following:

- (i) That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;
 - (ii) that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;
 - (iii) that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;
 - (iv) that waste is avoided, or where it cannot be altogether avoided, minimised and reused or recycled where possible and otherwise disposed of in a responsible manner;
 - (v) that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;
 - (vi) that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;
 - (vii) that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and
 - (viii) that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.
- (b) Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.
- (c) Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.
- (d) Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human wellbeing must be pursued and special measures may be taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination.

- (e) Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle.
- (f) The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured.
- (g) Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognising all forms of knowledge, including traditional and ordinary knowledge.
- (h) Community wellbeing and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means.
- (i) The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment.
- (j) The right of workers to refuse work that is harmful to human health or the environment and to be informed of dangers must be respected and protected.
- (k) Decisions must be taken in an open and transparent manner, and access to information must be provided in accordance with the law.
- (l) There must be intergovernmental coordination and harmonisation of policies, legislation and actions relating to the environment.
- (m) Actual or potential conflicts of interest between organs of state should be resolved through conflict resolution procedures.
- (n) Global and international responsibilities relating to the environment must be discharged in the national interest.
- (o) The environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage.
- (p) The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment.

- (q) The vital role of women and youth in environmental management and development must be recognised and their full participation therein must be promoted.
- (r) Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure.”

20. On page 2 of the DSR, the suggestion appears to be that the application for an environmental authorisation in terms of Section 24 of NEMA in relation to activities listed in terms of R.386 and R.387 must be made to the Department of Mining. This is correct only insofar as it relates to “[r]econnaissance, exploration, production and mining as provided for in the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), as amended in respect of such permits and rights” (Activity 7). All other listed activities associated with the mining operation, such as road building (Activity 5) or dam building (Activity 6) will require an environmental authorisation from the Department of Environmental Affairs and Development Planning in the Western Cape.

21. As at the date hereof, the Coalition has not received formal notice of any such application.

The National Environmental Management: Biodiversity Act

22. On page 3 of the DSR, it is stated that “[i]t is not expected that the footprint of the proposed Open-Cast mine will impact on any nationally protected vegetation types.”

23. However, members of the Coalition report sightings in the Verlorenvallei of a number of species listed on the Threatened and Protected Species lists issued under the National Environmental Management Biodiversity Act, 2004 (Act 10 of 2004), including:

- a. blue crane (*Anthropoides paradiseus*) (photograph available);
- b. leopard (*Panthera pardus*)
- c. Cape clawless otter (*Aonyx capensis*) (photograph available)
- d. whitefish (*Barbus andrewi*)
- e. Clanwilliam yellowfish (*Labeobarbus capensis*)
- f. Cape fox (*Vulpes chama*)
- g. geometric tortoise (*Psammobates geometricus*) (photograph available)
- h. four-toed elephant shrew (*Petrodromus tetradactylus*)
- i. pangolin (*Manis temminckii*)
- j. Armidillo Girdled Lizard (*Cordylus cataphractus*)

[VARIOUS SCIENTISTS ALSO REVERTING ON THIS ONE.]

24. For more information on the biodiversity status of the Verlorenvlei, see the comments submitted by Verlorenvallei Coalition member **WESSA (Philippa Huntly)**.
25. However, Appendix 4 to the Scoping Report makes repeated references to endangered botanical species. For example:
- a. *“All Swartland Shale Renosterveld areas are conservation priorities as they are “Critically endangered” nationally, but particularly important are the slopes around the northwest base of the Piketberg, which have produced a number of new species in the last few years.”* (page 10)
 - b. The Leipoldtville Sand Fynbos vegetation type is classified as “Endangered” nationally primarily as a result of it being heavily targeted for agriculture...” (page 10)
 - c. “The Cape Lowland Alluvial vegetation is classified nationally as being a “Critically endangered” vegetation type. Every effort should be made to restore as much as possible of the transformed areas potentially supporting it.” (page 15)
 - d. “The Verlorenvlei wetlands support an undescribed 3 m tall species of Psoralea that is endemic to the Sandveld, and is Red Data listed as Endangered” (page 17)

National Environmental Management: Air Quality Act

26. The DSR fails to record that the metallurgical plant will require an atmospheric emissions licence under the National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004) (AQA). AQA also imposes other general legal obligations in relation to air quality, including emissions to air from mining and metals processing.
27. As at the date hereof, the Coalition has not received formal notice of any such application.

National Environmental Management: Waste Management Act

28. The DSR fails to record that both the mine and the metallurgical plant will require a waste management licence under the National Environmental Management: Waste Management Act, 2008 (Act 59 of 2008) (WMA). The WMA also imposes other general legal obligations in relation to waste generation and management.
29. As at the date hereof, the Coalition has not received formal notice of any such application.

Environment Conservation Act

30. The DSR lists the Environment Conservation Act, 1989 (Act 73 of 1989) as part of the legal framework applicable to the proposal, but fails to mention that this act has been repealed by the WMA, which comes into effect on 1 July 2009.

Land Use Planning Ordinance

31. On page 45 the DSR refers to a “temporary change in land use” from Agriculture Zone I to Industrial Zone II in terms of the Land Use Planning Ordinance, 1995 (Ordinance 15 of 1985) (LUPO) to operate the mine. Presumably this “temporary change” is in fact for the life of the mine, i.e. 18-19 years.
32. As at the date hereof, the Coalition has not received formal notice of any such application to the local authority.

Overall financial impact

33. On page 34 of the DSR, it is stated that *“[t]he Riviera Tungsten Project will provide an initial direct investment into the local Bergrivier economy of between R1,2 and R1,5 billion over the first five years of operations.”*
34. No details are provided as to how these amounts are made up, so it is exceedingly difficult to assess the accuracy of this statement. For example, is it suggested that Bongani Minerals Pty Ltd will acquire all mining equipment within the Bergrivier Municipality? It is essential for meaningful public participation that the final Scoping Report provides detailed information on how these amounts are constituted.
35. In addition, because the DSR does not comply with Regulation 49(d) and does not identify and describe “the consequences of not proceeding with the proposed operation”, it also does not provide comparative figures so that the alleged direct investment by the mine can be compared to existing capital investment in the area.
36. Page ii of the DSR lists under “Opportunities” the following: *“Opportunities related to socio-economic benefits, both to the surrounding farming community, to the Government and local Municipality (taxes, foreign revenue, rates and taxes, increased buying power of increased population etc.)”*.
37. With regard to “increased buying power of increased population”, what is not addressed, of course, is the impact of decreased buying power of those farmers and farmworkers who will lose their livelihoods as a result of the mine. Clearly this is information that should be included in the assessment.
38. On page ii of the DSR, as another opportunity created by the mine, *“profits of the mine owners”* are mentioned in passing. No indication of the amount of such profits is given for the purpose of comparing such profits to livelihoods that will be lost as a result of the mine, or other detrimental impacts.
39. On page 31 of the DSR, it is stated that *“A need exists to align the development needs/priorities of communities with the social investment objectives of the Riviera Tungsten Project that emanate from the Local Economic Development Programme.”* This approach is of great concern to the Verlorenvallei Coalition, and confirms our fears that the mine will destroy the livelihoods and wellbeing of the Verlorenvallei communities. Is it not perhaps the project that needs to align itself with development needs/priorities of the community?

40. On page 33-34 of the DSR, it is stated that *“Umcebis Business Advisers (Pty) Ltd believes that agglomeration benefits associated with the Riviera Tungsten Project could be a catalyst for establishing linkages between businesses, growing existing businesses internally in the area and improving the social welfare of the community. These linkages would further enhance the potential of businesses to generate additional revenue and employment for communities within the region of the Project and in the Western Cape by exploiting the inter-regional affects between the regions.”*
41. To say that the Verlorenvallei community – which will be ripped apart by the mine as farmers shut down operations and retrench workers – will be more unified as a result of the mine is far-fetched.
42. On page 39 of the DSR, it is stated that *“[t]he potential positive impacts of the mine on the socio-economic environment of the region are seen to be HIGH. It should be noted that this impact will only be felt for the approximate 20 year lifespan of the mine. The recommendations of the study, applicable impacts and mitigation will be assessed during the EIA Phase of the project. Mitigation measures will be included into the EMP.”*
43. The Verlorenvallei Coalition strongly believes that the negative social and economic impacts of the mine (including the reduction in capital investment by local business as a result of the mining application) have not been properly identified and described, and insists that these are included in the expanded studies conducted under the EIA. Note in this regard the comment of Coalition member **Nick Taylor** in his written comments submitted: *“The impact has already been felt with farms currently on the market becoming unsaleable, worker morale low due to uncertainty, and a high volume of anger and resentment preoccupying many of the local community.”*
44. Even if these negative impacts have been taken into account, it is crucial to note that, while the negative impacts will last for generations, the alleged positive impacts are, by the DSR’s own admission, short-term in nature.
45. For details on the immediate anticipated impact of the mining operation on the production and export operations of those farms, as well as on the value of affected properties, see the comments submitted by Verlorenvallei Coalition member **Kromvlei Kosie van Niekerk Boerdery Pty Ltd (H.J Horne)**.

Allegations of “current unemployment” and “current underdevelopment”

46. On page ii of the DSR, the following statement is made: *“There is a high level of unemployment in the Piketberg Magisterial District”*.
47. The Social and Labour Plan (Appendix 7, p.22) shows that there is only 6.16% unemployment within 20km of the proposed mine; this goes down to 4.45% within 60km of the proposed mine and up to 5.19% for the entire Bergriver Municipality. Not by any stretch of the imagination can this be described as “high unemployment”.
48. On page ii of the DSR, the following statement is made: *“There is a high level of underdevelopment in the Piketberg Magisterial District”*.

49. However, the Social and Labour Plan (Appendix 7, p. 25) indicates that:

- a. the Bergriver economy makes a significant contribution to government income (6,14% of the turnover generated by levy-paying firms in the West Coast District in 2005-6); and
- b. the Bergriver economy grew at a rate of 10,33% from 2004-6, in contrast with the rest of the West Coast District (decline of 5.03%) - that is significantly more than the national economy.

Employment to be created by the mine

50. On page 32-33 of the DSR, it is stated that the estimate of the employment required to establish the Tungsten Mine and erect associated facilities is approximately 320. This is misleading, since:

- a. "note once again that these jobs are of a temporary nature and will slowly fall away once construction of the infrastructure and superstructure components are completed" (Appendix 7, p.29); and
- b. even in its own estimates, the DSR (p.33) relies on no more than 20% use of local labour. 20% of the anticipated 320 jobs created during the construction phase amounts to only 64 jobs.

51. Similarly, the estimate of 407 "direct new jobs" created by the mine in its operations phase should be assessed in view of the Social and Labour Plan's own assumption of a 20% take-up of local labour. This brings the figure of 407 down to just over 81 new jobs that will likely be offered to local workers.

52. No mention is made in the DSR of research conducted or to be conducted as part of the EIA on unemployment that will be caused by the mine. Any EIA that does not include research on actual current employment that will be affected by the mine will be fatally flawed. For interest, the Verlorenvallei Coalition estimates that at least **(NUMBER OF PEOPLE PERMANENTLY EMPLOYED ON THE FARMS THAT WILL BE DESTROYED BY THE MINE – WE KNOW THAT KOSIE V NIEKERK HAS 350)** permanent jobs and at least **(NUMBER OF SEASONAL WORKERS PER ANNUM ON THE FARMS THAT WILL BE DESTROYED BY THE MINE – WE KNOW THAT KOSIE VAN NIEKERK AS 1200)** will be lost as a result of the mine. Many of these workers are women. **[CAN WE SAY A MAJORITY ARE WOMEN?]**

Training and skills development

53. On page 30 of the DSR, many undertakings are given regarding skills development by the mine.

54. What is not mentioned, again because of the DSR's non-compliance with Regulation 49(d), is existing training and skills development programmes in the valley. **[WE NEED ALL THE INFORMATION ON EXISTING SKILLS DEVELOPMENT PROGRAMMES IN THE VALLEY PLEASE.]**

[STILL TO BE ADDED: ALL WATER AND ENVIRONMENT ISSUES]

[SIGNATURE]

Verlorenvallei Coalition

Signed by Interim Chairperson

Copies to:

The Honourable Minister of Water and Environmental Affairs, Ms Buyelwa Sonjica	
The Honourable Minister of Mining, Ms Susan Shabangu	
The Honourable Minister for Environmental Affairs and Development Planning, Mr Anton Bredell	
The Director-General, Department of Water and Environmental Affairs, Pretoria	
The Regional Manager, Department of Water and Environmental Affairs Western Cape	
The Regional Manager, Department of Mining Western Cape	

Members of the Verlorenvallei Coalition

[LIST TO BE COMPLETED]

Verlorenvallei Coalition

Hands off the Verlorenvallei

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Comments, questions and objections to the Draft Scoping Report conducted in terms of Regulation 49(2) of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) (“MPRDA”) for the mining of tungsten ore and molybdenum ore on Portions 1, 6, 13 of the farma Namaquasfontein No. 76 and Portion 1 of Farm No. 297, Piketberg dated April 2009 (Job No. 07/11/1190, DME Ref. No. WC 30/5/1/2/2(328) MR)

1. We refer to the Draft Scoping Report compiled in terms of Regulation 49 of the MPRDA for the mining of tungsten and molybdenum ore on the abovementioned portions of Namaquasfontein and Farm 297, Piketberg, dated April 2009.
2. The comments, questions and objections listed below are submitted on behalf of the Verlorenvallei Coalition, a broad-based coalition of labour, civic organisations, environmental groups and local residents. A full list of Coalition members at the time of writing (new members join on a daily basis) is attached as **Annexure A** to this document.
3. At the outset, the Verlorenvallei Coalition registers its profound and unequivocal objection to any proposal of mining in the Verlorenvallei. This area is a productive, profitable and economically growing part of the Bergriver Municipality that not only provides agricultural products for the Western Cape economy and for export, but employs hundreds of people, most of whom would lose their jobs and housing if the proposed mine goes ahead.
4. Most businesses and residents in the Verlorenvallei rely on ground and surface water resources, which are at serious risk of pollution by the mine. In addition, the mine is directly upstream from the Verlorenvlei wetland, a site internationally recognised under the Ramsar Convention on Wetlands 1971 and in respect of which South Africa, as a contracting party, has an international law obligation to protect.
5. Perhaps more importantly, the Coalition is extremely concerned about the following irregularities arising from the Draft Scoping Report:
 - a. non-compliance with Regulations 46 and 49 of the MPRDA Regulations, particularly in its failure to identify and describe the consequences of not proceeding with the proposed mining operation;

- b. the misrepresentation that there is a “high level of unemployment” in the Piketberg area (which the mine would allegedly address) when statistics from Statistics SA relied on by the specialist concerned clearly indicates that the unemployment rate in the Bergriver municipal area is just over 5%, compared to the national average which exceeds 20%. A statement that an unemployment of rate of just over 5% constitutes a “high level of unemployment” constitutes inaccurate, incorrect and misleading information within the meaning of Section 98(b) of the MPRDA;
 - c. crucial information omitted from the Draft Scoping Report, in particular the glaring omission of the estimated volume of water that the mine would use in this extremely water-sensitive geographical area. Thus far, interested and affected parties (I&APs) have been refused access to key information relating to the mining process; and
 - d. inadequate notice and public consultation to date, and inappropriate and offensive references to coloured members of the community at the one and only public consultation meeting to date.
6. Finally, the Coalition formally questions and demands evidence of the geological and financial viability of the proposed mine.

LEGAL ISSUES

The MPRDA

7. The required contents of a scoping report are clearly described in Regulation 49 of the Regulations issued under the MPRDA (Government Notice R.527 in Government Gazette No. 26275, 23 April 2004) (the MPRDA Regulations”). It goes without saying that the scoping report must contain sufficient information for I&APs to assess whether there has been compliance with the requirements of Regulation 49, and to provide comment on further investigation required for the environmental impact assessment report.
8. However, the Draft Scoping Report (DSR) omits crucial information about the proposed project, to such an extent that I&APs are not in a position to do so. Most notably, the DSR provides no information on:
- a. the estimated volume of water that the mine would use; and
 - b. the compositional and mineralogical analysis of the ore, the leaching characteristics of the ore, and heavy metals other than tungsten and molybdenum associated with the ore.
9. On 26 May 2009, the interim chair of the Verlorenvallei Coalition wrote the following email to Withers Environmental Consultants:

“Dear Mr. Withers

We are working hard and making a lot of headway in getting our comments to WEC.

Some of our Specialists require some more information so as to make properly

considered comments.

These are:

1.-The Metallurgists complete Report

2.-The Venmyn Rand Mine Plan and Concept Study

3.-Bongani give an exact number of people that will be employed by the proposed mine. We require an accurate job description for these people.

With the Deadline for comments looming it would be greatly appreciated if you could give this your urgent attention.

We have had no feedback from DME on the questions posed regarding the JR and the acceptance of the Bongani MR application.

Kind regards

Dr. Bennie van der Merwe

Interim Chair VC”

10. It is important to note that at least one Coalition member (**Brian Anderson**) already requested this information at the public consultation meeting on 30 April 2009.

11. On 26 May 2009, Withers Environmental Consultants replied as follows:

“Dear Dr Van der Merwe

I have sent your request to Bongani Minerals whether these two reports can be released at this stage, as both reports are copy righted.

As soon as I have the answer from Bongani I will come back to you.

Kind regards

Aubrey”

12. On 29 May 2009, Dr Van der Merwe again wrote an email to Mr Withers, which was responded to by Mr Withers on the same day, ad each paragraph of Dr Van der Merwe’s email. Mr Withers’ response is in bold:

“Dear Mr. Withers □

*□ It is getting late on the last working day prior to the deadline for submissions on the DSR. □ We have not heard from you regarding our request for further information. **I requested the release of the two reports from Mr Reynolds, a Director of Batla Minerals and have not had response from him.** □*

*I have to mention that our specialists are astounded by your reply that the first two items are copy righted! They think it must be a World First. **I tend to agree. You cannot write an EIA report without being able to make all the specialist studies available in the public domain. See next answer!** □*

*How are we supposed to make meaningful contributions to the process with such gaping holes in the information? **Remembering that this a Scoping Report in which we are gathering issues and the information of such reports is generally only available in the EIA phase of the project. Thus if you consultants require the Metallurgic Water Balance then we need to make sure that such information is made available in the EIA report for them to comment on. Once the EIA report, together with ALL the specialist reports are available, only then can meaningful contributions be made. We still need to get to the EIA phase!!! I don’t write the Act, I***

only apply it. Having said that, if the report has been compiled which it has, I agree that the sooner you and your specialists have it the better. Again, it was conveyed to me at the beginning of our process that these two reports were not available for the public domain. I have requested that it be made available and I now wait for the answer to my request.□

You can imagine the knock-on effect of not even having the Metallurgic Water Balance Diagram! See above□

They also seem to be silent on the detailed job descriptions?□□I have not heard from the DME regarding the circumstances of the acceptance of the Bongani MR application. I am trying to get a suitable date for a meeting with DME. As soon as I have an answer to your request I will inform you accordingly.

You offered to assist. Any luck? See above□

Kind regards□

Dr. Bennie van der Merwe□
Interim Chair VC”

13. Also see, in this regard, the comment of Coalition member **Herman Grütter** (Ph. D., P. Geo.) addressed to Withers Environmental Consultants:

“2. Comment and demand: Mineral Resources

Upon review of the available documentation it strikes me as unprecedented that a Mining Right Application could be contemplated when very little information is known or disclosed pertaining to the geology of the Riviera granite and surrounding wallrock, and the distribution of the related W-Mo mineralization. The 23-page extended abstract of Walker (1983) appears to be the single and only primary source of sketchy geological information related to the mineralization. That work was never peer-reviewed, nor is there any independent verification of the "mineral reserve" reported there-in (Walker, 1993, p.13) and subsequently cited in Rozendaal et al (SA Journal Geology, Vol. 97, pp 184ff, June 1994) and the SRK Consulting report "Riviera Tungsten Groundwater Impact Assessment". The information regarding W-Mo mineralization currently available cannot be considered remotely compliant with SAMREC, JORC or equivalent internationally-accepted code for reporting of mineral resources.

I am a registered, fully practising P. Geo. in British Columbia and consider it incomprehensible that several application documents refer to the W-Mo mineralization at Riviera as falling within a "mineral reserve" category. The so-called "mineral reserve" at Riviera cannot currently be verified and since it is highly material to the Mining Right Application, the absence of a declared mineral resource could be considered grounds for suspension of the application. As an IAP and a P. Geo. I am hereby demanding:

2.1: public disclosure of a mineral resource for the properties affected, declared to SAMREC or equivalent reporting code, and clearly signed off by Competent or Qualified Persons (CP or QP)

2.2: *alternatively, documentation that a SAMREC-compliant mineral resource is to be declared in future, plus disclosure by the Applicant of anticipated exploration activities and related exploration budget to support a resource declaration*

For clarity: SAMREC = SOUTH AFRICAN CODE FOR REPORTING OF MINERAL RESOURCES AND MINERAL RESERVES. Promulgated March 2000 under the auspices of the South African Institute of Mining and Metallurgy

3. *Request for additional information*

Upon review of available documentation it is apparent that Venmyn Rand are compiling, or have already compiled, a Concept Study (or similar study) dealing with establishment of an open-pit mine with related mineral processing facilities, tailings dumps, slimes dams and ancillary site infrastructure and services at Riviera. I am hereby requesting access to that entire work, or any other similar entire work, in order to evaluate the impacts covered by the current Mining Right Application.”

14. It is simply unacceptable for Bongani Minerals Pty Ltd to refuse I&APs access to crucial information regarding the mining process, ore analysis and estimated water use. Without this information, I&APs cannot assess:
 - a. the potential impact on water resources;
 - b. the risk of water pollution through the leaching of metals; or
 - c. the financial viability of the proposed mine (see paragraph 52 below).
15. Regulation 49(1)(d) of the MPRDA Regulations requires the scoping report to:

“identify and describe reasonable land use or development alternatives to the proposed operation, alternative means of carrying out the proposed operation, and the consequences of not proceeding with the proposed operation”
16. There are three separate aspects to this requirement, namely:
 - a. Identification and description of *“describe reasonable land use or development alternatives to the proposed operation”*;
 - b. Identification and description of *“alternative means of carrying out the proposed operation”*; and
 - c. Identification and description of *“the consequences of not proceeding with the proposed operation”*.
17. Only the second requirement has been addressed in the DSR, namely on page ii, as part of the Executive Summary, which describes alternative design alternatives for the mine.
18. The third requirement is addressed in a single line in the DSR, namely *“The no-go alternative will also be considered, in which the status quo for the area will remain, viz. that of agriculture and livestock farming”* (DSR p. ii).

Unfortunately it is not sufficient for compliance with Regulation 49(1)(d) to defer this description to the environmental impact assessment – Regulation 49(1)(d) specifically requires the consequences of not proceeding with the proposed operation to be identified and described in the Scoping Report.

19. Land-use of the affected area is well established, with the livelihood of many existing businesses and workers dependent on existing land-use, namely agriculture. It is particularly problematic that alternatives to the proposed mine, and the many positive consequences of not proceeding with the mine, are not identified and described as required by the Regulations. This means that the Department is not provided with all relevant facts to make a decision on this application. This non-compliance with Regulation 49 taints the remainder of the DSR by ensuring inadequate and misleading representation of the facts applicable to the proposed mining area through omission of relevant information.
20. In addition, Regulation 46(a) requires the Social and Labour Plan (Appendix 7) to contain “a preamble which provides background information of the mine in question”. Appendix 7 contains no such preamble, and no information at all on the mine or the mining company itself, such as what other mines Bongani Minerals Pty Ltd owns. All that we do know about Bongani Minerals Pty Ltd from the Social and Labour Plan is its employment equity statistics, indicating that all six of its top management positions are held by whites.
21. It is therefore submitted that the DSR itself is non-compliant with both Regulations 46 and 49 and should be rejected on this basis alone.
22. It is further submitted that the procedure followed thus far has not provided interested and affected parties (I&APs), including the Verlorenvallei Coalition, with sufficient notice and time for meaningful consultation in accordance with Regulation 3 of the MPRDA Regulations. The reasons for this are as follows:
 - a. A notice was published in *Die Weslander* (a weekly regional newspaper sold in Malmesbury, Moorreesburg, Piketberg, Porterville, Riebeeck-West and Riebeeck-Kasteel, Darling and Yzerfontein) on 22 April 2009, a public holiday due to national and provincial elections scheduled for that day.
 - b. The notice in *Die Weslander* on 22 April 2009 and in *Die Burger* on 23 April 2009 gave no more than 7 calendar days’ notice (4 or 5 working days’ notice) of the public consultation meeting on 30 April 2009. This is despite the fact that a number of the I&APs on the provisional I&AP list (and see criticism of the compilation of this list in the comments submitted by Coalition member **Nick Taylor**) are clearly not resident in the Piketberg area.
 - c. This is even more problematic because, at this stage, there was still an application for review of the Department of Minerals and Energy’s decision to grant a prospecting right over the affected properties to Bongani Minerals Pty Ltd. The authors of the DSR would have been well aware of this pending court application and the bitter opposition of members of the Verlorenvallei Coalition to the prospecting right.

- d. In any event, the mining right application was accepted by the Department of Minerals and Energy on 26 March 2009. From this date, it took nearly a month to place the advertisements in *Die Weslander* and *Die Burger* on 20 and 23 April 2009 respectively (the first being a public holiday), giving I&APs only 7 calendar days' notice of the public consultation meeting on 30 April 2009. This last-minute notice was either given deliberately to prejudice I&APs, or more likely illustrates the lax approach of the applicant to public consultation and the views of I&APs.
- e. Although the published notices themselves state that the DSR was available from Withers Environmental Consultants or in the Piketberg Library from 23 April 2009, many I&APs were not aware of the application or the DSR until a number of days later. Some I&APs received the report via a journalist at the *Cape Times* on 29 April 2009.
- f. On 20 May 2009, faced with the enormous task of reviewing the entire DSR plus all the specialist reports attached to the DSR (comprising more than 249 pages) within less than one month, at least two I&APs requested a week's extension to submit comments, forcing Coalition members to request a week's extension (which was granted).
23. See also other and more detailed procedural complaints in the comments of Coalition member **Nick Taylor**. Note, in particular, his complaint about inadequate I&AP registration facilities, audio-visual facilities and the manner in which the meeting on 30 April 2009 was conducted, including an inappropriate and offensive reference to coloured delegates at the meeting as "die volk".

The Constitution

24. On page 2 of the DSR, it is alleged that "the proposed Open-Cast mining development strives towards upholding" Section 24 of the Constitution.
25. The DSR then proceeds to quote – inaccurately – Section 24 of the Constitution:

Section 24(b)(iii) as represented in DSR page 2	Accurate version of Section 24(b)(iii)
<p>"... every person shall have the right to the following:</p> <p>(a) An environment that is not harmful to their health nor well being; and</p> <p>(b) To have that environment protected for the benefit of present and future generations, through reasonable legislative and other measures, which:</p> <ul style="list-style-type: none"> • prevents pollution and ecological degradation; • promotes conservation; and • secures justifiable economic and social development and use of natural resources while promoting 	<p>"Everyone has the right -</p> <p>(a) to an environment that is not harmful to their health or well-being; and</p> <p>(b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that -</p> <p>(i) prevent pollution and ecological degradation;</p> <p>(ii) promote conservation; and</p> <p>(iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development."</p>

justifiable economic and social development.”	
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26. We will assume that this was a typographical error by the authors of the DSR. The difficulty is that it is a fundamental error. With respect, it is hard to imagine how a twenty-year open-cast mine would “*protect the environment for the benefit of present and future generations*”. The DSR itself points out many potentially detrimental environmental impacts of the proposed mine, making it extremely unlikely (a) to constitute ecologically sustainable development and use of natural resources, and (b) to prevent pollution and ecological degradation.

The National Environmental Management Act

27. The DSR makes no mention of the environmental management principles contained in Section 2 of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA). This is crucial, because the MPRDA explicitly makes itself subject to those principles in its Section 37(1)(b), and provides that the principles apply to all prospecting and mining operations, as the case may be, and any matter relating to such operation; and serve as guidelines for the interpretation, administration and implementation of the environmental requirements of the MPRDA.

28. These principles include the following:

“(2) *Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably.*

(3) *Development must be socially, environmentally and economically sustainable.*

(4)(a) *Sustainable development requires the consideration of all relevant factors including the following:*

(i) *That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;*

(ii) *that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;*

(iii) *that the disturbance of landscapes and sites that constitute the nation’s cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;*

(iv) *that waste is avoided, or where it cannot be altogether avoided, minimised and reused or recycled where possible and otherwise disposed of in a responsible manner;*

- (v) *that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;*
 - (vi) *that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;*
 - (vii) *that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and*
 - (viii) *that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.*
- (b) *Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.*
 - (c) *Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.*
 - (d) *Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human wellbeing must be pursued and special measures may be taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination.*
 - (e) *Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle.*
 - (f) *The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured.*
 - (g) *Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognising all forms of knowledge, including traditional and ordinary knowledge.*

- (h) *Community wellbeing and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means.*
- (i) *The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment.*
- (j) *The right of workers to refuse work that is harmful to human health or the environment and to be informed of dangers must be respected and protected.*
- (k) *Decisions must be taken in an open and transparent manner, and access to information must be provided in accordance with the law.*
- (l) *There must be intergovernmental coordination and harmonisation of policies, legislation and actions relating to the environment.*
- (m) *Actual or potential conflicts of interest between organs of state should be resolved through conflict resolution procedures.*
- (n) *Global and international responsibilities relating to the environment must be discharged in the national interest.*
- (o) *The environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage.*
- (p) *The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment.*
- (q) *The vital role of women and youth in environmental management and development must be recognised and their full participation therein must be promoted.*
- (r) *Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure."*

29. On page 2 of the DSR, the suggestion appears to be that the application for an environmental authorisation in terms of Section 24 of NEMA in relation to activities listed in terms of R.386 and R.387 must be made to the Department

of Mining. This is correct only insofar as it relates to “[r]econnaissance, exploration, production and mining as provided for in the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), as amended in respect of such permits and rights” (Activity 7). All other listed activities associated with the mining operation, such as road building (Activity 5) or dam building (Activity 6) will require an environmental authorisation from the Department of Environmental Affairs and Development Planning in the Western Cape.

30. As at the date hereof, the Coalition has not received formal notice of any such application.

The National Environmental Management: Biodiversity Act

31. On page 3 of the DSR, it is stated that “[i]t is not expected that the footprint of the proposed Open-Cast mine will impact on any nationally protected vegetation types.”
32. Firstly, it is important to note that the actual “footprint” of the mine is 555 ha, which is the total “mine lease area” required for the pit area and all the structures and facilities associated with the mine, including waste dump, slimes dam and plant area (DSR page 4).
33. Secondly, members of the Coalition report sightings in the Verlorenvallei of a number of species listed on the Threatened and Protected Species lists issued under the National Environmental Management Biodiversity Act, 2004 (Act 10 of 2004), including:

Endangered

- a. blue crane (*Anthropoides paradiseus*) (photograph available);

Vulnerable

- b. leopard (*Panthera pardus*) (the presence of leopard in the Verlorenvallei area was confirmed by a 1981 survey by Stuart (in CSIR Research Rep. 431.)
- c. Peregrine falcon (*Falco peregrinus*)
- d. Martial eagle (*Polemaetus bellicosus*)
- e. Lesser kestrel (*Falco naumanni*)

Protected

- f. White Steenbras (*Lithognathus lithognathus*)
- g. Armadillo Girdled Lizard (*Cordylus cataphractus*) (photograph available)
- h. African Marsh Harrier (*Circus ranivorus*)
- i. Cape clawless otter (*Aonyx capensis*) (photograph available)
- j. Honey badger (*Mellivora capensis*)

- k. Cape fox (*Vulpes chama*)
34. In addition, Coalition members report sightings of the Verlorenvlei Redfin, listed on the IUCN's Red List of Threatened Species.
35. For more information on the biodiversity status of the Verlorenvlei, see the comments submitted by Verlorenvlei Coalition member **WESSA (Philippa Huntly)**.
36. In addition, Appendix 4 to the Scoping Report makes repeated references to areas that have endangered statuses in terms of the IUCN's Red List of Threatened Species and the National Spatial Biodiversity Assessment (2004). For example:
- a. *"All Swartland Shale Renosterveld areas are conservation priorities as they are "Critically endangered" nationally, but particularly important are the slopes around the northwest base of the Piketberg, which have produced a number of new species in the last few years." (page 10)*
 - b. *"The Leipoldville Sand Fynbos vegetation type is classified as "Endangered" nationally primarily as a result of it being heavily targeted for agriculture..." (page 10)*
 - c. *"The Cape Lowland Alluvial vegetation is classified nationally as being a "Critically endangered" vegetation type. Every effort should be made to restore as much as possible of the transformed areas potentially supporting it." (page 15)*
 - d. *"The Verlorenvlei wetlands support an undescribed 3 m tall species of Psoralea that is endemic to the Sandveld, and is Red Data listed as Endangered" (page 17)*

National Environmental Management: Air Quality Act

37. The DSR fails to record that the metallurgical plant would require an atmospheric emissions licence under the National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004) (AQA). As at the date hereof, the Coalition has not received formal notice of any such application.
38. AQA also imposes other general legal obligations in relation to air quality, including emissions to air from mining and metals processing.

National Environmental Management: Waste Management Act

39. The DSR fails to record that both the mine and the metallurgical plant would require a waste management licence under the National Environmental Management: Waste Management Act, 2008 (Act 59 of 2008) (WMA). The WMA also imposes other general legal obligations in relation to waste generation and management.
40. As at the date hereof, the Coalition has not received formal notice of any such application.

Environment Conservation Act

41. The DSR lists the Environment Conservation Act, 1989 (Act 73 of 1989) as part of the legal framework applicable to the proposal, but fails to mention that this act has been repealed by the WMA, which comes into effect on 1 July 2009.

Land Use Planning Ordinance

42. On page 45 the DSR refers to a “temporary change in land use” from Agriculture Zone I to Industrial Zone II in terms of the Land Use Planning Ordinance, 1995 (Ordinance 15 of 1985) (LUPO) to operate the mine. Presumably this “temporary change” is in fact for the life of the mine, i.e. 18-19 years.
43. As at the date hereof, the Coalition has not received formal notice of any such application to the local authority.

Ramsar International Convention on Wetlands

44. The Convention on Wetlands of International Importance (commonly known as the Ramsar Convention) came into force on 21 January 1975 and provides a framework for the conservation and wise use of wetlands and their resources. There are presently 118 contracting parties (including South Africa, who became a member on 12 March 1975). The DSR, however, neglects to mention this international treaty under the section “Legal and Policy Framework”.
45. The obligations of the parties joining the Ramsar Convention are:
 - a. to designate at least one wetland for inclusion in the List of Wetlands of International Importance (Ramsar List);
 - b. to promote the wise use of all wetlands;
 - c. to stem the loss of wetlands;
 - d. to promote the training of personnel; and
 - e. to promote the implementation of parties’ obligations under the Ramsar Convention.
46. The benefits of a Ramsar status for a wetland include:
 - a. recognition at a national level and by the international community as being of significant value not only for the country, or the countries, where they are located, but for humanity,
 - b. better protection by government, through high level political commitment to maintain the sites ecological character,
 - c. increased opportunities for tourism,
 - d. greater access to expertise and training opportunities,

- e. implementation of management plans which include wise use of resources, and development of monitoring programmes
 - f. and lastly the profile of the wetland raised through its promotion as a focal point or flagship for demonstrating conservation, good management and wise use of wetlands in the region.
47. According to the Department of Environmental Affairs and Tourism:
- “Wetlands are highly productive ecosystems that provide resources that are of economic and social importance. They provide significant benefits to humans in general because of the ecological functions they perform in the global ecosystem. People may benefit directly from wetlands products such as fish, rice, timber, fuel-wood, reeds, and medicine or indirectly from their functions such as flood control, nutrient cycling, erosion control, storm protection and ground water recharge. The most important resource from wetlands is water that is needed for the survival of all kinds of life. Wetlands can also be utilised for recreational activities such as game viewing, hunting and fishing or just to be appreciated for their mere existence and scenic beauty.*
- Wetland loss is due to ignorance and misunderstanding of their role. Many wetland areas have been lost. Direct losses are due to their conversion to intensive agricultural, industrial and residential uses, while indirect losses are due to changes in their hydrological regime.”* (www.deat.gov.za)
48. 1843 wetland sites across the world have been designated under Ramsar. The Verlorenvlei is one of only 19 Ramsar wetland sites in South Africa designated since 1975 (these are De Hoopvlei, Barberspan, de Mond State Forest, Blesbokspruit, Turtle beaches/Coral reefs of Tongaland, St Lucia System, Langebaan Lagoon, Wilderness Lake System, Verlorenvlei, Orange River Mouth Wetland, Kosi Bay System, Lake Sibiya, Natal Drakensberg Park, Ndumo Game Reserve, Seekoeivlei and Nylsvley Nature Reserve).
49. According to DEAT:
- “Verlorenvlei (designated 28 June 1991) is one of the most important estuarine systems in the Western Cape and one of the largest natural wetlands along the West Coast. It is also one of the few coastal fresh water lakes in the country. The wetland is regarded as one of the 10 most important wetlands for wading birds in the south-western Cape, being a particularly important feeding area for the white pelican and supporting a number of threatened bird species.”* (www.deat.gov.za)
50. Against this background, the DSR itself points out the risks that the proposed mine poses to the Verlorenvlei Ramsar site, which clearly contradicts South Africa’s international law obligations:
- “Possible impacts include the deterioration in surface and groundwater water quality resulting from mining activities, affecting the Krom Antonies Rivier and the ecologically sensitive Verlorenvlei.”* (page 37)
51. We also refer to a comment submitted on behalf of Coalition member **WESSA**:

“The internationally recognised Ramsar Site of Verlorenvlei is fed by the Krom Antonies river. With over 50% of SA’s wetlands having already been lost it is crucial that the remaining wetland systems are protected. The important ecological functions provided by wetlands, such as flood attenuation, water storage and purification cannot be ignored in light of climate change and increasing stresses on our county’s precious freshwater resources. The Krom Antonies river would be severely and negatively affected should the above proposed mining application be approved and go ahead. This would in turn negatively affect Verlorenvlei. In cases where Ramsar Sites are not managed to an acceptable standard they become in danger of losing their Ramsar Status, which is serious, both in that it is indicative of environmental degradation and in that it reflects poorly at an international political level. South Africa, as signatories to the Ramsar Convention and as a member nation of the International Union for the Conservation of Nature (IUCN) has significant responsibilities in terms of the conservation and protection of its Ramsar sites. In our view, permitting mining in the catchment that feeds Verlorenvlei, will compromise those commitments.”

GEOLOGICAL AND FINANCIAL VIABILITY OF THE PROPOSED MINE

52. As set out above, it is not clear how Bongani Minerals Pty Ltd has planned a large mining operation with extremely limited geological and mineralogical information available to it. At the same time, public information available on the tungsten deposit indicates that the grade of the deposit is at best marginal.¹
53. In addition, Bongani Minerals Pty Ltd has apparently refused I&APs access to such information as is available and has been produced for Bongani Minerals Pty Ltd, such as the Vermyn Concept study.
54. Over and above our objection to this refusal of access to crucial information, the Coalition also formally questions the financial viability of the proposed mine. Considering that:
 - a. the proposed mine poses numerous risks to the environment, as confirmed by the specialists in the DSR;
 - b. and is likely to have major impacts on the livelihoods of the community in the Verlorenvallei; and
 - c. the proposed mine has apparently been planned with limited geological and mineralogical data,

the Coalition formally demands that Bongani Minerals Pty Ltd provides details of their calculations, with supporting evidence, to support their contention that the proposed mine is financially viable. We appeal to the Department of Mining to require Bongani Minerals Pty Ltd to make such information, which

¹ For example, see Rozendaal, A. and Gresse, P.G. 1994 “Structural setting of the Riviera W-Mo deposit, Western Cape, South Africa” in *South African Journal of Geology* Jun94, Vol. 97 Issue 2, p184.

should include at least the mining work programme submitted to the Department in terms of Regulation 10 and 11, available to I&APs.

FINANCIAL, SOCIO-ECONOMIC AND LABOUR ISSUES

Overall financial impact

55. On page 34 of the DSR, it is stated that “[t]he Riviera Tungsten Project will provide an initial direct investment into the local Bergrivier economy of between R1,2 and R1,5 billion over the first five years of operations.”
56. No details are provided as to how these amounts are made up, so it is exceedingly difficult to assess the accuracy of this statement. For example, is it suggested that Bongani Minerals Pty Ltd will acquire all mining equipment within the Bergriver Municipality? It is essential for meaningful public participation that the final Scoping Report provides detailed information on how these amounts are constituted.
57. In addition, because the DSR does not comply with Regulation 49(d) and does not identify and describe “the consequences of not proceeding with the proposed operation”, it also does not provide comparative figures so that the alleged direct investment by the mine can be compared to existing capital investment in the area.
58. Page ii of the DSR lists under “Opportunities” the following: “*Opportunities related to socio-economic benefits, both to the surrounding farming community, to the Government and local Municipality (taxes, foreign revenue, rates and taxes, increased buying power of increased population etc.)*”.
59. With regard to “*increased buying power of increased population*”, what is not addressed, of course, is the impact of decreased buying power of those farmers and farmworkers who will lose their livelihoods as a result of the mine. Clearly this is information that should be included in the assessment.
60. On page ii of the DSR, as another opportunity created the mine, “*profits of the mine owners*” are mentioned in passing. No indication of the amount of such profits is given for the purpose of comparing such profits to livelihoods that will be lost as a result of the mine, or other detrimental impacts.
61. On page 31 of the DSR, it is stated that “*A need exists to align the development needs/priorities of communities with the social investment objectives of the Riviera Tungsten Project that emanate from the Local Economic Development Programme.*” This approach is of great concern to the Verlorenvallei Coalition, and confirms our fears that the proposed mine would destroy the livelihoods and wellbeing of the Verlorenvallei communities. Is it not perhaps the project that needs to align itself with development needs/priorities of the community?
62. On page 39 of the DSR, it is stated that “*[t]he potential positive impacts of the mine on the socio-economic environment of the region are seen to be HIGH. It should be noted that this impact will only be felt for the approximate 20 year lifespan of the mine. The recommendations of the study, applicable impacts*

and mitigation will be assessed during the EIA Phase of the project. Mitigation measures will be included into the EMP.”

63. The Verlorenvallei Coalition strongly believes that the negative social and economic impacts of the mine (including the reduction in capital investment by local business as a result of the mining application) have not been properly identified and described, and insists that these are included in the expanded studies conducted under the EIA. Note in this regard the comment of Coalition member **Nick Taylor** in his written comments submitted: *“The impact has already been felt with farms currently on the market becoming unsaleable, worker morale low due to uncertainty, and a high volume of anger and resentment preoccupying many of the local community.”*
64. Even if these negative impacts have been taken into account, it is crucial to note that, while the negative impacts will last for generations, the alleged positive impacts are, by the DSR’s own admission, short-term in nature.
65. For details on the immediate anticipated impact of the mining operation on the production and export operations of those farms, as well as on the value of affected properties, see the comments submitted by Verlorenvallei Coalition member **Kromvlei Kosie van Niekerk Boerdery Pty Ltd (H.J Horne)**.
66. We also specifically refer you to the comments submitted on behalf of Verlorenvallei Coalition member the **Moutonshoek Employees’ Association (Johannes Erasmus)**:

“Daar is nagenoeg vyfhonderd permanente en duisend seisoenale werkers wat amper heel jaar werk kry in die Moutonshoek Vallei. Mense is opgelei in verskeie dissiplines van Landbou. Ons beklee ook poste vanaf die laagste vlak tot middel en top bestuur op die verskeie boerderye. Ons werk met vee, resiesperde, aartappels, grane, rooibostee en uitvoer vrugte (druwe en sitrus). Met die oopgroef myn sal ons almal ons werk verloor. Ons het gekies om Landbouers te wees en om in vrede hier in die pragtige natuurskoon te woon. Dit sal arrogant wees om te aanvaar, dat ons sal wil meeding vir die handjievool gespesialiseerde poste wat ‘n oopgroef myn sal aanbied.

As die myn goedgekeur word gaan al die skoolkinders van die vallei daaronder lei. Die laerskool sal moet toemaak, want dit gaan ‘n gesondheid risiko wees. Die meeste werkers in die vallei is vroue, waar gaan hulle werk kry dus hoekom ons nie kan toelaat dat die myn hier kom nie. Die gemeenskap is ongelukkig oor die koms van die myn, omdat hulle bly al vir ‘n leeftyd in die vallei. Ons praat van 20 na 30 jaar indien langer. Alle voordele wat ons tans besit bv. water, elektrisiteit, gratis behuising en om elke dag ‘n werk te hê gaan ons verloor. Wat gaan van die bejaarde mense word? Hulle het al die jare gratis verblyf gehad, waar gaan hulle nou heen. Baie van die mense het al verblyf reg in die vallei.”

67. On page 33-34 of the DSR, it is stated that *“Umcebisi Business Advisers (Pty) Ltd believes that agglomeration benefits associated with the Riviera Tungsten Project could be a catalyst for establishing linkages between businesses, growing existing businesses internally in the area and improving the social welfare of the community. These linkages would further enhance the potential*

of businesses to generate additional revenue and employment for communities within the region of the Project and in the Western Cape by exploiting the inter-regional affects between the regions.”

68. To say that the Verlorenvallei community – which would be ripped apart by the mine as farmers would shut down operations and retrench workers, as the primary school would be forced to close, and lifelong residents of the area would have to find new homes – will be more unified as a result of the mine, is simply far-fetched.

Misrepresentation regarding “current underdevelopment”

69. On page ii of the DSR, the following statement is made: *“There is a high level of underdevelopment in the Piketberg Magisterial District”*.
70. However, the Social and Labour Plan (Appendix 7, p. 25) itself indicates that:
- a. the Bergriver economy makes a significant contribution to government income (6.14% of the turnover generated by levy-paying firms in the West Coast District in 2005-6); and
 - b. the Bergrivier economy grew at a rate of 10.33% from 2004-6, in contrast with the rest of the West Coast District (decline of 5.03%) - that is significantly more than the national economy.

Misrepresentation regarding “current unemployment”

71. On page ii of the DSR, the following statement is made: *“There is a high level of unemployment in the Piketberg Magisterial District”*.
72. The Social and Labour Plan (Appendix 7, p.22) shows that there is only 6.16% unemployment within 20km of the proposed mine; this goes down to 4.45% within 60km of the proposed mine and up to 5.19% for the entire Bergriver Municipality. Not by any stretch of the imagination can this be described as “high unemployment”, when the national unemployment average exceeds 20%.
73. In addition, farmers and other enterprises operational in the Moutonshoek area regularly complain of the lack of workers, skilled and unskilled. See, for example, an extract from a telefax from Alpha Civils dated 30 April 2009 (contact Fanie du Toit, Alpha Civils, 082 773 3242) who has been engaged to repair a bridge in the Moutonshoek area:

Figure 3: Extract from telefax from Alpha Civils dated 30 April 2009

1.1) Moutonshoek site:

On 25 February 2009 we contacted the liaison officer, Mr. Philip Daniels of the Roads Infrastructure Branch in Ceres. With his input and the help of a person only known as Elizabeth, we arranged for 10 labourers from the Redelinghuys area to start on 26 February 2009. On 26 February 2009 only two of the labourers reported for work. From 12 March 2009, none of labourers from the Redelinghuys area ever reported for work again.

On 27 February 2009 we arranged for 8 labourers from the Eendekuil area, with the help of Mr. Daniels and a person known as Christo. They could only find 4 to start on 02 March 2009, but none of the labourers reported for work. On the 2nd and 3rd of March, two labourers from the Redelinghuys-area turned up for work. On the 4th of March, 4 labourers were present.

On 7 March, we recruited and transported at our own cost six labourers from the Citrusdal area, some 40km from the site.

Despite firm commitments from the recruited labourers, very few are dependable and arrive on site for work as agreed. From the 2nd of March, we have had between 0 and 10 unskilled labourers on the site. Due to the lack of skilled labourers and the haphazard availability of unskilled labour, we have been forced to source our own labour from Worcester. This incurs additional cost to our Company as any non-local labour has to be provided with lodging.

...

The majority of labour from this area mostly employed on farms and do not seem physically capable of performing heavy manual labour to the required standard.

There is also a further cost implication as each new labourer needs to undergo an induction training course. With the staff turnover as it is currently, a lot of time and money is unnecessarily being spent on this training. We have also found that as soon as a skill has been transferred, the labourer deserts and we are left having to train another one to take his place.

From the above it is clear that we have taken all possible steps to employ local labour from the target area to meet the requirements without much success.

74. Also see the following comment submitted by Coalition member **Namaquasfontein Boerdery Trust:**

"We farmers all have to fetch labourers as far afield as Kuruman, Prince Albert, Ceres and Cape Town for example. Table Grape farms in the immediate area of Piketberg employ over 6000 staff alone (BTPV). (This without the Expofruit packshed, PPC Cement and the many other fruit farms on top of the mountain.). Alpha Civils (Worcester) could not comply with the

prescribed 20% local content of their workforce. This means that they could not find 10 local employees in the agricultural ‘off’ season.”

Employment to be created by the mine

- 75. On page 32-33 of the DSR, it is stated that the estimate of the employment required to establish the Tungsten Mine and erect associated facilities is approximately 320. This is misleading, since:
 - a. “note once again that these jobs are of a temporary nature and will slowly fall away once construction of the infrastructure and superstructure components are completed” (Appendix 7, p.29); and
 - b. even in its own estimates, the DSR (p.33) relies on no more than 20% use of local labour. 20% of the anticipated 320 jobs created during the construction phase amounts to only 64 jobs.
- 76. Similarly, the estimate of 407 “direct new jobs” created by the mine in its operations phase should be assessed in view of the Social and Labour Plan’s own assumption of a 20% take-up of local labour. This brings the figure of 407 down to just over 81 new jobs that will likely be offered to local workers.
- 77. No mention is made in the DSR of research conducted or to be conducted as part of the EIA on unemployment that will be caused by the mine. Any EIA that does not include research on actual current employment that will be affected by the mine would be fatally flawed. The Verlorenvallei Coalition estimates that at least 500 people are permanently employed on the farms that will be destroyed by the mine, and the jobs of at least 1000 seasonal workers will be lost as a result of the mine (see the comments of Verlorenvallei Coalition member the **Moutonshoek Employees’ Association (Johannes Erasmus)**). Many of these workers are women who are unlikely to be employed by the mine.

Training, skills development and the forced closure of a school

- 78. On page 30 of the DSR, many broad undertakings are given regarding skills development by the mine.
- 79. What is not mentioned, again because of the DSR’s non-compliance with Regulation 49(1)(d), is existing training and skills development programmes in the valley.
- 80. For example, the farm Namaquasfontein provided the following training to workers from 1997 to 2008:

Figure 1: Training for Namaquasfontein workers 1997-2008

Boskop opleiding	Vragmotor instandhouding (Steven)	13.11.1997
Voluit Vrou	Kaapse vroue forum (Alle vroue)	Mei .2003
Tafeldruif kort kursus	Goudini SAWWV (Boon)	2003 elke jaar
Home Based care	Vroue forum (Voorvrou)	2004 en 2005

ABET Kursus	Wes kaap - Dept van onderwys	03.02.2004
Veilige hant. V Plaagdoders	Praktika (Frans April Colin)	2003 elke jaar
Trekker operateurs	Praktika (Frans April Colin)	2003 elke jaar
Noodhulp	First Aid Academy CTN (Frans,Wilma)	03.08.2006
Brandbestryding	Concordia Forest Indust. (Abraham)	01.12.2006
Arbeidswetgewing	Hopkins Calvert (Deb)	08.10.2007
Vigs opleiding en bewus	DPFT / SPT (Almal)	Mei en Sep 2007
Gesondheid en Veiligheid	Hopkins Calvert (Sophia en Magdalene)	03.07.2008
Boordmonitering	Terason (Boet en Lökkies)	15.09.2008
Sektorale vasstelling	Praktika (Almal)	03.06.2008
Vurkhyser opleiding	Piet Wessels Opl. (Steven en Frans)	20.06.2008
Sedex Opleiding	Praktika (Deb)	11.08.2008
Ethical Trading	Acert (Deb)	27.1.2009
Natures Choice Audit	PPECB / CMI	Elke jaar
Global gap Audit	PPECB / CMI	Elke jaar
Stud Managers Course	Onderspoort Pretoria	Julie 2006

81. The farm Kromvlei provided the following training to workers from 2002 to 2009:

Figure 2: Training for Kromvlei workers 2002-2009

Naam van Kursus	Opleiding Instansie	Hoeveel het bygewoon
Bestuurslisensie	Zebra Bestuurskool	1
Volwasse Onderrig	Piketberg Community Learning Center	11
Veilige Hantering van Landbou Chemikalieë	Praktika	5
Neem Leiding in Werksplek	Praktika	9
Berekeninge in Werksplek	Praktika	8
Bestem om te bestuur	Praktika	3
Rek jou Rande	Praktika	33
Vigspraatjie	Praktika	53
Veilige Hantering van Landbou Chemikalieë	Praktika	5
Volwasse Man	Praktika	18
Voluit Vrou	Praktika	12
Neem Leiding in Werksplek	Praktika	1
People's Profit	Kaapse Vroue Vorum	9
Wingerdmonitering	Viking	5
New Holland Trekker Opleiding	Kosie Van Niekerk Boerdery - Werkswinkel	5
Basic Fire Training	Boland Fire Engineering	2
Higiëne en Risiko Analise	Kromvlei	53
Gesondheid en Veiligheid Kursus	Annie Tattersall Consultancy	2

Veilige Hantering van Druie	Kromvlei Pakstoor	200
Noodhulp Opleiding	Praktika / Techilaw	2
Spanbestuurder Riglyne	Kromvlei	15
Higiëne en Risiko Analise	Kromvlei	53
Neem Leiding in Werksplek	Praktika	11
Bestem om te bestuur	Praktika	3
Spanbou Sessie	Eli	36
Arbeidswetgewing	Eli	4
Selfbestuur	Eli	36
Arbeidswetgewing	Eli	11
Spanbou - Adminpersoneel	Eli	1
Konflikhantering	Praktika	3
Higiëne en Risiko Analise	Kromvlei	53
Vurkhyser Opleiding	Praktika	1
Vurkhyser Opleiding	PW Training	1
Beroeps gesondheid en Veiligheid	Kaapse Vroue Vorum	2
Beroeps gesondheid en Veiligheid	Praktika	2
Ons Huwelik	Praktika	10
Vurkhyser Opleiding	PW Training	2
Aksie Forum Opleiding	Eli	2
Alkohol Rehabilitasie	Toevlug Sentrum - Worcester	3
Bestuurslisensie	Zebra Bestuurskool	1
Bestuurslisensie	Zebra Bestuurskool	1
Bestuurslisensie	Zebra Bestuurskool	1
Hoe dissipleneer ek my kind	Praktika	30
Trekker Operateur	Praktika	5
Verhoudinge	Praktika	38
Global Gap en Nature Choice	CMI - Ceres	1
Free to Grow - Money Sense	Hopkins Calvert	22
Free to Grow - Life Skills	Hopkins Calvert	31

82. Coalition member Namaquasfontein Boerdery Trust provided the following additional information in its comments:

- *“ABET and basic literacy have been offered on an ongoing basis for over 10 years (Lilian van Louw, PALA)*
- ...
- *We donated 6 ha of land opposite the Karookop School 6 years ago, for a Sports facility, Garden project and Community hall. These facilities are in the process of being built with financial assistance from Lotto and logistics from the farmers in the valley. The Provincial Department of Agriculture is very involved as well (Hannes Pienaar). The netball/ tennis court is 90% complete and the automatic irrigation system is been installed for the rugby field. Indigenous trees have been planted and the first vegetables were harvested in the summer of 2008/2009. Through the massive efforts of the local Headmaster Henk Brand (2007 winner of Primary Headmaster in*

Western Cape and 2nd nationally), the children of Karookop School will also soon have good sports facilities.

- *Both corners of the valley have good creches at Namaquasfontein and Kromvlei.*
- *...*
- *We also get audited three times a year by independent auditors for Good Agricultural Practice and Tesco Nature's Choice (These two mainly for traceability of sprays, good agricultural practice and some social responsibility) and then the Ethical Trading Audit, which focuses mainly on labour issues viz safety in the workplace, conditions of service, etc. and includes interviews with staff and site inspectors of the workplaces and staff homes. The results are posted on a website.*
- *Our skills development ledgers are perused and verified, and course attendance checked. We live 100% transparent lives from that perspective. Happily – because we are an interdependant COMMUNITY, that is standing in line to be shattered by the proposed mine.”*

83. In addition, and again because of non-compliance with Regulation 49(1)(d), no mention is made of fact that the mine would force the closure the Karookop Primary School. This school, built in 1964 by local farmer Nikkie Smit, currently houses 87 children from the valley, with another 30 joining the school in 2010 when the nearby school at Kliphoek closes. Karookop Primary School's teachers are highly regarded by the Department of Education and have received numerous awards, including second best primary school principal. The principal, Mr Henk Brand, can be contacted on admin@karookopps.wcape.school.za.
84. The school also houses a computer centre with 10 computers where adults have been receiving computer literacy training for the past three years. All other adult education in the valley is presented at this school.
85. If the proposed mine proceeds as planned by Bongani Minerals Pty Ltd, Karookop Primary School would be situated a few hundred metres from the mining site, and clearly children cannot be allowed to go to school at such an unsafe site. All 117 children would have to relocate to schools in Eendekuil or Piketberg, with concomitant transport and supervision problems created for the parents of these children.
86. We draw your attention to the following statement submitted by the owner of **Karookop Farm, Jacobus Smit** (another member of the Verlorenvallei Coalition):

“Ek maak beswaar teen die myn aangesien die Karookop SKOOL op my grond is en ook my eiendom is. Die dept. van Vervoer en Openbare Werke huur die perseel en geboue van my. My verantwoordelikheid is om te verseker dat die geboue sowel as die perseel te alle tye vir die kinders (al die valle se kinders, voorskools, graad R en tot met graad 7 word daar gehuisves) veilig sal wees. Ek voorsien ook water aan die SKOOL.

Sou daar asgevolg van 'n myn 'n situasie ontstaan waar die kinders se gesondheid en veiligheid bedreig word waar laat dit my as die verantwoordelike persoon. Die beoogde verwerkings aanleg sal reg langs die skool wees en boonop soos die myn aan die wind op kant van die skool wees. Geraas- en stofbesoedeling sal 'n aaklige werklikheid wees."

...

"Die kinders, ouers en onderwysers is bekommerd aangesien hierdie "Plaaskinders" weg raak in die dorpe se skole. Hulle pas baie moeilik aan want die onderwysers by Karookop se Skool is lief vir kinders en onderwys is hul roeping. Die Skoolomgewing buite hierdie vallei is totaal vreemd vir ons kinders. Ouers wat na ander plase beweeg stuur baie gou hul kinders trug na Karookopprimer want hul kinders kry nie die warmte en liefde in ander skole."

87. No EIA will be complete without a full investigation into the provision of primary education to the children of the valley with and without the mine, in accordance with Regulation 49(1)(d).

Vulnerable people and social development support

88. The DSR makes no reference to the existence of vulnerable people (the aged, ill and disabled people), also as result of an inadequate assessment of the status quo in the area (and as a result of non-compliance with Regulation 49(1)(d).
89. Similarly, no information is included about current social development support provided in the Valley. See the comments of Coalition member **Namaquasfontein Boerdery Trust**:
- *"We started a Rugby Club 15 years ago. The Club is still supported in terms of transport etc.*
 - *We paid a Social Worker for 10 years to aid social upliftment and spiritual needs (Chris Croukamp)."*

Livelihoods and those who will be unemployed

90. The DSR does not in any way put forward a plan or propose further research into the following issues:
- a. What financial or other support will be provided to workers who will have to be retrenched by the farms destroyed by the mine?
 - b. What financial or other support will be provided to the spouses of workers who will have to be retrenched? Many of these are women who work on the farm as well.
 - c. Are there any plans to replace current social and welfare support for workers in the area (currently provided by the farms)?

Loss of agricultural land

91. The Verlorenvallei is a highly arable area that contributes significantly to the Western Cape's agricultural output. Products include grapes (wine and

export), citrus, potatoes, rooibos, buchu, lavender, beef cattle, sheep, racehorses, wheat, rye, lucerne, teff and oats. Despite this, the DSR contains no assessment of current agricultural production by the affected area (again, because of non-compliance with Regulation 49(d)).

92. Particularly in view of the threats posed by climate change and the current global financial crisis, the need to secure reliable local sources of food is becoming imperative. Significant productive capacity will be lost as a result of the mine, and the remaining capacity is likely to be significantly affected by the mine.
93. Verlorenvallei Coalition member **Agri Wes-Kaap** put it as follows in their comments:
-
- “a. Die grootte van die myn (50 ha en 200 m diep; oopgroef) sal heelwat van die landbou-aktiwiteite van die omgewing insluk en/of veroorsaak dat dit gestaak word; grondpryse sodoende sal sodoende tuimel en landbouers en hul afhanklikes benadeel.*
- b. Die groot hoeveelhede stof op landbouprodukte (veral tafeldruiwe, groente en aartappels en diere van perdeplaas) wat in die streek geproduseer of onderhou word.*
- c. Die argument van werkverskaffing in die dokumente wat deur die konsultant verskaf is, is ongegrond aangesien die permanente en seisoensarbeid in daardie deel aansienlik meer is as wat die myn self in diens kan neem – die myn sal eerder groter werkloosheid tot gevolg hê.*
- d. Die myn-aktiwiteite gaan vir 20 jaar onderneem word, met die gevolge dat die gebied geskaad agtergelaat word met geen kans op ekonomiese bestaan vir ‘n landelike gebied want landbou sal nie meer onderneem kan word.”*

THE MINING PROCESS

94. On page 9-12 of the DSR is a brief description of the physical mining and metals processing proposed by Bongani Minerals Pty Ltd. From this we know that Bongani Minerals proposes:
- a. a open-pit mine with a depth of 200m;
 - b. a metals processing plant with two operations involving hazardous chemicals (the exact chemical process has apparently not been decided);
 - c. mining and processing ± 348,385 tonnes of ore in Year 2, and thereafter ± 700,000 tonnes per annum for 18-19 years.
95. However, the DSR also states that *“little information is available”* regarding the chemical processes. One has to wonder at the planning of a major mining operation based on “little information”. In addition, the DSR itself points out that *“[d]etails of the chemical and physical processes that are part of the proposed mining operation are required so that their potential impacts on downstream and adjacent aquatic ecosystems can be elucidated”* (page iii).
96. Other information not provided includes:

- a. estimates of the amount of water to be consumed in both the mining and metals processing;
- b. estimates of the volume of residual ore to be stored in tailings dams on the site;
- c. estimates of the volume of waste water to be produced in both the mining and metals processing, the composition and quality of such waste water and treatment proposed for such waste water;
- d. estimates of the volume of dust containing tungsten and molybdenum that will be generated by the mining process;
- e. estimates of the volume of pyrite present in the ore. Already the exposure of pyrite to water in mines all over South Africa has led to the urgent and large-scale problems caused by acid mine drainage (see the concerns of Coalition member **Agri Wes-Kaap**); yet no mention is made in the DSR of the possibility that the Riviera mine could cause similar problems;
- f. a comprehensive Process Flow Diagram showing inputs, outputs, byproducts and wastes (to land, water and air). It is inconceivable that Bongani Minerals Pty Ltd has not yet developed a process flow – why is this missing from the DSR?
- g. whether Bongani Minerals Pty Ltd intends mining in the void only (starter pit area and final pit area), or the whole area demarcated as mine area?

WATER AND ENVIRONMENTAL ISSUES

General concerns

97. The potential impact of the mine on water resources – groundwater, surface water and coastal waters – is of extreme concern to the Verlorenvallei Coalition. As is apparent from the specialist reports, the water emanating from the Krom Antonies River catchment area is of a high quality (see, for example, the DSR p. 25). However, this catchment is also water-stressed.
98. See, for example, the following statements by Verlorenvallei Coalition member WESSA in their initial comments to the Department of Minerals and Energy dated 16 April 2009:

“We question the use of water for mining activities in an area that is already known to be extremely water stressed. We are in the process of calling for comment from the Department of Water Affairs and Forestry on current and future availability of water in the area and call for reference to the concept of the ecological reserve as upheld in the National Water Act.

In addition to the issues raised above with respect to Verlorenvlei we are concerned about potential pollution from mining activities to the Krom Antonies river, a system that is relatively pristine when compared to other catchments in the area.”

99. The Coalition’s concerns are supported by the specialist reports attached to the DSR, which itself lists as a constraint to the project “*groundwater use and contamination in and around the open-pit mine (the mining of the mineral*

resource could cause pollution not only of surface water resources but also groundwater resources)” (page iii). On page 37 of the DSR, it also states that “[p]ossible impacts include the deterioration in surface and groundwater water quality resulting from mining activities, affecting the Krom Antonies Rivier and the ecologically sensitive Verlorenvlei. The impacts on the surface and groundwater water quality could potentially be HIGH to VERY HIGH.”

100. We refer you to the detailed comments on the issue of water impacts submitted separately by the following Coalition members (this is not a complete list of all Coalition members who have addressed this issue):
- a. **Unifruitti Matroozefontein;**
 - b. **Kromantonies Water Users’ Association;**
 - c. **WESSA;**
 - d. **Verlorenvlei Fragrant Products CC;**
 - e. **Kromvlei Kosie van Niekerk Boerdery Pty Ltd;**
 - f. **Namaquasfontein Boerdery Trust;**
 - g. **Agri Wes-Kaap;** and
 - h. **Odette Curtis** (MSc), Renosterveld Management Project, CapeNature & TMF-WWF, Board Member, Breede-Overberg CMA.

Risks of water pollution by the mine

101. Surface water flows in the Verlorenvlei catchment tend to be primarily limited to event-driven, short-duration episodes,² and groundwater plays a strong role in maintaining the Kruis River/Verlorenvlei river system. Malan and Day note that extensive lengths of the rivers in this arid area are characterised by hyporheic (i.e. subsurface) flow from a multitude of intersecting groundwater outflows (springs and seeps). This alludes to the importance of the ground water flows.³
102. Extensive dewatering of the excavated pit would be required through the mining operation, with water stemming from both the primary (surface) aquifer and from faults running through the underlying rock layers (Appendix 5, p. 20). This suggests that the pit will intercept, and attract, water from the aquifers.
103. Dr L Day (Appendix 5, p. 23) suggests that sealants or linings to be used to prevent inflows into the pit, or that cut-off trenches are used to divert groundwater flows into existing stream systems. Neither option is in our view

² Department of Water Affairs and Forestry (DWAF) 2003. Sandveld Preliminary (Rapid) Reserve Determinations: Langvlei, Jakkals and Verlorenvlei Rivers, Olifants-Doorn WMA G30. DWAF Project no. 2002-27. Prepared by GEOSS for the Department of Water Affairs and Forestry, Pretoria

³ Malan, H. and Day, J.A. 2005. Assessment of trophic status in aquatic resources with particular reference to the water quality reserve. WRC Report No 1311/2/05.

practical nor possible. Whilst cut off drains may in places be able to intercept the surface alluvial aquifer, it could not do so for the deeper confined or semi-confined aquifer(s).

104. The SRK report (Appendix 6) investigates the hydrogeology of the area, focusing on groundwater usage and inputs. They refer to the two-aquifer system. It seems clear that the presence of the pit, in the middle of the main recharge area for the groundwater for the valley, also the area with the highest rainfall, will attract all water to it. They talk about dewatering and reintroducing this pumped the water into the system. This is presumably after the water has been in contact with what could be heavy minerals which may exist in the hole and the nitrogen residues from the blasting operation. SRK suggests that the secondary aquifer is expected to extend to well below the orebody.
105. The DSR quotes in bold from Appendix 6 that, *“if prevented, contained and managed by good housekeeping and design, the ground water contamination risk is deemed low”* (page 28). This refers only to *“accidental chemical and/or fuel spillages where the site is underlain by a layer of less permeable compacted clay or sandy clay.”* This does not apply everywhere, and certainly not to the pit.
106. The DSR (page 29) states that *“[f]acilities which pose a contamination risk to the groundwater should be located as far as possible from highly transmissive fault structures to minimize the risk of contaminant propagation along these zones.”* The SRK report (Appendix 6, page 15) states that *“the granite pluton is terminated on its western periphery by a major fault system, the Krom Antonies Fault, which has a possible downthrow of ~450m to the west (Rozendaal et al, 1994). Drilling has indicated that a fault also occurs on the eastern boundary of the pluton, although it shows hardly any displacement of the orebody.”* The DSR also recommends that all rock and earth dump areas and slimes dams must be kept well away from the 1:100 year flood levels of rivers and streams, and that all water used in the mining and processing operation must be recycled and must be stored in water tight reservoirs to prevent any pollution of groundwater or surface water.
107. It is therefore both puzzling and alarming that, on the current Site Plan (Figure 7 in the DSR), both the spoil dump and the slimes dam are situated right next to the Krom Antonies River.

Impact of polluted groundwater

108. Should groundwater be polluted by the mine, it would have catastrophic consequences for those who rely on groundwater for both drinking water and irrigation (a substantial amount of irrigation in the Verlorenvallei is supplied by groundwater):
 - a. Water supplied by the Redelinghuys Municipality derives from an artesian well in a valley above Matroozefontein just outside Redelinghuys at a rate of 31 liters/second (977,616 m³/annum). This presumably emanates from the semi-confined aquifer through which the pit will be excavated. Any

changes to the quality and availability of the water from the fountain will have serious health, welfare and development implications for the town.

- b. Verlorenvallei Coalition member **Kromvlei Kosie van Niekerk Boerdery Pty Ltd** states the following about impacts of polluted groundwater and explosives on groundwater resources:

“Op grond van inligting wat ons ontvang het van Whithers Environmental Consultants is dit duidelik dat die beoogde mynaktiwiteite katastrofiese gevolge mag inhou vir die plaas en sy bestaande boerdery bedrywighede. Ons boorgate op die plaas wat die primêre waterbronne is van besproeiing is ongeveer 90 meter diep en lewer so in die orde grootte van 80 kubieke meter water per uur. Uit die Whithers verslag is dit duidelik dat die beoogde myn tot op ’n diepte van 200 meter gemyn gaan word. Dit is dus logies om die afleiding te maak dat die beoogde myn katastrofiese gevolge op die ondergrondse watervlakke gaan veroorsaak en dit die voortbestaan van die plaas en sy waterbronne bedreig.

Aangesien die myn plofstof gaan gebruik in sy aktiwiteite is dit logies om die afleiding te maak dit verskuiwing in die ondergrond uiters negatief en selfs katastrofies kan impakteer op die ondergrondse water bronne.”

- c. Coalition member **Unifrutti Matroozefontein** points out the following about impacts of polluted groundwater on its operations:

“Matroozefontein is situated 28.5 km’s from the proposed mine site as the crow flies.

The Moutons Hoek valley is an important catchment area for the Veloren Vlei and for replenishing underground water in the Sandveld. This is the best quality water source for the Veloren Vlei and replenishing underground water. The other catchment areas provide water that is high in salts.

Matroozefontein obtains its water from 15 boreholes on the farm.

Matroozefontein has a permit to withdraw more than 2 million cubic meters of water/annum. Unifrutti has spent a considerable sum of money investigating the long term sustainable yield and quality of the water from the boreholes on the farm before it purchased the farm in 2004. The tests were done by De Villiers Visser Besproeiing and analyzed by SRK consulting (Compiled by A.C. Woodford). This was for the purpose of future citrus and table grape plantings on the farm. Any negative impact to the water resources on the farm will jeopardize the current and future developments on Matroozefontein. This will have negative implications on the long term profitability of the farm and negatively impact on employment in the area. Matroozefontein employs a large number of seasonal and permanent people (in excess of 250 people).

Currently Matroozefontein is monitoring its boreholes (levels and water

quality) on a monthly basis. It is also using electronic divers to check the long term levels of the underground water.”

Surface water salinity

109. On page 17-18, the DSR states that “[s]alinity in the three key rivers appeared to be quite different. Salinity, measured as electrical conductivity and total dissolved solids, in the Hol River and Kruismans Rivers was about 4.5 and 5.5 times higher respectively than in the Krom Antonies River. This indicated that the Hol and Kruismans Rivers were more saline than the Krom Antonies River. Salinity in the Krom Antonies River also changed in a downstream direction. In the upper reaches of the river near Moutonshoek, the TDS concentration was 70 mg/l and just before the confluence it was 294 mg/l, a four-fold increase in salinity. ... The elevated salinity in the Hol and Kruismans Rivers is probably due to the underlying geology (Malmesbury shales) of the region and due to the effects of irrigation return flows. The increase in salinity along the length of the Krom Antonies River is also possibly the result of irrigation return flow. ... Despite this, the water quality of the Krom Antonies River would be classified as “ideal” for irrigation purposes and in the Hol and Kruismans River it would be classified as “acceptable” for irrigation purposes.”
110. And on page 18: “JN Roussouw surmised that the Krom Antonies River is probably the river that controls the salinity in Verlorenvlei by diluting the salts brought in by the Hol and the Kruismans Rivers. “
111. The Coalition would like to clarify any suggestion that current irrigation is affecting the salinity in the Krom Antonies River. Irrigation backflow would add nitrates; yet the DSR reports that nitrate levels were insignificant. The salinity lower down in the river is due to the salinity of the soils that the river flows through.
112. Jacobus Smit, chair of the **Kromantonies Water Users’ Association**, (KWUA) puts it as follows:

“...die meer mms van die Kromantonies by die samevloeiing die gevolg van natuurlike logging van Chloriede. Dit is omdat die gronde aan die Oostekant van die vallei hoofsaaklik Skalieneersettings is. Hierdie is redelike sagte gesteentes en los makliker op as die baie harder Sandsteen, wat dan tot gevolg het groter vrystellings van o.a. Chloriede. Dit is 'n natuurlike proses wat niks met landbou aktiwiteite te doen het nie.

Wat betref die Verlorenvlei se soutlading word dit verseie kere in die verslag genoem dat die Kromantonies, met sy goeie kwaliteit water, die hele sisteem reguleer. Die Verlorenvleisisteem is dus totaal afhanklik vir sy voortbestaan, van die Kromantonies se water.”

River diversion

113. On page iii of the DSR, the risks of diversion “of even minor tributaries of the Krom Antonies River, resulting in increased downstream velocities, loss of ecosystem processes that are considered beneficial in terms of water quality

amelioration or management of sedimentation and/or erosion” are listed as a “constraint”. On page 36 of the DSR, the following is stated: *“Mining activities may also have HIGH impacts on riparian vegetation should the course of the Krom Antonies River or its smaller tributaries be changed.”*

114. Despite this, on page ii of the DSR, “whether to construct a river diversion for the opencast mining operations” is listed as a design alternative being considered by Bongani Minerals Pty Ltd and their appointed consulting engineers.

Current water use and impacts on water quality

115. Again, as a result of the non-compliance with Regulation 49(1)(d), no effort was made in the DSR to describe current water use in the affected area in any detail. Such information is available, inter alia, from the Kromantonies Water Users’ Association (KWUA), a registered water users’ association under the National Water Act, 1998. The KWUA chair, Jacobus Smit, provides the following information:

“Alle gebruike tans is of huishoudelik of landbou. Die toepassing van die vereniging se verantwoordelikhede is bloot 'n gegewe en 'n voorreg. Die rede: Die huidige gebruikers is die KAWGV. Alle inwoners word op die vereniging verteenwoordig en almal het dieselfde doelwitte nl. om die HULPBRON OPTIMAAL TE BESTUUR. Daar is dus geen botsende belange en verantwoordelike gebruik is die norm.

Wat landbou se gebruike betref die volgende. Dit is na my mening die enigste Watergebruikersvereniging in SA, waar alle landbougebruike met behulp van 'n Neutron vogmeter geskeduleer word. Die inligting wat op hierdie wyse bekom word stel die KAWGV om nie net akkurate onttrekkings syfers te verskaf maar ook om te kan sien wat word van die water nadat dit besproei is. Dit het nie net optimale besproeiing tot gevolg maar is die enigste metode om loging sinvol te voorkom.

Mnr. Withers se gevolgtrekking dat daar wel loging in die Krom Antonies plaasvind is onwaar en sal in die toekoms as gevolg van bogenoemde nooit hoof plaas te vind nie. Wat die onwaarheid betref net die volgende. Die mms lesing wat toeneem, tot met die samevloeiing, is 'n natuurlike proses asgevolg van die water se natuurlike roete deur Skallie gronde aan die Oostekant van die vallei. Dit kan gesien word in die feit dat die verhoogde mms asgevolg van Chloriede is en nie Nitrate. Nitrate is die eerste aanduiding van loging deur Landbou praktyke. Volgens mnr. Withers se eie verslag was die nitrate so laag dat die ontleding dit nie eens kon optel nie.”

116. The statement on nitrates referred to by Smit above appears at page 15 of the DSR: *“Nutrient concentrations – The phosphate concentrations (total and ortho-P), nitrate/nitrite nitrogen, and ammonia nitrogen concentrations were below the detection limits of the CSIR laboratory. Nutrient enrichment does not appear to be a serious concern in the system.”*

117. The DSR (page 15) also records that *“Most... trace metals were below the detection limits of the CSIR laboratory and for those that measured greater than the detection limit, the concentrations were well within the guideline values for irrigation and domestic water supply use”*.
118. It is therefore apparent that the impact of current water use – primarily for irrigation for agriculture - on water quality is negligible.

Vegetation

119. On page 36 of the DSR, it is stated that *“[i]mpacts on vegetation and fauna within the boundaries of the site identified for the potential Riviera Tungsten Open-Cast Mining Project are likely to be LOW due to the fact that, with the exception of suitable habitat along the Krom Antonies River, the area has nearly been totally disturbed by farming activities and thus supports an extremely low floral biodiversity and limited breeding habitats.”*
120. As mentioned above, however, a number of vegetation types are listed as threatened and endangered - a fact that is confirmed by Bongani Minerals Pty Ltd's own specialist (see Appendix 4).

Alien and invasive species

121. On page ii of the DSR, “the opportunity to clear alien vegetation and rehabilitate stretches of the Krom Antonies River and river valley river course modification being a recipe which encourages the dominance by alien invader species and dramatic movement of large volumes of sand during floods” was listed as an “opportunity” to be created by the mine.
122. However, had there been compliance with Regulation 49(1)(d) and the DSR had properly identified current land use, the DSR would have reported the extensive measures taken by landowners in the Verlorenvallei since 2005 to address the problems of alien and invasive species. The following information is provided by Jacobus Smit in this capacity as chair of the KWUA:

“Ons het gedurende 2000 besluit om iets te doen aan die probleem van Bloekoms en Port Jacson in die rivier. Die rivier was toegegroeï van hierdie indringers wat 'n groot negatiewe effek op die vloei sowel as hoeveelheid water gehad het. Dit het ook die natuurlike plantegroei verdring en gelei tot erosie van die oewer.

Verskeie amptenare van DWAF en ander kundiges het verstommende gegewens gegee oor die hoeveelheid water wat asgevolg van die indringers verlore gaan. Om fondse en kundigheid te bekom om die probleem aan te spreek het vyf jaar geneem. Gelukkig het Hannes Pienaar van dept. Landbou op Moorreesburg die omvang en erns van die probleem besef en het dept. Landbou dit as 'n Landcare projek aanvaar.

Ons kon uiteindelik in Mei 2005 begin om die indringers te verwyder. Landbou het geld vir arbeid gegee en die grondeienaars het die res verskaf wat die

volgende behels.

- 1. Alle logistiek omtrent die werk, soos vervoer van werkers.*
- 2. Alle toerusting.*
- 3. Alle chemiese middels. Hierdie middels is streng gekeur en word slegs onder toesig gebruik.*
- 4. Opleiding van werkers asook noodhulp opleiding van sekere spanlede.*

Aangesien werkloses gebruik is waar moontlik, is daar 'n groot omset van personeel wat volgehoue opleiding vereis. Dit het egter tot gevolg dat alle werkloses in die omgewing nou gekwalifiseerde boom verwyderaars is. Baie van die permanente arbeiders het ook al gedurende hul vakansies gehelp en so hulself beter bekwaam.

Gedurende die eerste somer nadat met die projek begin is het die gebied 21 mm reën vanaf November tot Maart gehad. Daar het toe 221 mm reën in die winter geval voordat die rivier by Vrede ('n plaas teen die rivier) begin loop het. Dieselfde hoeveelheid reën het in die volgende somer gedurende die somer maande geval. Slegs 65 mm reën het toe geval voordat die rivier by Vrede begin loop het.

Die afgelope somer het die rivier nooit gaan staan tot waar dit die Verlorenvlei binne gevloei het nie. Niemand kan onthou wanneer laas dit gebeur het nie. Dit was weliswaar die natste winter wat ons gehad het sedert daar met metings begin is, maar die verwydering van die indringers het 'n deurslaggewende bydrae gemaak.

Al hierdie werk is nie gedoen omdat iemand dit van ons verwag het nie, maar was bloot hierdie gemeenskap se bydrae om ons verantwoordelikheid teenoor die hulpbron na te kom.”

123. Also see the comment from Coalition member Namaquasfontein Boerdery Trust:

“We have been clearing alien species in the Krom Antonies River for 14 years using biological means (galls) and chemical and physical means for 4 years. We have had phenomenal results that have been felt all the way down to the Verlorenvlei. It is a classic case study of a great model of success! By the time Bongani propose to start mining in 2011, there will be very few alien trees to clear.”

Avifauna, invertebrate, mammal and fish species

124. The DSR, on page 21, contains a long list of avifauna, invertebrate, mammal and fish species found to occur in the affected area. Paragraph 33 above also lists a number of nationally listed threatened, endangered and protected species that have been sighted in the Verlorenvallei area.
125. Despite the foregoing, the DSR then inexplicably concludes that “[i]t may however be reasonably surmised that the number and diversity of animals breeding on the properties making up the site would be minimal. This may be

attributed to the fact that, with the exception of suitable habitat along the Krom Antonies River, the area has been totally disturbed by farming activities and thus supports an extremely low floral biodiversity and limited breeding habitats.”

126. Coalition member **BirdLife South Africa** has provided the following comments on bird species of the Verlorenvlei:

“It would appear that a very sensitive wetland in the form of Verlorenvlei may be adversely affected by the proposed mining operation. We would like to bring the following to your attention regarding the Verlorenvlei wetland.

1) The wetland is a declared “RAMSAR” site in terms of the Ramsar International convention on wetlands. This confirms its global and not just national Importance. The wetland is of great significance, especially in terms of its large area, the diversity of its wetland habitats, and the large population of waterbirds it supports. It is also included in the BirdLife International Important Bird Area programme, SA103. (Barnes 1998)

2) The Verlorenvlei contains bird 3 species that are red listed as globally threatened. (Barnes 2000)

3) Verlorenvlei supports over 189 bird species: 75 are waterbirds. The wetland regularly supports over 5000 individual birds with up to 20000 on occasions. This includes over 1000 wading bird species, many of which are migratory and therefore of global significance. At least 26% of Western Cape`s White pelican population occur on this site at times.

4) Greater Flamingo and Lesser Flamingo also occur here, as well as relatively large numbers of Little Bittern and Caspian Tern.

5) The wetland is a moulting ground and winter refuge for large numbers of various species of Anatidae. (E.g. Yellow-billed duck, Cape shoveller and South African Shelduck)

6) There are high densities of African marsh harrier which forage over the marsh and reedbank areas as well 4-5 pairs of African Fish eagle.

7) Significantly large numbers of Great crested grebe, Redknobbed coot Hartlaub`s gull and White-breasted cormorant are also supported at this wetland.

8) The global fish species population of the Berg river redbfin is restricted to Verlorenvlei as well as several endangered mammals and endemic reptiles and snakes.

In view of the above, BirdLife South Africa would like to request that specialist surveys be conducted on the impact of the mining operation and particularly the effects of water usage for mining, on the Verlorenvlei wetland area. This should include primarily, a specialist bird study but, because of its importance for other taxa, a number of specialist studies must be identified and conducted through the environmental impact assessment process.”

Freshwater ecosystems

127. On page 21 of the DSR, it is stated that “Dr. Day found the Krom Antonies River to be of potentially high importance in terms of the ecological health or

integrity of the downstream Verlorenvlei system and that water quality, including sediment, nutrient and dissolved solid loads and concentrations could all have implications for the downstream system. Dr. Day however also highlighted that in its own right the Krom Antonies River is also a system that could potentially be of high conservation importance. The extent to which indigenous fish occur within the river is not yet known, and neither is the extent to which alien fish populations in the system may be having an impact on both indigenous fish and macroinvertebrate populations.”

128. As mentioned in paragraph 33 above, the Verlorenvlei Redfin – a Red Data species - occurs only in a very small area inside the valley (and nowhere else on earth).
129. Dr Day’s opinion on the potential impacts of the proposed mine on freshwater ecosystems are listed on page 36-7 of the DSR, summarised to be potentially “*high to very high*”. She then proceeds to list some proposed mitigation measures to be included into the Environmental Management Plan, including “*a detailed stormwater management plan, plans for active upgrading and rehabilitation of the riverine ecosystems associated with the Krom Antonies River (through establishment of effective riverine and other wetland buffers or setback areas, establishment of corridors for the movement of fauna along the river, between the mountains and the Verlorenvlei system downstream, management of alien fauna (fish) and flora and setting abstraction of surface and groundwater flows at sustainable levels).*”
130. The difficulty is that mitigation measures are designed to reduce, lessen or diminish harmful impacts; for example, a stormwater management plan will be designed to minimise the risk of polluted water entering stormwater drainage systems. However, experience has shown that the existence of such a plan is no guarantee of prevention of such a pollution incident, the consequences of which can be disastrous. The reality is that all these impacts can be avoided by not proceeding with the mine (one of the issues that should have been pointed out by the DSR in compliance with Regulation 49(1)(d)).

The Verlorenvlei Ramsar wetland

131. See the comments in paragraph 44 to 51 above.

Land use and soil

132. Page 35 of the DSR reports that the impacts for land use and soil “*could be potentially HIGH to VERY HIGH for the proposed open-cast mining area. Potential impacts will result from the standard open-cast mining methods, which involve the removal of large volumes of topsoil, overburden and rock in order to expose the ore body. The fragmented overburden stockpiles are exposed to oxidation and un-weathered faces could potentially make contact with groundwater, affecting its quality. Topsoil is also stockpiled and replaced many years later during rehabilitation, which negatively affects soil structure, soil fertility and thus post-mining land capability. Post-mining changes to the*

topography will however be insignificant as the site is located in a fairly flat area.”

133. The only details provided of rehabilitation to be *“included in the EMP”* are that they will draw on *“specialist knowledge, the latest scientific literature and on the Chamber of Mines of South Africa’s 1981 Handbook of Guidelines for Environmental Protection, Volume 3/1981. The Rehabilitation of Land Disturbed by Surface Coal Mining in South Africa.”*
134. On page 35, the DSR also glibly reports that *“[d]uring the mining process the current land use of the potential open-cast mining area is progressively decommissioned before mining and could thus theoretically be re-established after the cessation of mining. Since mining is temporary (±20 years), agricultural activities could theoretically take place once decommissioning and rehabilitation has taken place.”*
135. These statements are both superficial and unsubstantiated: how does Bongani Minerals Pty Ltd intend filling and rehabilitating the mining void to enable agriculture to be resumed? How will it avoid the post-mining void simply filling up with water of unknown quality?

Waste management

136. The issue of waste management is also glossed over in the DSR. On page 10, the DSR states that *“[w]aste rock, overburden and topsoil will be separately stockpiled at the surface, near the edge of the open-pit (the specific locations still need to be determined) (Figure 5). These stockpiles are also known as waste dumps. The waste dumps will be tiered and stepped, to minimise degradation (erosion).”*
137. However, Figure 5 indicates the proposed location of a waste dump.
138. Regarding tailings from the metals processing plant, the DSR states the following on page 10: *“Ore which has been processed in the metallurgical plant produces waste known as tailings, and is generally a slurry. This is pumped to a tailings dam or settling pond, where the water evaporates. Tailings dams can often be toxic due to the presence of unextracted sulfide minerals and/or toxic minerals in the gangue (sand, rock, and other impurities surrounding the mineral of interest in an ore). Specific management of the tailings will be included in the EMP and EIA reports to ensure that there are no long-term negative effects, especially on groundwater quality (groundwater plays a strong role in maintaining the quality of surface water in the Kruis River/Verlorenvlei river system) (Figure 5).”*
139. Needless to say, the design, location and management of a tailings dam containing toxic slurry is of major concern to the Verlorenvallei Coalition. As pointed out in paragraph 106 above, the DSR itself points out that the tailings dam should be situated as far as possible from “highly transmissive fault structures” and well away from the 1:100 year flood levels of rivers and

streams (page 29). However, on Figure 5 the tailings dam seems to be situated directly next to the Krom Antonies River!

140. The Coalition therefore requires detailed information on the proposed design, location and management of a tailings dam, including what tailings thickener would be used.

Air, dust and noise

141. Many Coalition members have independently raised questions about the amount of dust and air pollution that will be caused by the mine. The DSR itself states:
- a. On page iii: *“Mining operations will cause dust and noise pollution of the surrounding area, which could have a negative health effect on the surrounding farmers and their labourers”.*
 - b. On page 35: *“The impacts of dust on the agricultural industry could potentially be MEDIUM TO HIGH (e.g. setting of fruit, amongst others). The only effective dust suppressant in mining operations is the use of water, by wetting roads, employing mist sprays at the primary crusher and a rock and earth dumps. Slimes dams will need to be regularly rehabilitated with topsoil and vegetation to prevent dust pollution. A permanent irrigation system will need to be employed on the rehabilitated rock and earth dumps and slimes dam.”*
142. Needless to say, any dust suppression mechanism involving water adds to the water requirements of the mine, which information has been omitted from the DSR.
143. Coalition Member **Kromvlei Kosie van Niekerk Boerdery Pty Ltd** states the following about impacts of dust on their operations (also see comments by other Coalition members on this issue):

*“Gesien in die lig dat dit ’n oopgroef myn gaan wees en daar ongeveer 10 miljoen ton grond verskuif gaan word oor ’n periode van 20 jaar is dit na ons mening logies om die afleiding te maak dat verskuiwing van soveel grond met groot vragmotors ’n groot stof probleem gaan veroorsaak. Uit gesprekke met The Grape co, wat tans alle uitvoere van tafeldruiwe hanteer, is dit katagories gestel dat die **regulasie** t.o.v. uitvoere duidelik bepaal dat alle druiwe vry van stof en reste moet wees. Ons is van mening dat die geringste hoeveelheid stof met reëns reste op die korrels gaan veroorsaak. Stof op die vrugte kan ook veroorsaak dat die vrugte nie geskik is vir uitvoere nie.*

Dit is ook duidelik uit die verslag dat daar vir wolfram en molibdeen gemyn gaan word. Aangesien molibdeen ’n mikro element is wat op plante gebruik word is dit onbekend tot watter mate ’n oorvloed molibdeen die plante kan beïnvloed.

Wat die verbouing van wyndruiwe aanbetref is ons deur die onderskeie kelders, wat ons produk hanteer, naamlik Tulbagh Kelder en Schenkfontein

Kelder, ingelig dat alle produkte wat by hulle gelewer word vry moet wees van stof en reste. Aangesien die druiwe wat op Kromvlei verbou word in die premie klasse val is dit uiters noodsaaklik dit die vrugte vry moet wees van bogenoemde om sodoende 'n premie te verdien."

144. See also the comments from Coalition member **Nick Taylor**:

"The strong winds from both north and south actually box the compass often due to temperature and topographical influences. As a sailor who uses binoculars with a built in compass, I have marveled the capricious nature of the so called prevailing winds in regard to direction, velocity funnels, gusts up to 35 knots on the water and catabatic forces experienced both on the vlei and traveling in a wide area north of the Piketberg. This alone could influence the spread of dust from mining to areas not investigated by direct studies at various points. I point this out as a positive comment which should the proposal go further might help to make any study more comprehensive.

Studies monitoring dust can only give an indication of what might happen in an actual mine. Levels of dust, increased wind velocities and literally dozens of wild card factors could turn this into a nightmare that could take years of studies and trial and error to fix. Meanwhile livelihoods from Moutonshoek to Elands Bay and Leipoldville could be destroyed in one hot dry summer.

Will the preliminary dust monitoring stations be able to establish what effect dust coming off the workings will have on water in the vlei, water that will duly flow out and impact on the crayfish and tourism industries that are the only alternatives to farming in the Velorenvallei? Unless they do we will have to assume that included in the inevitable fallout from this proposed mine, will be the way of life of yet another community, black coloured and white."

Climate change

145. The crucial issue of climate change and the consequential impacts of climate change on water resources, in particular, is completely ignored in the DSR, the attached specialist reports and the EIA Plan of Study.

HERITAGE ISSUES

146. The Coalition is perturbed by the fact that the DSR (page 38) describes the potential impacts of the proposed mine on heritage resources as "low". This conclusion has been reached despite not even a desktop review having been done on existing heritage and archaeological resources in and around the affected area (in compliance with Regulation 49(1)(d)). In fact, Coalition members are aware of the fact that there are plenty of San sites along the southwestern shore of the Verlorenvallei mountains.

WAY OF LIFE AND SENSE OF PLACE

147. Many Coalition members have raised the impacts that the proposed mine would have on the way of life and sense of place of the Verlorenvallei. Some members also link this to other development initiatives less destructive than a mine, such as tourism. Because of the DSR's non-compliance with Regulation 49(1)(d), none of these issues have been identified and described as required.

148. Coalition member **Kromvlei Kosie van Niekerk Boerdery Pty Ltd** puts it as follows:

“Die invloed wat die beoogde myn op die natuurskoon, een van die vallei se groot bates, gaan hê, gaan veroorsaak dat die toerisme potensiaal wat ons tans aan die ontwikkel was, in totaliteit gaan verdwyn.

Ons wil u ook versoek om te alle tye eerlik en opjektief te wees, om sodoende te voorkom dat 'n groot klomp mense die hartseer en trauma van werksverliese, wat aan die orde van die dag is, gespaar word. Na 20 jaar word 'n pragtige vallei wat vir geslagte heen boere en families huisves met een groot onooglike gat nagelaat terwyl 'n klein groepie mense verryk word.

Sosiale strukture wat oor jare en geslagte ontstaan het word in een oorwink uitgewis. Families wat al geslagte lank op die plaas werk, wat al verblyfsreg het staan nou die kans om alles te verloor. Bejaardes wat van die plaas afhanklik is se toekoms is ook nou in die weegskaal.”

149. Coalition member the **Moutonshoek Employees' Association (Johannes Erasmus)** commented as follows:

“Hier is baie families op die plase wie se voorgeslagte op die plase begrawe is. Die emosionele letsels wat dit gaan laat om jou afgestorwene families te verlaat, sal 'n groot knou vir baie mense wees.

Hierdie myn aansoek wat tans ingedien is maak groot inbraak op ons godsdienste, leefwyse en kulturele erfenis. Die belange van die kerke moet ook in ag geneem word, oor 'n baie lang tydperk was daar gebou aan 'n gemeente om inwoners in die vallei rigting te gee, ten opsigte van hulle leefwyse. Hoekom moet dit wat ons opgebou het nou afgebreek word.”

PLAN OF STUDY FOR EIA

150. Firstly, the Verlorenvallei Coalition expects all recommendations contained in the specialist reports attached to the DSR and all recommendations referred to in the DSR to be contained in the terms of reference for all specialist studies under the EIA (whether or not such recommendations are repeated in these comments or the comments of individual Coalition members, and whether or not these recommendations are included in the terms of reference in the DSR themselves). A failure to do so will be regarded as a fatal flaw to the EIA Report.
151. Secondly, the Verlorenvallei Coalition expects all recommendations made and questions raised in these comments as well as in the comments of individual Coalition members, also to be included in the terms of reference for all specialist studies under the EIA. Again, a failure to do so without adequate reason will be regarded as a fatal flaw to the EIA Report in accordance with MPRDA Regulation 50(f).
152. Thirdly, we draw your attention to MPRDA Regulation 50, stipulating the contents of the EIA Report. Any non-compliance with Regulation 50 will be regarded as a fatal flaw to the EIA Report, and the Verlorenvallei Coalition reserves all its rights in advance to challenge the Report on this basis in due course. In particular, we draw your attention to the fact that the EIA Report must contain:
 - a. *“an assessment of the nature, extent, duration, probability and significance of the identified potential environmental, social and cultural impacts of the proposed mining operation, including the cumulative environmental impacts”* (regulation 50(c)); and
 - b. *“a comparative assessment of the identified land use and development alternatives and their potential environmental, social and cultural impacts”* (regulation 50(d)).
153. Fourthly, as outlined above, very limited information regarding the mining and metals processing processes is provided in the DSR, and the Coalition regards this as a fundamental flaw of the DSR. It is actually not possible to assess the proposed terms of reference for the specialist studies, particularly the impact on downstream ecosystems, without more information on these processes.
154. Other than the study on Freshwater Ecosystems, the list of specialist studies in the EIA Plan of Study seems to exclude any study on fauna that occur in and around the affected area, and how this will be impacted by a large open-case mine. This includes avifauna, reptiles, invertebrates and mammalian species not included under Freshwater Ecosystems. Considering the requirements of Regulation 50, any EIA Report that does not deal with these issues would be fatally flawed.
155. As quoted above, Coalition member **BirdLife South Africa** required the following to be included in the EIA Plan of Study:

“BirdLife South Africa would like to request that specialist surveys be conducted on the impact of the mining operation and particularly the effects of water usage for mining, on the Verlorenvlei wetland area. This should include primarily, a specialist bird study but, because of its importance for other taxa, a number of specialist studies must be identified and conducted through the environmental impact assessment process.”

156. The DSR (page 38) recommends that a Traffic Impact Assessment be done for the area: *“The cumulative impacts of the proposed mining development will need to be assessed in terms of the current and future road infrastructure and what cumulative impacts the mining will have on the road system (wear and tare [sic]) and what impacts it would have on the agricultural community. Traffic counts would need to coincide with the harvesting of the various agricultural products produced in the valley. The recommendations of the study, applicable impacts and mitigation will be assessed during the EIA Phase of the project and will be considered by the Town Planners and Civil Engineers in their design of the project.”*
157. However, such a Traffic Impact Assessment is not mentioned again under the EIA Plan of Study. Considering the wide range of issues arising from traffic impacts (pollution, social impact of noise, road impact on ecosystems and animal corridors, risks of traffic accidents and injuries, the potential of increased crime, additional impacts on destinations like Saldanha), the Coalition regards such an Assessment as essential to the EIA Plan of Study (and will regard the EIA report as inadequate without such an assessment).
158. As set out in the comments of Coalition member **Namaquasfontein Boerdery Trust**:

“No mention is made of studies in relation to the seismic effects of the proposed underground blasting. By your own admission in the PP meeting of 30 April, will “sterilise” the whole narrow valley. The expert who asked the question explained to me that this means that not only will it cause major damage to all the sandstone structures above ground (outcrops, San paintings etc), but also crush the underground structures like aquifers into an homogenous crumbled mass. This is entirely unacceptable. We insist on a very detailed study on this point.”
159. Another aspect not covered in the list of studies for the EIA Plan of Study is that of the impact of the mine on existing agriculture and food supply from the valley. In this regard, see the specific comments of Coalition member **Charles de Wet**.
160. Finally, the DSR itself makes vague statements about how the mine would bring additional revenue to the district and region (such as tax revenue and rates). No amounts or calculations are provided to support these statements. A detailed analysis of the financial impacts, both positive and negative, should be included in the EIA Plan of Study (see also the specific comments of Coalition member **Charles de Wet**).

161. Below are additional comments on the terms of reference (TORs) for specialist studies listed in the DSR.

a. Vegetation: In addition to the three bullet points listed under these TORs, at least the following TORs should be added (in accordance with recommendations in Appendix 4):

i. A detailed vegetation survey (including all-year sampling) of the site affected by the Proposed Riviera Tungsten Open-Cast Mine has to be undertaken in order to accurately pin-point the distribution of the remnant vegetation types and to provide a comprehensive inventory of all species, including the presence and distribution of threatened plants present on any site supporting indigenous vegetation in the highly disturbed Krom Antonies River Valley (recommended on pages 20 and 36 of the DSR).

b. Freshwater Ecosystems

i. As mentioned above, the Coalition does not accept that baseline studies can be done as part of the EIA Report – it is our view that baseline studies fall within the requirement of Regulation 49(1)(b) applicable to scoping. Be that as it may, we draw your attention to the fact that, in Appendix 5, Dr Day makes detailed recommendations for a baseline study to be done as part of the EIA Report. These recommendations (repeated on page 22-23 of the DSR) include:

1. A detailed stormwater management plan for the site, including specific measures to reduce the rate of runoff into freshwater ecosystems, and to manage the quality of runoff;
2. Details of the depth of excavation, as well as the maximum anticipated footprint;
3. Detailed measures for dewatering, including estimates of water volume;
4. Details of the chemical and physical processes that are part of the proposed mining operation, so that their potential impacts on downstream and adjacent aquatic ecosystems can be elucidated;
5. Detailed breakdown of groundwater quality, particularly if dewatering into surface systems is required;
6. Details regarding areas for the storage or disposal of spoil generated from the site, as well as details of all built and constructed aspects of the proposed mining works;
7. Details of dust suppression methods;
8. Details of additional infrastructure that would be required as part of the proposed mining operation – for example, new or

upgraded roads, sewage and/or water pipelines, electricity pylons or substations;

9. details of water supply requirements and proposed water sources;
10. details of proposed management / disposal of both on- and off-site sewage and other waste;
11. surveys of fish populations both within the Krom Antonies River system, and in the Verlorevlei River system up- and downstream of the Krom Antonies River confluence;
12. detailed surveys of macroinvertebrate fauna at strategic points along the Krom Antonies River system, to establish inter alia the possible presence of the endemic bivalve *Unio caffer* along the river, as well as to obtain a clearer understanding of changes in aquatic invertebrate community structure along the river, in relation to changes in habitat quality and structure and water quality;
13. detailed assessment of the Krom Antonies River along its length, to allow an assessment of Habitat Integrity at a scale that will allow future monitoring of the impacts of the proposed mining activities, if approved; and
14. collection of data relating to algal assemblages along the river.

ii. According to Dr Day:

1. data gathered would need to be interpreted with reference to surface and groundwater water chemistry and flow data, as well as to botanical information;
2. the following sites should be selected for the baseline study: the Kruismans River just upstream of the confluence with the Krom Antonies and Hol Rivers, and a site between the confluence of the Krom Antonies River and the confluence of the Hol River. In addition, a more suitable reference site (in terms of an ecological perspective) should also be selected in the Verlorenvlei catchment and proposed a site in the Bergvallei River;
3. data gathered from these sites should then be compared to that collected from the Verlorevlei River, both upstream and downstream of the confluence of the Krom Antonies River system; and
4. baseline data should be collected on at least a three monthly basis, over a minimum period of one year (assuming that water quality and flow data are collected at more frequent intervals [i.e. at least monthly]).

- iii. The DSR (page iii) lists three additional “constraints” to be detailed by “specialist study”: increases in sedimentation of the Krom Antonies River system; increases in erosion within the Krom Antonies River or its associated tributaries; and encroachment into riverine buffer areas. These issues are not included in the TORs for the specialist study on Freshwater Ecosystems, and should be included.
- c. Water Quality and Hydrogeology (surface and groundwater)
- i. In addition to the many bullet points under the TORs on pages 43-44 of the TORs, the following should be included:
 - 1. a detailed hydrocensus needs to be undertaken of boreholes, springs and dug wells in the Krom Antonie River Valley to determine current groundwater users and abstraction, borehole yields, groundwater levels and quality. This will allow for, inter alia, a comprehensive groundwater contour plan to be generated (page 25 of the DSR);
 - 2. detailed measures for dewatering are needed, including estimates of water volumes required by the mine (page iii of the DSR);
 - 3. a detailed stormwater management plan is needed for the site, including specific measures to reduce the rate of runoff into freshwater ecosystems, and to manage the quality of runoff (page 3 of the DSR);
 - 4. it is critical that the irrigation abstractions and return flows are accurately modeled to develop a representative flow record at the estuary. Return flows from irrigation that uses groundwater must also be accounted for as these return flows may result in elevated low flows at the estuary (page 16 of the DSR);
 - 5. *“This desktop assessment uses the daily flow record at G3H001 on the Kruis River to disaggregate the current day monthly flows generated at the estuary to current day daily flow. This process assumes that flow characteristics (or the pattern of flow) at each location are similar. Should the flow at G3H001 not be representative of the flow at the estuary then the ACRU Model should be used to generate daily flows at the estuary. It is recommended that the observed flow record at G3H001 be carefully assessed to ascertain the accuracy of both low and high flow, and that flow measurement near the estuary be undertaken for a similar period of time to that in the upper Krom Antonies River for comparative purposes with the flow record at G3H001. This comparison will enable a decision to be made regarding model selection (ACRU or WR90)”* (page 16 of the DSR);

6. An assessment of the impacts on drinking water, such as the water supplied to the Redelinghuys community; and
7. An intensive assessment of aquifers within at least a 150km radius from the proposed site.

d. Socio-Economic Study

- i. The TORs for this Study are focused entirely on the direct and indirect consequences of the mining project. Other than “to describe the regional and local level economic and social environment”, there is no proper assessment of the status quo and, as required by Regulation 50(a) and (b), of the environment likely to be affected by the proposed mining operation and/or the identified alternative land use or developments. These TORs should therefore include at least the following:
 1. A detailed analysis of current employment in the Verlorenvallei (with reference to age and gender);
 2. A detailed analysis of the skills of those currently employed in the Verlorenvallei (with reference to age and gender);
 3. A detailed consideration of which employees would be likely to be employed by the proposed mine (with reference to age and gender);
 4. A detailed analysis of all residents dependent on those currently employed in the Verlorenvallei, including but not limited to children, spouses and the aged;
 5. A detailed analysis of current skills development programmes and training provided in the Verlorenvallei, including both school education and adult education; and
 6. A detailed analysis of all social and other support services currently provided in the Verlorenvallei.

e. Air Quality

- i. Due to the variability of winds in the Verlorenvallei, the study area for this study should be broadened to include a radius of at least 100km from the proposed site;
- ii. A weather station needs to be employed in the valley to measure wind data, air quality, temperature, rainfall and humidity. A number of dust monitoring stations will also need to be positioned at various key localities in the valley (page 44 of the DSR);
- iii. *“Baseline data needs to be collected for at least a year before mining commences. This data will need to be used for the EIA process. Prevailing wind data and dust monitoring will be important for deciding where to locate mine infrastructure and spoil areas”* (page 35 of the DSR);

- iv. Details of dust suppression methods and dust monitoring are required (page iii of the DSR).

f. Visual Impact

- i. A 3-D terrain model may be required to assess the key observation points from which the proposed mine infrastructure will be visible (page 39 of the DSR).

162. Kindly acknowledge receipt of this document.

Verlorenvallei Coalition

Signed by the Interim Chairperson

Date:

Copies to:

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The Verlorenvallei Coalition

Part A: Organisational members as at 31 May 2009

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4.	Agri WesKaap - Hoof Utivoerende Beampte	CB Opperman Christine Dowling	021 860 3800 christine@awk.co.za
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Comments, questions and objections to the FINAL SCOPING REPORT conducted in terms of Regulation 49(2) of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) (“MPRDA”) for the mining of tungsten ore and molybdenum ore on Portions 1, 6, 13 of the farm Namaquasfontein No. 76 and Portion 1 of Farm No. 297, Piketberg dated April 2009 (Job No. 07/11/1190, DME Ref. No. WC 30/5/1/2/2(328) EM)

A. PURPOSE OF THIS DOCUMENT

1. We refer to the Final Scoping Report (FSR) compiled in terms of Regulation 49 of the MPRDA for the mining of tungsten and molybdenum ore on the abovementioned portions of Namaquasfontein and Farm 297, Piketberg, dated July 2009.
2. The comments, questions and objections listed below are submitted on behalf of the Verlorenvlei Coalition, a voluntary association and a broad-based coalition of labour, civic organisations, environmental groups and local residents. A full list of Coalition members at the time of writing (new members join on a daily basis) is attached as **Annexures A and B** to this document.
3. The comments below comprise:
 - a. an assessment of the FSR’s compliance or non-compliance with the MPRDA and Regulations issued under the MPRDA (Government Notice R.527 in Government Gazette No. 26275, 23 April 2004) (“the Regulations”) (Section C. below);
 - b. an assessment of the way in which the FSR has responded to and incorporated the comments of authorities and I&APs to the Draft Scoping Report (DSR) published in April 2009 (Section D. and E. below). This includes the revised EIA Plan of Study and the revised Terms of Reference for the Specialist Studies in the EIA (Section F. below);
 - c. comments on the additional reports provided in the FSR (Section G. below); and
 - d. details of documents to which access has been refused (Section H. below).



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B. SUMMARY OF THE COALITION'S COMMENTS ON THE FSR

Introduction

4. As it did in its response to the DSR, the Verlorenvlei Coalition reiterates its profound and unequivocal objection to any proposal of mining in the Verlorenvallei. This area is a productive, profitable and economically growing part of the Bergriver Municipality that not only provides agricultural products for the Western Cape economy and for export, but employs hundreds of people, most of whom would lose their jobs and housing if the proposed mine goes ahead.
5. Most businesses and residents in the Verlorenvallei rely on ground and surface water resources, which are at serious risk of pollution by the mine. In addition, the mine is directly upstream from the Verlorenvlei wetland, a site internationally recognised under the Ramsar Convention on Wetlands 1971 and in respect of which South Africa, as a contracting party, has an international law obligation to protect.

Non-compliance with the MPRDA Regulations

6. As set out in detail below, the Coalition is of the view that no meaningful attempt has been made to remedy the non-compliances with Regulations 46 and 49 in the FSR.

The FSR's response to comments of I&APs and authorities on the DSR

7. The FSR fails to comply with crucial requirements set by authorities, particularly the Department of Minerals and Energy (DME), in their response to the DSR.

Additional reports provided in the FSR

8. Additional reports provided in the FSR raise fundamental questions about the financial viability of the proposed mine: not only does Bongani not have lawful access to the technical information required to produce the desired tungsten product, but the actual market price of this particular product (ammonium paratungstate) is far lower than presented in the reports.

C. NON-COMPLIANCE WITH REGULATION 49

9. In our comments on the DSR, the Coalition pointed out that Regulation 49(1)(d) of the MPRDA Regulations requires the scoping report to:
"identify and describe reasonable land use or development alternatives to the proposed operation, alternative means of carrying out the proposed operation, and the consequences of not proceeding with the proposed operation"
10. There are three separate aspects to this requirement, namely:
 - a. Identification and description of *"reasonable land use or development alternatives to the proposed operation"*;
 - b. Identification and description of *"alternative means of carrying out the proposed operation"*, and
 - c. Identification and description of *"the consequences of not proceeding with the proposed operation"*.
11. We pointed out that only the second requirement had been addressed in the DSR, namely on page ii, as part of the Executive Summary, which describes alternative design alternatives for the mine.
12. The third requirement was addressed in a single line in the DSR, namely *"The no-go alternative will also be considered, in which the status quo for the area will remain, viz. that of agriculture and livestock farming"* (DSR p. ii). We pointed out that, unfortunately, it was not sufficient for compliance with Regulation 49(1)(d) to defer this description to the environmental impact

assessment – Regulation 49(1)(d) specifically requires the consequences of not proceeding with the proposed operation to be identified and described in the Scoping Report.

13. We argued that land-use of the affected area was well established, with the livelihood of many existing businesses and workers dependent on existing land-use, namely agriculture. We pointed out that it was particularly problematic that alternatives to the proposed mine, and the many positive consequences of not proceeding with the mine, were not identified and described as required by the Regulations. We contended that this non-compliance with Regulation 49 taints the remainder of the DSR by ensuring inadequate and misleading representation of the facts applicable to the proposed mining area through omission of relevant information.
14. We also pointed out that Regulation 46(a) requires the Social and Labour Plan (Appendix 7 to the DSR) to contain “*a preamble which provides background information of the mine in question*”. Appendix 7 contained no such preamble, and no information at all on the mine or the mining company itself, such as what other mines Bongani Minerals Pty Ltd owns.
15. It was therefore submitted that the DSR itself was non-compliant with both Regulations 46 and 49 and should be rejected on this basis alone.
16. In response, the DME required the FSR to “provide all the relevant information that allow the comparative investigation and assessment of project alternatives as required in terms of IEM and Reg. 49(1)(d) of the MPRDA” (p. 3).
17. In its comments on the DSR (Appendix 2b), the Western Cape Department of Environmental Affairs and Development Planning (DEADP) provided more detail as to what is required in the description of alternatives:
 - a. “a detailed description of all alternatives identified”
 - b. “the project alternatives must be practical and realistic”, i.e. “alternatives that have the potential to be implemented should be investigated”
 - c. “the reasons for considering one of the alternatives as the ‘preferred alternative’ must be clearly described”

DEADP proceeds to record that “in terms of the alternatives identified in the Scoping Report, it is indicated that no activity alternatives will be investigated.... It is also critical to note that specialist advice and the concerns received from I&APs are essential in identifying and assessing alternatives”. ... the Scoping Report fails to meet the requirement in terms of Regulation 49(1)(d)... Therefore, at this stage, this Department is not satisfied with the information provided on alternatives”.

18. One would expect that, in response to these comments and directives, the FSR would contain a detailed assessment of alternatives to the proposed mining operation, and an addendum to the Social and Labour Plan. However, as mentioned under Key issue 5.8 above, the FSR contains:
 - a. the sentence “*The no-go alternative will also be considered, in which the status quo for the area will remain, viz. that of agriculture and livestock farming*” (which appeared in the Executive Summary of the DSR on p. ii); and
 - b. one additional paragraph to explain that “*the cumulative pros and cons of the various alternatives (including the no-go alternative) can only be evaluated and compared once all the EIA-phase specialist studies have been completed*”, with reference to the Social and Economic Impact Assessment and Agriculture Land-use Study to be commissioned (p. 34-35).
19. Regulation 49(1)(d) requires a Scoping Report to “*identify and describe reasonable land use or development alternatives to the proposed operation*”. This has not been done, and the FSR simply defers all these queries to the EIA phase. The FSR certainly does not provide “all the relevant information that allow the comparative investigation and assessment of project alternatives” required by DME. The FSR therefore remains non-compliant with Regulation 49(1)(d).

20. In addition, no amendment was made to the Social and Labour Plan (Appendix 7 in the FSR) to provide the “*preamble which provides background information of the mine in question*” to ensure compliance with Regulation 46.
21. The Coalition now has no option but to record its conclusions that the FSR does not comply with Regulation 46 and 49, and to reserves all its rights to raise this in an appropriate forum at a later stage.

D. FSR’S RESPONSE TO COMMENTS OF I&APS ON THE DSR

22. The Coalition, with somewhat more limited resources than Bongani, has attempted the enormous task of comparing the FSR to its own comments and those of other I&APs, and we have pointed out all discrepancies and difficulties to the best of our abilities. However, we stand by the comments made to the DSR, and to the extent that those comments have not been incorporated in the FSR, we regard the FSR as an inadequate response.
23. Although these issues are also covered in section 8 of the FSR, p. 65, the references to key issues below use to the reference system in Table 6.

Key issue 1.1: Impact of proposed Mining on Ecology and Biodiversity

24. In 1.1.2, WEC suggest that there already is a “high degree of certainty on how these systems function”. This seems to be at odds with the comprehensive studies recommended by the various specialists. There is no basis at present to suggest a high degree of certainty about “the potential impacts on the surface and underground water systems of the Krom Antonies River and inflows to the Verlorenvlei”.

Key issue 1.2: Impact of proposed Mining on Water Resources of Verlorenvlei and surrounds

25. Firstly, the FSR, an attempt is made for the first time to quantify the groundwater to be abstracted for the proposed mining operation:
 - a. “The total water demand for the processing plant is estimated by the metallurgist 3500m³/day’ [*sic*] (FSR p. 30)
 - b. “100m³ for dust suppressants and 3500m³ for minerals processing”, with no indication of period applicable (FSR p.67)
 - c. “the processing plant requires about 3500 m³ per day (FSR p. 80)

Yet this figure is not substantiated as the metallurgist’s report is not provided in the FSR, and we are advised that this report will be only be available as part of the EIA. See Section H. below.

In addition, in response to Key issue 3.1 Impact on Infrastructure, Withers Environmental Consultants (WEC) note that “the total volume of water actually required will still need to be determined by how much water can be recycled.”

26. Secondly, the Krom Antonies Water Users Association points out that any new application for water use must be preceded by a reserve determination for the Krom Antonies river, which has not yet been undertaken. If the reserve determination shows that there is water available for further allocations, the KAWUA will first have to make provision for allocations to people who did not, in the past, receive their fair share of water allocations in line with Department of Water Affairs policies.
27. Thirdly, as an illustration of how the proposed water use compares to the current water use, the Coalition points out that the largest dam in the KAWUA contains about 140 000m³. At an estimate, a combination of all the proposed mine’s daily water requirements (concentrator plant, dust suppressants etc) this dam could conceivably be drained in 10 days, while the same dam provides water for Little Swift for an entire season.

28. WEC reject an I&AP's concern about the "acidification of the groundwater and wetlands surrounding the Mpumalanga coal mines" with the comment that "the acidification of groundwater by coal mines is very different to tungsten mining" (1.2.9). While this may true, acidification of groundwater is not unique to coal mining. In this regard, the Department of Agriculture (Appendix 2b) points out that molybdenum is a sulphide mineral which "will eventually, on exposure to air and water, begin to produce acid which will leach into run-off water to be dispersed into both ground and surface water". WEC's response is therefore inadequate.
29. Despite the undertaking in 1.2.10 that the FSR would be amended to remove all references to the Krom Antonies River being "perennial", the FSR contains three references to the river being perennial (pp. 36, 37 and 47).

Key issue 1.3: Impact of polluted groundwater

30. At least one Coalition member, geologist Dr. Bob Winter, argues that the floods the area suffered last year undermines the claim that contamination of ground- and surface water can be mitigated. Needless to say, even the best stormwater management programme will be hard-pressed to contain the impacts of floods such as those seen in the area.

Key issue 1.5: Impact of the proposed mine on river diversion

31. The Coalition would like to point out that, in Figure 5, it is clear that both the starter pit and the pit layout in the Preliminary Site Layout Plan's pit design would transect two of the largest drainage gulleys in the Moutonshoek valley (the site of the current Moutonshoek dam). Massive river diversions with all the resultant negative impact would be unavoidable.

Key issue 1.6: Current water use and impacts on water quality

32. In our comments on the DSR, the Coalition indicated that it regarded the lack of information in the DSR about current water use in the affected area as a non-compliance with Regulation 49(1)(d). We even indicated that such information is available from the Krom Antonies Water Users' Association.

In the FSR, no additional information is provided to address this omission – instead, the response is that a hydrocensus will be undertaken as part of the EIA. This means that the non-compliance with Regulation 49(1)(d) has not been remedied in the FSR.

Key issue 1.7: Impact of the Proposed Mining on Agricultural Land

33. In our comments on the DSR, the Coalition indicated that it regarded the lack of assessment of current agricultural production in the DSR as a non-compliance with Regulation 49(1)(d). In the FSR, the response is that "the physical and economic impacts of the proposed mining operation on agriculture will be assessed during the EIA before any conclusions will be drawn". Again, the non-compliance with Regulation 49(1)(d) has not been remedied in the FSR.
34. WEC's response seems to suggest that they believe that agriculture can continue on the mine lease site, i.e. in the immediate vicinity of an operational open cast tungsten mine and metals processing plant. With respect, this is a ridiculous suggestion that bears no relation to the reality of mining sites.

Key issue 1.8: Impact of noise and air pollution from Mining

35. It is easy to answer the multiple concerns about dust pollution by saying that "dust suppressants will be used". The reality is that the effectiveness of dust suppressants is questionable, and many large industrial sites struggle to control fly-away dust from dumps despite using dust suppressants.

The Coalition also notes the comment by the Western Cape Department of Agriculture that "using water to dampen dust 'down' is not sufficient, and more attention to detail regarding the aspect is requested" (Appendix 2b).

Key issue 1.11: Impact of Climate Change and Water Use on Available Water Reserves

36. WEC's response indicates that "it will be important to capture at least one year's worth of biophysical data"; how is this possible if the draft EIA Report has to be produced within the statutory 180 days? A conclusion that reports produced in 180 days would be deficient is unavoidable.

Key issue 1.13: The impact of blasting and mine design on the instability of the Piketberg Mountain to the east of the mine

37. I&APs refer to the highly likely scenario that underwater structures will be damaged by blasting, resulting in the disappearance of their underground water. For WEC to state that blasting will "hardly cause earthquakes" misses the point. Farmers with boreholes in the application area report the need to frequently service their boreholes as a result of the friable nature of the substrate that they abstract water from. Blasting may well damage their boreholes.

Key issue 1.1: Impact of the proposed mining on the Greater Cederberg Biodiversity Corridor

38. WEC's response seems to deny that the Krom Antonies River valley falls within the Greater Cederberg Biodiversity Corridor, despite this having been confirmed by two environmental NGOs (EBEDAG and WESSA) and a statutory body (Cape Nature).
39. It is not at all clear what the comment "mining occurs mostly on old agricultural areas (refer to the gold and coal mines of the old Transvaal region)" is supposed to convey – this does not address the complaint by I&APs that the proposed mine is "completely out of line" with the Greater Cederberg Biodiversity Corridor initiative.
40. WEC suggest that Namakwa Sands is a "good example of good mining practices on the West Coast". The research conducted for at least one Masters thesis found that "the gaseous emissions from the [Namakwa Sands] Mineral Separation Plant could probably have had a detrimental effect on the adjacent Succulent Karoo vegetation".¹

Key issue 2.1: Alternative Development Options to be Considered

41. In our comments on the DSR, the Coalition pointed out the deferral of the no-go alternative to the EIA as a non-compliance with Regulation 49(1)(d), which inter alia requires the Scoping Report (not the EIA) to "*identify and describe reasonable land use or development alternatives to the proposed operation, alternative means of carrying out the proposed operation, and the consequences of not proceeding with the proposed operation*".

WEC's response states that "the so-called 'no go' development option is being considered. ...[agriculture] will be described in greater detail in the Final Scoping Report". However, no further information about current agricultural production is provided in the FSR.

The non-compliance with Regulation 49(1)(d) has therefore not been remedied in the FSR, and the FSR therefore remains in breach of the requirements of Regulation 49(1)(d).

Key issue 3.1: Impact on Infrastructure

42. See comments under Key issue 1.2: Impact of proposed Mining on Water Resources of Verlorenvlei and surrounds above.

¹ Lukama, Beatice M K. 2008. "Effects of gaseous emissions from the Namakwa Sands mineral separation plant near Lützville on the adjacent succulent Karoo vegetation – a pilot study". University of Stellenbosch Masters Thesis. Available at <http://hdl.handle.net/10019/573>.

Key issue 3.2: Traffic Impact of Mining on Road Infrastructure and N7 Road

43. As can clearly be seen from Figure 5, both the proposed starter pit and final pit areas will destroy district road T2172, cutting residents off from their homes higher up in the valley. The Coalition calls on Bongani to clearly indicated how they plan to provide alternative access and what the financial cost and environmental impact of this road diversion will be. Also see paragraphs 112 to 114 and paragraphs 161 to 162 below.

Key issue 3.4: Concerns about the proposed design of the open cast mining project

44. WEC state that, “at the current tungsten prices, the proposed Riviera Tungsten mine is highly viable”. As described in more detail below, as at 18 August 2009, the bid-ask rate of ammonium paratungstate (APT) varies between \$185 and \$200 per metric tonne. A rough calculation shows that, at the actual price, the proposed mine is already no longer viable. (See also the implications of not having access to proprietary information necessary for the manufacture of APT below.)
45. In June 2009, WEC was quoted in *Mining Weekly* magazine as saying that China had resolved to limit the mining and production of tungsten to help force the price of Tungsten upwards.² Thus Bongani bases the alleged viability of the proposed mine on an inflated APT price of \$250/metric tonne.
46. In addition, should the price of APT go up, many mines currently mothballed will be reopened – a practice known as “swing production”. All other known tungsten mines are more viable than Riviera Tungsten. One of these more viable mines is the CanTung mine in Canada’s Northwest Territories, one of the benchmark mines used by Venmyn in their Concept Study (FSR, Appendix 17). CanTung announced its temporary closure on 29 June 2009³ (its previous temporary closure was in December 2003 after it reopened in January 2002).⁴
47. In addition, WEC state that “the results are based on very detailed exploration by Union Carbide and Anglo American” during the 1980s. Unfortunately this “very detailed exploration” has not been sufficient for the deposit to be SAMREC compliant – see the report of Dr Herman Grütter in Annexure C).

Key issue 3.5: Processing of Tungsten

48. WEC deflect the I&AP concerns about the lack of information on the detail on chemicals to be used and potential environmental hazards these might pose by stating that this information cannot be recorded due to “trademark secrets of processing tungsten”. The neglect to mention that Bongani apparently does not have access to this information either (see Section H. below).
49. How can I&APs be expected to assess the FSR and provide meaningful input on Terms of Reference for the Specialist Studies, without this information? How can the appointed specialists draw meaningful conclusions without this information?

Key issue 4.1: Impact of Proposed Mining on Existing Jobs

50. In its response to the DSR, the Coalition made serious allegations against blatant misrepresentations made in the DSR regarding current levels of unemployment in the Piketberg area. WEC have now removed these allegations from the FSR, and has not denied the misrepresentation. It but simply states that “the data contained in the DSR was obtained from the Social and Labour Plan”. It also states that “these figures will be quantifies [sic] and verified in the EIA”.

² *Mining Weekly*, 12 June 2009 “R1,3bn required for 'viable' but vigorously opposed Western Cape tungsten project” available at <http://www.miningweekly.com/article/riviera-tungsten-project-2009-06-12>.

³ Metal-Pages.com, 29 June 2009 “North American Tungsten to suspend CanTung mine in October” available at <http://www.metal-pages.com/news/story/40436/>.

⁴ See article by Mining Watch, available at http://www.miningwatch.ca/index.php?Parks/CanTung_Closes.

The Coalition strongly objects to the inclusion of “inaccurate, incorrect and misleading information” in the DSR within the meaning of S.98(b) of the MPRDA, which constitutes a criminal offence. The Coalition calls upon the DME to take action against those responsible for inclusion of such information in contravention of the MPRDA.

51. An almost identical proposed mine (in size and scope) in the Yukon in Canada provides only 74 jobs and not 400 (see the report of Dr Herman Grütter in Annexure C). Furthermore, local labour is trained in agriculture, and not mining. All agricultural jobs will be lost in the valley, as farming in the greater part of the valley will not be able to continue.

Key issue 4.3: Impact of Falling Tungsten Prices on Mining in Krom Antonies Valley

52. The Coalition requires information about the “financial securities” that Bongani will provide to DME “for the rehabilitation of the mine”. Without endorsing this figure at this early stage, the Coalition notes that the Western Cape Department of Agriculture has requested that the financial provision be made in the amount of R406,6 million for rehabilitation costs (Appendix 2b).

Key issue 4.4: Impact of mine on the value of affected property

53. The Coalition would like to record that there has already been an impact on property values in the valley and on top of Piketberg mountain merely as result of the mining rights application by Bongani accepted by DME (and similar claims are made as far as Elands Bay). The farm Tierhoek was sold for a quarter of its value, and Kosie van Niekerk Boerdery had a significant offer on his farm Kromvlei that was withdrawn due to the threat of the mine. Similarly, M Matzener on the Piketberg mountain had an offer to purchase withdrawn.

Key issue 4.5: Impact of Proposed mining on the Karookop school

54. In our comments on the DSR, the Coalition indicated that it regarded the omission of the fact that the proposed mine would force the closure of the Karookop Primary School as a non-compliance with Regulation 49(1)(d). We even provided WEC with contact details for the school principal.

In the FSR, no further information has been provided regarding this school. Instead, the WEC response is that “if the school is forced to close because of the close proximity to the mine, the mining company should provide another school in a more suitable locality”.

The non-compliance with Regulation 49(1)(d) is not denied, but has not been remedied in the FSR either. The FSR therefore remains in breach of the requirements of Regulation 49(1)(d).

Key issue 4.6: Vulnerable people and social development support

55. Again, the response to the Coalition’s allegation of non-compliance with Regulation 49(1)(d) is simply deferred to the socio-economic assessment in the EIA phase. The FSR remains in breach of the requirements of Regulation 49(1)(d) in that it does not “*identify and describe reasonable land use or development alternatives to the proposed operation, ... and the consequences of not proceeding with the proposed operation*”.

Key issue 4.7: Impact of proposed mine on the way of life and the sense of place

56. With respect, the WEC response that “specialist socio-economic, visual and heritage assessments will be undertaken in the EIA phase” is no answer to the Coalition and many other I&APs concerns. This is not just about a change in the way the valley looks or how people earn their living, but also about the way in which a large open-cast mine would disrupt the community, their history and their social interaction. In which study are these factors described and assessed (as it should have been in the FSR in compliance with Regulation 49(1)(d))?

Key issue 4.8: Impact of the proposed mining on housing in the district

57. As mentioned in our comments on the DSR, the non-compliance of the DSR – and now the FSR – with Regulation 49(1)(d) means that there has been no assessment of the current housing in and around the affected area, which is vital for an assessment of how the proposed mine would impact on such housing.

Key issue 4.9: Impact of Proposed Mining on Tourism

58. The WEC response that “the DSR is not supposed to address issues, but rather table them” is not accurate. In terms of Regulation 49(1)(d), the FSR needs to “*identify and describe reasonable land use or development alternatives to the proposed operation*”, which includes tourism. Again, the FSR does not comply with this statutory requirement.

Key issue 4.11: Economic Impact of Mining on agricultural economy in the valley

59. Three highly viable farms in and around the proposed mining area will definitely go out of business should the mining right application be approved, no matter what mitigation is put in place:
- a. Kosie van Niekerk Boerdery (loss of groundwater and dust);
 - b. Little Swift Investments 56 (Pty) Ltd (entire farm in application area); and
 - c. Namaquasfontein Boerdery Trust (two thirds of income will be knocked out by the removal of Little Swift).

This will result in massive job losses for workers employed on these farms.

Key issue 4.15: Visual Impact



60. In support of our pleas against the destruction of the Moutonshoek Valley, the Coalition can only include some images from our beloved valley and hope that the authorities making decisions about this application will attempt to understand the loss that approving the mining right application will cause.





61. One of the agricultural activities in the valley is the breeding and raising of racehorses. The aesthetics of the valley is an integral part of the marketing of this product. The buyers who purchase an untried, unschooled yearling racehorse purchase a dream (a dream of winning the Durban July or the J&B Met), in which the environment in which the horse was raised plays an important role. Moutonshoek farm located its stables in a position where they can maximise the natural beauty of the Moutonshoek valley when parading their yearlings to prospective buyers. The proposed open pit would fill the entire vista from this location, and would destroy the very core of their successful business plan.

Key issue 5.1: Impacts of the Previous Prospecting Right Application on the Present Mining Right Application

62. The Coalition records that, on 26 June 2009, it submitted an application to DME in terms of S.5 of the Promotion of Administrative Justice Act, 2000 (Act 3 of 2000) requesting reasons why DME accepted the mining rights application by Bongani.

63. In addition, on 23 June 2009, the Coalition wrote to DME with inter alia the following requests:

“Despite none of its members having been consulted on any other prospecting and/or mining rights applications in the valley, the Coalition keeps hearing rumours of other such applications having been submitted to yourself (you will recall this question being posed at RMDEC, without reply). Please could you now confirm for us:

- *whether any such applications for any property in the Moutonshoek or Verlorenvallei have been submitted to yourself; and*
- *whether DME has accepted and referred any EMPs in support of prospecting rights to the Minister in terms of Section 16(5) of the Minerals and Petroleum Resources Development Act.”*

The Coalition has received no response to these queries, and it is therefore not clear what other rights applications, if any, are pending.

Key issue 5.2: The Legal Process Regarding Public Participation

64. The Coalition looks forward to another public participation meeting, but demands that the date for such a meeting be provided with at least 30 days’ notice. Many I&APs have to make travel and leave arrangements to be able to attend such a meeting.

65. See also the comments in paragraph 94 below.

Key issue 8.5.5: Lack of Contact with Authorities, especially DEA&DP and DEAT

66. The Coalition requests a copy of the correspondence sent to DEAT as alleged.

Key issue 5.7: Controlling Authority for Land Use

67. Presumably the last sentence in 5.7.3 should read “A temporary rezoning application to mine for a period of ± 20 years will be to the Berg River Municipality”.

Key issue 5.8: Non-compliance with the MPRDA Regulations

68. The WEC response in 5.8.1 is misleading and inaccurate.

Firstly, WEC state that “the so called ‘no-go’ option was included in the DSR. In fact, this constituted one sentence in the Executive Summary of the DSR on p. ii:

“The no-go alternative will also be considered, in which the status quo for the area will remain, viz. that of agriculture and livestock farming.”

Secondly, WEC state that “the Revised Scoping Report refers in more detail to the Alternatives to be considered”. In fact, the FSR contains the same sentence as quoted above, but this time with an additional paragraph to explain that “the cumulative pros and cons of the various alternatives (including the no-go alternative) can only be evaluated and compared once all the EIA-phase specialist studies have been completed”, with reference to the Social and Economic Impact Assessment and Agriculture Land-use Study to be commissioned (p. 34-35).

Regulation 49(1)(d) requires a Scoping Report to “*identify and describe reasonable land use or development alternatives to the proposed operation*”. This has not been done, and the FSR remains non-compliant with Regulation 49(1)(d).

69. With regard to the WEC response at 5.8.3, with respect, approval by the DME of the Social and Labour Plan does not make a non-compliant Plan compliant with Regulation 46(a). The Coalition reserves all its rights to raise this deficiency in future in the appropriate forum.

Key issue 6.1: Issues regarding EMP

70. Various I&APs, including the Coalition, has asked for the release of crucial information regarding the proposed mining operation, which information is already available to Bongani Minerals Pty Ltd.

This information includes:

- a. information regarding the mining process (some of this information is contained in the Venmyn Rand Concept Report);
- b. metallurgist’s report, which should contain an analysis of the ore (advised that this will only be available as part of the draft EIA Report);
- c. estimated water use (an incomplete and unreliable attempt to estimate water use is described under Key issue 1.2);
- d. “a mineral resource for the properties affected, declared to SAMREC or equivalent reporting code, and clearly signed off by Competent or Qualified Persons”, or “documentation that a SAMREC-compliant mineral resource is to be declared in future, plus disclosure by the Applicant of anticipated exploration activities and related exploration budget to support a resource declaration”.

There is no basis for withholding any of this information until the draft EIA Report is released: this information is or should be available, and is crucial for I&APs to assess the financial, geological and environmental viability of the proposed mine.

The Coalition again requests DME’s intervention to ensure that this information is released to I&APs without delay.

Key issue 6.2: NEMA and the EIA process

71. WEC’s response to the I&AP concern raised in 6.2.3 is not sufficient. The I&AP is asking what size the Riviera Tungsten Mine project (in terms of estimated professional fees) constitutes in relation to the estimated professional fees for all other projects currently being conducted by WEC. This is directly relevant to the EAP’s independence, and the Coalition requests that this information be made available as a matter of urgency.

72. WEC state in 6.2.6 that they will ask DME for an extension of time for producing the Final EIA Report. For clarification, is it proposed that WEC will ask for a 6 month extension, considering that a number of specialists have indicated that they would need a minimum of 12 months to do adequate baseline studies and collect sufficient relevant data to make informed recommendations?
73. As at date of these comments, I&APs have not been notified that an application has been lodged for an environmental authorisation in terms of S.21 of NEMA, for the activities listed by DEADP in their letter to DME dated 5 June 2009 (Appendix 2b). The Coalition notes and supports DEADP's comment that this NEMA EIA process should have been run in parallel with the MPRDA EIA. The fact that Bongani has chosen not to do so places an undue burden on I&APs, who have to spend funds and time out of their employment and businesses to participate in these processes.

Key issue 6.4: NEMA:AQA

74. With respect, the fact that no smelting is required does not mean that the metallurgical plant would not require an atmospheric emissions licence under NEM:AQA. It is recommended that WEC consult Category 4 (Metallurgical Industry) in the Draft Listed Activities and Associated Minimum Emission Standards identified in terms of S.21 of NEM:AQA (GN 1001 in Government Gazette 32434, 24 July 2009) as well as the National or Provincial Air Quality Officer before drawing conclusions about the requirements of this Act. The Coalition will be doing the same.

Key issue 6.7: LUPO

75. The Coalition would like to draw to WEC and DME's attention that the Cederberg Municipality (Mayor Judy Mouton) have indicated that they want to give input into the LUPO application, as they feel the negative impact would be felt in their district as well.

Key issue 6.8: Ramsar

76. The Coalition notes the Western Cape Department of Agriculture's concern in Appendix 2b that the Ramsar designation of the Verlorenvlei would be withdrawn "as one of the requirements of a Ramsar site is that it 'not affected by mining activities' AND there could be significant damage done to the agricultural practices in the region."

Key issue 7.2: Palaeo Ecology

77. With respect, it is not within WEC's expertise to state that "the proposed mine will... not impact on the palaeo-ecology of the vlei" because it would be 35 km away from the Vlei. As pointed out by many I&APs and the DSR, the Verlorenvlei would lie directly downstream of the proposed mine, which means that any impacts on water quality would most definitely affect the palaeo-ecology of the Verlorenvlei.

The Coalition therefore reiterates other I&APs' requests for an investigation into the palaeo-ecological heritage of the Vlei, and the potential impact of the proposed mine on this heritage.

Key issue 7.3: Rehabilitation and surety

78. As stated under Key issue 4.3 above, the Coalition requires information about the "surety payment" that will be made to DME by Bongani "to ensure rehabilitation". In particular, the Coalition wants to know how much this surety payment would be.

The Constitution (1.4, p.3)

79. It is astonishing, to say the least, that WEC have managed to repeat the incorrect quotation of S.24 of the Constitution in the DSR, after the Coalition pointed out the fundamental error in the DSR.

Section 24(b)(iii) as represented in DSR p. 2 and the FSR p. 3	Accurate version of Section 24(b)(iii)
<p>“... every person shall have the right to the following:</p> <p>(a) An environment that is not harmful to their health nor well being; and</p> <p>(b) To have that environment protected for the benefit of present and future generations, through reasonable legislative and other measures, which:</p> <ul style="list-style-type: none"> • prevents pollution and ecological degradation; • promotes conservation; and • secures justifiable economic and social development and use of natural resources while promoting justifiable economic and social development.” 	<p>“Everyone has the right -</p> <p>(a) to an environment that is not harmful to their health or well-being; and</p> <p>(b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that -</p> <p>(i) prevent pollution and ecological degradation;</p> <p>(ii) promote conservation; and</p> <p>(iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.”</p>

80. While in our comments on the DSR, we assumed that this was a typographical error by the authors of the DSR, is it possible to make this fundamental error twice without drawing an adverse inference? As stated in our comments on the DSR, it is hard to imagine how a twenty-year open-cast mine would “*protect the environment for the benefit of present and future generations*”. Both the DSR and the FSR point out many potentially detrimental environmental impacts of the proposed mine, making it extremely unlikely (a) to constitute ecologically sustainable development and use of natural resources, and (b) to prevent pollution and ecological degradation.

Legal process followed to date for obtaining the mining rights

81. The description of the legal process in paragraph 1.5 of the FSR is neither an accurate nor complete reflection of the events in question for example, no mention is made of the first prospecting right application that was rejected by DME), and it is not clear why WEC, as independent consultants, have chosen to portray Bongani Minerals Pty Ltd as a victim of past legal action by I&APs. In the absence of a court judgement finding that the applicants in the application for the review of the decision to grant a prospecting right to Bongani were not entitled to the relief they sought at the time, it would be appropriate for WEC to refrain from questioning the applicants’ rights to bring the review application in question.
82. The Coalition reserves its rights to place a correct and more objective version of events on the record at an appropriate time and forum in the future.

Access to land

83. WEC make repeated accusations in the FSR that landowners (all of whom are members of the Verlorenvlei Coalition) are resisting access to the affected properties. It is important to note that, as at date of these comments, the landowners in question have had no legal obligation to allow WEC or any of the specialist scientists on their properties.
84. Having said that, although the Verlorenvlei Coalition strongly opposes the application by Bongani for a mining right for the Riviera tungsten deposit, the Coalition has indicated its commitment to a high quality, legally compliant environmental impact assessment process as required by the MRDA. In particular, the owners and lawful occupiers of the affected properties are committed to providing such access to their land as is necessary for the EIA specialist studies to be conducted, subject thereto that such studies comply with all legal requirements set by the MPRDA and other applicable legislation.

Consultation with I&APs

85. Please note that the statement that the Coalition's Chairperson, Dr Bennie van der Merwe, "started a blog on the Verlorenvlei website" is not correct. A personal letter from Dr Van der Merwe was posted on this website by Vleifriend without his knowledge or consent. When it was brought to his attention by Mr Withers on 30 April 2009, he had it removed immediately.
86. The number provided for I&APs who attended the public meeting on 30 April 2009 differs on p. 63 of the FSR ("some 130") and on p. 72 of Table 6 in the FSR ("175"). The Coalition believes that more than 175 I&APs attended the meeting in question, despite very limited notice of the meeting.

Alignment of development needs/priorities

87. The Coalition notes that the statement that "*A need exists to align the development needs/priorities of communities with the social investment objectives of the Riviera Tungsten Project that emanate from the Local Economic Development Programme*" has not been removed (FSR p. 54) despite our comments to the DSR. In those comments, we stated that such an approach was of great concern to the Verlorenvallei Coalition, and confirmed our fears that the proposed mine would destroy the livelihoods and wellbeing of the Verlorenvallei communities. We suggested that, instead, it was the project that needs to align itself with development needs/priorities of the community.

Comments on the DSR ignored in the FSR

88. The Coalition is in possession of a number of submissions by I&APs to WEC complaining that their particular comments on the DSR were either completely excluded from the FSR, or were misquoted or misinterpreted. These include:
 - a. The Moutonshoek Werknemers Vereniging, representing the farmworkers in the valley
 - b. Kromvlei Plaas (Kosie Van Niekerk Boerdery)
 - c. Felicity Strange;
 - d. Nick Taylor;
 - e. WESSA;
 - f. Agri Western Cape. Note, in their letter of 14 August 2009, their demand for the appointment of an independent expert to evaluate the application process and specialist studies and reports throughout the application process;
89. A number of critical comments made and questions posed by the Coalition in its comments on the DSR have also been ignored in the FSR. As an example, we asked for a detailed breakdown of the initial direct investment into the local Berg River economy by the Riviera Tungsten Project – alleged to be between R1,2 and R1,5 billion over the first five years of operations (DSR p 34). Instead, this statement is simply repeated in the FSR (p. 57) with no mention of our request for a breakdown of these figures.

E. FSR'S RESPONSE TO REQUIREMENTS FROM THE DME AND OTHER AUTHORITIES

90. As in the case of I&APs comments, the Coalition has attempted to compare the FSR to all the comments and requirements of authorities as contained in Appendix 2b to the FSR, and we have pointed out all discrepancies and difficulties to the best of our abilities. In addition to the gaps pointed out below, to the extent that those requirements have not been incorporated in the FSR, we regard the FSR as an inadequate response to authorities' requirements.
91. Note that page 8 of the comments of DEADP in Appendix 2b is not included in the electronic or hardcopy FSR.

92. In a letter to Bongani dated 24 June 2009 (Appendix 2b to the FSR), the DME identified “key issues that require further input” in the DSR. The section below considers whether these requirements have been incorporated in the FSR.

Consultation

93. The DME required the FSR to “provide proof that objections and concerns have been resolved and/or incorporated in the EMP. Submit the “results of consultation (i.e. written agreement/solved disagreements/or deliberated disagreements) with affected parties and the authorities” (p. 1).

The reality is that most I&APs are fundamentally opposed to the principle of mining in the Moutonshoek Valley, for a wide range of reasons, as appears from the many I&AP comments. See, for example, the statement by statutory body Cape Nature in their letter to DME dated 15 May 2009 (Appendix 2b):

“Based on the current information available, Cape Nature believes that the proposed mining activities and the associated increase in population, which will bring with it the need for additional roads, water supply, sewage and waste disposal, poses a high level of risk to the terrestrial and aquatic ecosystems in the area and their functioning. We believe that the proposed mine is entirely inappropriate for the area and could have significant and irreversible impacts on the environment.

We will therefore continue to oppose any open cast mining of this magnitude in the upper catchment of the Verlorenvlei system.”

Except for a few undertakings to amend the FSR, all of these objections have been dealt with by referring to the specialist studies to be conducted in the EIA. By no means does this constitute resolving this fundamental disagreement with I&APs.

94. In addition, the FSR makes it clear that the Open Day planned for sometime later in the EIA process is only an opportunity to ask questions of specialists – WEC state that “a formal meeting will not take place” (FSR p. 117). It is not clear how WEC propose resolving objections and concerns of I&APs without even meeting with us.
95. The DME also required the FSR to deal with consultation with the local authority (p. 2) and consultation with DWAF (p. 2). No mention is made in the FSR of consultation that has taken place with the Berg River Municipality or with DWAF, and such consultation is referred to in the future tense in the FSR.

Project description

96. The DME required the project description in the FSR to be “explained and resource requirements from the environment must be clear and without ambiguity” (p. 2).
97. Concerns about lack of detail provided in the DSR regarding the mining process are echoed by DEADP (Appendix 2b), who specifically required more information about the power supply for the crusher plant and any aboveground storage of fuel; details of the processing operations (components of the process, equipment required, flotation, gravity concentration, thickening and water storage, volumes of waste material to be stockpiled, transport of processed materials from the site – how many tons per truck per trip, disposal of hazardous and general solid waste).
98. A comparison of DME’s list of requirements for the project description and Section 4 of the FSR shows the following gaps:
- No mention of the size or slope of the overburden dump (the issue of location is referred to the Specialist Studies in the EIA);
 - No mention of the exact size, location, slope and height of the slimes dam (all these issues have been referred to the EIA Specialist Studies);
 - The predicted volume of slimes is provided as a cubic meter per hour figure, instead of an overall estimate;

- d. No detailed information on the composition and chemistry of the slimes produced (again, this issue is referred to the EIA Specialist Studies);
 - e. No information about the volume and type and concentration of each chemical used and released by all the different processes in the plant (again, this issue is referred to the EIA Specialist Studies);
 - f. No mention of the volume of “all other wastes to be produced” (though an estimated amount of 94,674,061 million tonnes of waste rock is provided on p. 26 of the FSR; volumes of slimes to be produced are given at hourly rates only);
 - g. No details of the volume and method of fuel storage to be required (again referred to the EIA Specialist Studies);
 - h. No details regarding the predicted noise and dust emissions (referred to the EIA Specialist Studies);
 - i. No details of the design for a sewage plant;
 - j. No details of internal roads, conveyors and pipeline routes;
 - k. No details of the predicted volume of traffic out of and onto the valley; and
 - l. No maps drawn up by a surveyor with various crucial details of the proposed operation.
99. Many of these requirements were echoed by authorities:
- a. DEADP: “This Department is concerned about the amount of water that may be utilized by the proposed mining activity at this stage, based on the surrounding land uses that are highly dependent on the water resources”;
 - b. DEADP: the FSR must contain information in terms of the proposed layout (the extent of the proposed pit areas, the extent of the waste dump, the extent of the slime dam and the location of the proposed haul road).
 - c. DWAF: required detailed estimates for dewatering and include estimates of water volume, as well as a plan for dealing with the “final void”.
100. In the Coalition’s comments on the DSR, we lamented the statement in the DSR that “*little information is available*” regarding the chemical processes, and wondered at the wisdom of planning a major mining operation based on “little information”. We pointed out other information not provided in the DSR, and list below those that have still not been provided in the FSR:
- a. estimates of the volume of residual ore to be stored in tailings dams on the site;
 - b. estimates of the volume of waste water to be produced in both the mining and metals processing, the composition and quality of such waste water and treatment proposed for such waste water;
 - c. estimates of the volume of dust containing tungsten and molybdenum that would be generated by the mining process;
 - d. estimates of the volume of pyrite present in the ore. Already the exposure of pyrite to water in mines all over South Africa has led to the urgent and large-scale problems caused by acid mine drainage (see the concerns of Coalition member **Agri Wes-Kaap**); yet no mention is made in the DSR of the possibility that the Riviera mine could cause similar problems (we note that the FSR records that the ore does contain pyrite);
 - e. a comprehensive Process Flow Diagram showing inputs, outputs, byproducts and wastes (to land, water and air). It is inconceivable that Bongani Minerals Pty Ltd has not yet developed a process flow – why is this missing from the DSR?

- f. whether Bongani Minerals Pty Ltd intends mining in the void only (starter pit area and final pit area), or the whole area demarcated as mine area?

Prospecting information

101. The DME required a report by a geologist to be submitted with certain specified “prospecting information”, to be used to plan the plant and compile the mine plans and specify the chemistry of waste materials.
102. No such geologist’s report is attached to the FSR. The only mention of a geologist is in the context of the experts who will participate in the Geotechnical Study as part of the EIA Specialist Studies (FSR p. 78).

Project alternatives

103. See paragraphs 9 to 21 above.

Feasibility and sensitivity assessment

104. The DME required a feasibility and sensitivity assessment (p. 3, Appendix 2b) with factors including tonnes of ore, grades and value of ore, capital expenditure, operating expense (blasting/m³, hauling/m³, milling/m³, extraction/m³, handle slimes/m³, remove and handle overburden/m³, salaries and rehabilitation), exchange rate, discount rate, tax and royalties. In the FSR (p. 31), WEC refer us to an “Extract of the Financial Model Base Case on the Optimised Riviera Open Pit” in Table 9 of the FSR.
105. This table does not provide any of the following:
- tonnes of ore (though an “unqualified Mining Inventory estimate” of 10,860,167 million tonnes of ore is provided on p. 24 of the FSR);
 - grades and value of ore (though an average grade of between 0.28% and 0.31% WO₃ is provided as part of the “unqualified Mining Inventory estimate” referred to on p. 24 of the FSR);
 - a detailed breakdown of operating expenditure;
 - exchange rate; or
 - tax.
106. The Coalition also wishes to point out that the tungsten price used in this table is \$250/metric tonne unit. As at 18 August 2009, the bid-ask rate of APT varies between \$185 and \$200 per metric tonne (www.minormetals.com).

Venmyn Rand itself points out that the project is very sensitive to particularly the commodity price (Appendix 17, D531R, p. 3):

“Typically low tungsten grade deposits tend to be marginal under low commodity prices and very sensitive to prices. It would be important that before a decision to develop the operation, an off-take agreement should be in place. This will enable the project owners to easily access project finance and guarantee success of the project” (Appendix 17, par. 8)

In this context, an “off-take agreement” means an agreement with a tungsten buyer who undertakes to buy a minimum amount per period, usually at a fixed price. Venmyn therefore states that Bongani would need a guaranteed buyer of the tungsten to be viable and for raising finance, since project financiers would want to know what income guarantees there are. No indication of such a buyer or prospective buyer is provided in the FSR.

107. Using today’s APT price, a rough calculation shows that the mine is no longer profitable. In addition, this does not yet take into account the fact that Bongani has no access to the technical information required to produce APT (see paragraph 171 below).

108. Importantly, the FSR itself repeats Venmyn Rand's conclusion that "Venmyn Rand (Pty) Ltd. determined that the Riviera Project is viable based on the open pit design. The planned mine schedule was used to calculate NPV of ZAR 1.3bn, which does take into account initial capital expenditure and does not include cost escalations, commodity prices escalations, inflation and selling costs."
109. On the last paragraph on p. 32, WEC comment that "the confirmatory and additional core sampling exploration programme must however be carefully planned before the final investment decision is made and should systematically lead the company to the eventual preparation of a pre-feasibility or feasibility study and the confirmation and classification of SAMREC Code compliant tungsten mineral resources".
110. From this statement, it appears that Bongani does not currently have sufficient information available to complete the feasibility study that the DME requires (including the SAMREC Code). One therefore has to ask whether this mining rights application and the environmental impact assessment, which requires significant resources from I&APs and authorities, has not been launched prematurely?

Socio-Economic Impact Assessment

111. See paragraph 133 and further below.

Roads and traffic

112. DEADP required that the FSR contain "a map indicating the road infrastructure (names of the roads) that will be used by mining vehicles that will transport materials from the facility".

No such map is provided in the FSR.

113. DEADP also required that comments are obtained from the Municipality and/or the Western Cape Department of Transport and Public Works regarding the potential traffic impacts".

No mention is made in the FSR of consultation that has taken place with the Berg River Municipality or the Western Cape Department of Transport and Public Works in relation to traffic issues. The only comments are found on p. 31 and p. 116 of the FSR, which refers to the engineers consulting with the applicable local authorities to obtain confirmation of services available.

114. See also paragraphs 155 to 156 below.

F. REVISED PLAN OF STUDY IN THE FSR

115. In this section, the Coalition points out recommendations from authorities and I&APs not incorporated in the FSR Plan of Study, including recommended specialist studies not included in the FSR Plan of Study.

Vegetation

116. The Coalition notes the requirement for "all-year sampling", which was recommended by the DSR in Appendix 4. Should the Specialist Study on Vegetation be completed in 180 days, the findings and conclusions would not even comply with the DSR's own recommendations.
117. No mention is made in the TORs for this Specialist Study of Critical Biodiversity Areas, which have been recommended by Cape Nature (Appendix 2b) to be taken into account in all Specialist studies.

Freshwater Ecosystems

118. Again, the Coalition notes the recommendation that “data should be collected on at least a three monthly basis, over a minimum period of one year”, which “assumes that water quality and flow data are collected at more frequent intervals (i.e. at least monthly)”. Reports compiled in a shorter period would therefore be deficient.
119. In our comments on the DSR, we drew attention to the specific recommendations made by Dr Day in the DSR. Insofar as these recommendations relate to other Specialist Studies (e.g. “Detailed measures for dewatering, including estimates of water volume”, and “details of proposed management / disposal of both on- and off-site sewage and other waste”), the Coalition will assume that the recommendations have been incorporated in the other Specialist Studies, or that this information has been provided to Dr Day.
120. The DSR (page iii) listed three additional “constraints” to be detailed by “specialist study”: increases in sedimentation of the Krom Antonies River system; increases in erosion within the Krom Antonies River or its associated tributaries; and encroachment into riverine buffer areas. These issues are again not included in the TORs for the Specialist Study on Freshwater Ecosystems, and should be included.
121. The Coalition also draws attention to Cape Nature’s requirement (Appendix 2b) that the assessment of how the abstraction and disposal of water would affect the water quality of the freshwater ecosystems must encompass the entire Krom Antonies Valley and the Verlorenvlei catchment. The exact geographical area to be covered in this study does not seem to be adequately defined in the FSR (currently just referred to as “the vicinity of the proposed mining area”).
122. DEADP (Appendix 2b) also required the following issues to be covered in this study, which issues do not appear in the Terms of Reference in the FSR:
 - water quality changes;
 - increase in sedimentation;
 - increase in alien vegetation;
 - loss of wetlands; and
 - encroachment on riverine buffer areas.
123. No mention is made in the TORs for this Specialist Study of Critical Biodiversity Areas, which have been recommended by Cape Nature (Appendix 2b) to be taken into account in all Specialist studies.

Water Quality and Hydrogeology (surface and groundwater) Impact Assessment

124. In addition to the Coalition, a number of authorities have pointed to the need for “an accurate determination of the amount of water the mining activities will require and which surface and groundwater resources it will be abstracted from”, as well as “an accurate determination of the volume of waste water which will need to be disposed of”. This does not appear in the Terms of Reference for this study. The Coalition will regard this – and all other affected Specialist Studies – to be deficient should this information not be provided and considered in all the Studies.
125. DWAF requirements for “details on water supply and sewage disposal management” and a “detailed rehabilitation and end use plan” (Appendix 2b) are not explicitly included in the Terms of Reference for this study.
126. Cape Nature’s requirement for “a precise description of how it is proposed to dispose of polluted wastewater as well as solid and chemical waste”. In the Coalition’s view, waste management (for solid and liquid waste) requires a separate specialist study.

127. Although not specifically mentioned, the Coalition assumes that this Study will include “a detailed stormwater management plan is needed for the site, including specific measures to reduce the rate of runoff into freshwater ecosystems, and to manage the quality of runoff (recommended on page 3 of the DSR). This is also mentioned by a number of authorities.
128. The 1:100 year flood lines of all wetlands, rivers and drainage areas in the mining area must, according to the Terms of Reference for the Specialist Study on Freshwater Ecosystems, be determined by the hydrological study (FSR p. 106). However, this does not appear in the Terms of Reference for the Water Quality and Hydrogeology Impact Assessment (FSR p. 106-109).
129. As mentioned earlier in this document, the Krom Antonies Water User Association points out that any new application for water use must be preceded by a reserve determination for the Krom Antonies river, which has not yet been done. This should be included in this Specialist Study (as pointed out by I&APs in comments on the DSR – FSR p.67), yet WEC state that this “may not be possible”, without explanation.
130. Two other aspects raised by the Coalition in our comments on the DSR that are not explicitly reflected in the Terms of Reference in the FSR are:
 - a. an assessment of the impacts on drinking water, such as the water supplied to the Redelinghuys community; and
 - b. an intensive assessment of aquifers within at least a 150km radius from the proposed site.Should these aspects not be covered in this Specialist Study, the Coalition will regard the EIA Report as deficient.

Soils and Land Capability Impact Assessment

131. No indication has been given as to the name and qualifications of the expert/s who will conduct this Specialist Study.

Heritage and Archaeology Impact Assessments

132. No indication has been given as to the name and qualifications of the expert/s who will conduct this Specialist Study.

Socio-Economic Impact Assessment

133. A number of issues mentioned in the DME’s requirements (Appendix 7, p. 3 at paragraph 7) are not again specifically listed in the Terms of Reference described in the FSR on p.110-113), such as housing, schools, training and way of life. In addition to the specific issues raised below, the Coalition expects that at least all the issues listed by the DME and the Western Cape Department of Agriculture (Appendix 2b) be covered by this Specialist Study; if not, this Study will be regarded as deficient.
134. The issues raised by the Coalition in our comments on the DSR are not explicitly included in the proposed Terms of Reference. These include:
 - a. A detailed analysis of current employment in the Verlorenvallei (with reference to age and gender);
 - b. A detailed analysis of the skills of those currently employed in the Verlorenvallei (with reference to age and gender);
 - c. A detailed consideration of which employees would be likely to be employed by the proposed mine (with reference to age and gender);
 - d. A detailed analysis of all residents dependent on those currently employed in the Verlorenvallei, including but not limited to children, spouses and the aged;
 - e. A detailed analysis of current skills development programmes and training provided in the Verlorenvallei, including both school education and adult education; and

- f. A detailed analysis of all social and other support services currently provided in the Verlorenvallei.
135. In addition, the Socio-Economic Impact Assessment would be incomplete without a detailed breakdown of jobs that would be lost on all farms directly and indirectly affected.
136. On p. 51 of Table 6 in the FSR, WEC undertook to consider the impact of dust and the “potential economic losses to the fruit, flower and grape (export and wine) will need to be determined against the economics of the mine (which is seen as a temporary industry 18 years) in a socio-economic impact assessment to be done in the EIA phase”. However, this issue is not included in the TORs for this Specialist Study.
137. The DME specifically requested that impacts on current land use to be considered in this Specialist Study include “land values”. However, this issue is not included in the TORs for this Specialist Study. Importantly, this assessment must go well beyond the proposed mining area, since land prices as far afield as on top of the Piketberg mountain have been negatively impacted. A farm in the Valley recently sold at a quarter of its value.
138. The Western Cape Department of Agriculture (Appendix 2b) requested the study to cover the links between the Verlorenvlei and the livelihoods of coastal communities. It also referred to the potential risks associated with “new resources required from government as a result of increased pressures on local small school and requirements for increased policing, labour shortages on farms as a result of the potential migration of farmworkers from their present employment”. These issues do not appear explicitly in the TORs for this Specialist Study.
139. As a general comment, the TORs for this study (to which WEC referred many I&AP comments) do not reflect the concerns of I&APs regarding the way in which a large open-cast mine would disrupt the community, their history and their social interaction.

Air Quality Impact Assessment

140. None of the comments by the Coalition made in response to the DSR have been incorporated in the TORs for this Specialist Study. These include:
- a. Due to the variability of winds in the Verlorenvallei, the study area for this study should be broadened to include a radius of at least 100km from the proposed site;
 - b. A weather station needs to be employed in the valley to measure wind data, air quality, temperature, rainfall and humidity. A number of dust monitoring stations will also need to be positioned at various key localities in the valley (page 44 of the DSR);
 - c. *“Baseline data needs to be collected for at least a year before mining commences. This data will need to be used for the EIA process. Prevailing wind data and dust monitoring will be important for deciding where to locate mine infrastructure and spoil areas”* (page 35 of the DSR);
 - d. Details of dust suppression methods and dust monitoring are required (page iii of the DSR).
141. As in other studies, the Coalition notes the requirement for baseline data to be collected “for at least a year” (p. 58 of the DSR and p. 35 of Table 6). Should the Specialist Study on Air Quality be completed in 180 days, the findings and conclusions would not even comply with the DSR’s own recommendations.
142. No indication has been given as to the name and qualifications of the expert/s who will conduct this Specialist Study.

Noise Impact Assessment

143. No indication has been given as to the name and qualifications of the expert/s who will conduct this Specialist Study.

Visual Impact Assessment

144. The issue of “light pollution” mentioned on p.68 of Table 6 in the FSR is not specifically mentioned in the TORs for this Specialist Study.
145. The 3-D terrain model recommended by the DSR (p. 39) highlighted by the Coalition in our comments on the DSR still does not appear in the TORs for this Specialist Study.
146. No indication has been given as to the name and qualifications of the expert/s who will conduct this Specialist Study.

Geotechnical Impact Assessment

147. It is astonishing that Bongani wishes to ascertain “material properties of soils and rocks” on the affected area at this stage of the mining rights application.
148. No indication has been given as to the name and qualifications of the expert/s who will conduct this Specialist Study.

The Impact Assessment on Indigenous Fish

149. No mention is made in the TORs for this Specialist Study of Critical Biodiversity Areas, which have been recommended by Cape Nature (Appendix 2b) to be taken into account in all Specialist studies.
150. No indication has been given as to the name and qualifications of the expert/s who will conduct this Specialist Study.

Impact Assessment on Avifauna

151. No mention is made in the TORs for this Specialist Study of Critical Biodiversity Areas, which have been recommended by Cape Nature (Appendix 2b) to be taken into account in all Specialist studies.
152. No indication has been given as to the name and qualifications of the expert/s who will conduct this Specialist Study.

Impact Assessment of Weather

153. No indication has been given as to the name and qualifications of the expert/s who will conduct this Specialist Study.

Town Planning

154. No indication has been given as to the name and qualifications of the expert/s who will complete this Report.

Architectural Guidelines

155. No indication has been given as to the name and qualifications of the expert/s who will complete this Report.

Civil Engineering

156. No indication has been given as to the name and qualifications of the expert/s who will complete this Report.

Landscape Architecture

157. No indication has been given as to the name and qualifications of the expert/s who will complete this Report.

Rehabilitation Plan

158. No indication has been given as to the name and qualifications of the expert/s who will complete this Plan.

Land Surveying

159. No indication has been given as to the name and qualifications of the expert/s who will complete this Report.

Missing studies

Land Use

160. In their comments on the DSR, DEADP supported a previous recommendation that “a land-use survey for the entire Verlorenvlei River catchment be undertaken using remote sensing and verification by means of a field trip and if possible communication with farmers”. This requirement is echoed by the Western Cape Department of Agriculture, which recommended a “Specialist GIS Desktop and Site Study to map which areas may be utilised for the proposed activities, and which may not, to produce a working/site map which identifies areas where boreholes can be drilled which needs to be fully workshopped with the landowners and I&APs”.

Traffic Impact Assessment

161. The DSR (page 38) recommended that a Traffic Impact Assessment be done for the area: “*The cumulative impacts of the proposed mining development will need to be assessed in terms of the current and future road infrastructure and what cumulative impacts the mining will have on the road system (wear and tare [sic]) and what impacts it would have on the agricultural community. Traffic counts would need to coincide with the harvesting of the various agricultural products produced in the valley. The recommendations of the study, applicable impacts and mitigation will be assessed during the EIA Phase of the project and will be considered by the Town Planners and Civil Engineers in their design of the project.*”
162. The FSR repeatedly refers to the Traffic Impact Assessment, but again fails to include such a Traffic Impact Assessment under the EIA Plan of Study. Considering the wide range of issues arising from traffic impacts (pollution, social impact of noise, road impact on ecosystems and animal corridors, risks of traffic accidents and injuries, the potential of increased crime, additional impacts on destinations like Saldanha), the Coalition regards such an Assessment as essential to the EIA Plan of Study (and will regard the EIA report as inadequate without such an assessment).

Waste Management

163. Cape Nature’s requirement for “a precise description of how it is proposed to dispose of polluted wastewater as well as solid and chemical waste”. In the Coalition’s view, waste management requires a separate specialist study. This recommendation is echoed by the Department of Agriculture in Appendix 2b, with proposed TORs.

Fauna

164. Other than the Specialist Studies on Freshwater Ecosystems, Indigenous Fish and Avifauna, the list of specialist studies in the EIA Plan of Study seems to exclude any study on fauna that occur in and around the affected area, and how this would be impacted by a large open-case mine.
165. This includes reptiles, invertebrates and mammalian species not included under Freshwater Ecosystems, Indigenous Fish and Avifauna, and includes species listed on the Threatened and Protected Species (TOPS) lists issued under the National Environmental Management Biodiversity Act, 2004 (Act 10 of 2004) of which there have been sightings in the affected area:
- a. leopard (*Panthera pardus*) (the presence of leopard in the Verlorenvlei area was also confirmed by a 1981 survey by Stuart (in CSIR Research Rep. 431.) (listed on the TOPS list as “vulnerable”)

- b. Armadillo Girdled Lizard (*Cordylus cataphractus*) (photograph available) (listed on the TOPS list as “protected”)
 - c. Cape clawless otter (*Aonyx capensis*) (photograph available) (listed on the TOPS list as “protected”)
 - d. Honey badger (*Mellivora capensis*) (listed on the TOPS list as “protected”)
 - e. Cape fox (*Vulpes chama*) (listed on the TOPS list as “protected”)
166. The Coalition notes WEC’s opinion that “it may however be reasonably surmised that the number and diversity of animals breeding on the properties making up the site would be minimal” (FSR p. 44). Note that this conclusion is not based on any specialist study, since neither the DSR nor the FSR contains any specialist study – desktop or otherwise – relating to fauna in and around the affected area. (Dr Boucher’s study at Appendix 4 only deals with “the botanical features of the Krom-Antonies River Valley).
167. Considering the requirements of Regulation 50, any EIA Report that does not deal with these issues would be fatally flawed.

Ecosystems services

168. In its comments dated 1 June 2009, WESSA called for “a resource economist to make an assessment of the ecosystems services provided by the functioning Krom Antonies River and the Verlorenvlei and how this would be affected by the proposed mine”. This study, which would provide crucial quantitative information in any cost benefit analysis, has been omitted from the EIA Plan of Study.

Palaeo-ecology

169. For the reasons set out in paragraph 77 above, an investigation into the palaeo-ecological heritage of the Vlei, and the potential impact of the proposed mine on this heritage, should be included in one of the other Specialist Studies.

G. ADDITIONALS REPORTS PROVIDED IN THE FSR

EMC Report on Riviera Tungsten Deposit Metallurgical Plant

170. This report (Report No. VMR 1a/2009, contained in Appendix 17) describes two operations to be used at the proposed metallurgical plant. The first is the Concentrator Plant which is supposed to produce molybdenum sulphide and tungsten oxide concentrates. For their comments on this operation, EMC apparently relied on 1981 Union Carbide “testwork”, supplemented by information from conferences and the internet, described as “not voluminous... but readily available” (p. 11).
171. The second operation is the Concentrates Treatment Plant, supposed to produce ammonium paratungstate (APT) through various leaching processes. The EMC report goes to great lengths to explain that information regarding the concentrates treatment process is not readily available to them or the public, because it constitutes proprietary information of members of the International Tungsten Industries Association and the China Tungsten Industry Association (p. 7). It is not at all clear how Bongani plans to access the necessary technical information to be able to implement this process. Presumably it is possible, if not likely, that this information will never be available to Bongani, so that Bongani would be limited to produce and sell only a lowgrade flotation/gravity concentrate or a leached flotation/gravity concentrate (and not APT).
172. In the Venmyn Rand Concept Report discussed below, it is specifically mentioned that if the ore is sold as a concentrate, instead of as APT, “it will attract a fraction of the ATP price”. Such limitation will therefore dramatically affect the financial viability of the project – note that Venmyn, in its calculations to support its conclusion that the deposit can be mined profitably, assumed that the ore would be sold as APT!

173. The Coalition therefore calls on Bongani urgently to provide clear evidence of its access to the proprietary technical information required to produce APT.
174. In reality, most global startup operations of this nature start up by selling concentrate. Bongani needs to provide evidence that starting up with an ATP circuit has been done elsewhere, and at what cost.

Venmyn Rand Conceptual Open Pit Mine Design and Scheduling Report

175. In our comments on the DSR, the Coalition formally questioned the financial viability of the proposed Riviera Tungsten Mine. In particular, we requested that certain information be made available to I&APs; of the requested information, only the Venmyn Rand Conceptual Open Pit Mine Design and Scheduling Report (Report D531R, contained in Appendix 17) has been provided.
176. One of the Coalition's members, Dr Herman Grütter (Ph. D., P. Geo.),⁵ has provided a detailed critique of the Venmyn Rand Concept Study (see Annexure C to this document). Although he comments in his personal capacity as an I&AP, in his professional capacity he advises a large multinational mining company on diamond exploration and acquisition opportunities for global projects. He routinely conducts project-scale reviews of large and often complex geological data sets in collaboration with IT, GIS and geophysics professionals and advises on effective exploration and project development strategies in existing mining camps and in greenfields environments. He operates from Vancouver, Canada. Dr Grütter comes to the following conclusions:
 - a. the basic geology of the Riviera tungsten deposit continues to be poorly known;
 - b. the deposit is insufficiently explored to support declaration of a SAMREC-compliant mineral resource. It is accordingly premature to apply for a right that contemplates construction of a mine;
 - c. Report D531R contains material omissions or unexplained, fixed assumptions pertaining to the proposed open pit mining complex and contains material errors in the related analysis of financial viability. The impacts of such omissions, ranges around assumptions and errors compound to show the Riviera deposit cannot be considered viable, and would remain "marginally economic", at best;
 - d. Report D531R was compiled under an artificially narrow mandate imposed by the Applicant, under which no financial or viability comparison has been made with open pit mines in Southern Africa, nor with economically exploited global tungsten deposits. A comparison of this nature would highlight that Riviera-equivalent deposit have not been developed as mines and that Riviera compares unfavourably to global tungsten deposits in terms of grade and strip ratio.
177. In addition, the Coalition's initial comments on the Draft Report are the following:

⁵ Dr. Herman Grütter (Ph. D., P. Geo.) has 20 years' experience in the diamond exploration industry and is Commodity Specialist (Diamonds) for a large multinational mining company. Operating from Vancouver, Canada he advises on diamond exploration and acquisition opportunities for global projects. He routinely conducts project-scale reviews of large and often complex geological data sets in collaboration with IT, GIS and geophysics professionals and advises on effective exploration and project development strategies in existing mining camps and in greenfields environments. Herman has considerable experience in targeting, selection and early-stage evaluation of primary diamond deposits in Southern Africa, Tanzania, the East European Platform, FennoScandia, Greenland, Brazil and Canada. He has undertaken academic research in geoscientific fields related to kimberlites and the upper mantle and is a recognised authority on the phase-relations of mantle rocks and alkaline magmas. These topics are covered in thirteen peer-reviewed published papers and two co-edited special publications. Herman's degrees are from the University of Cape Town (B.Sc. Hons) and Cambridge University (Ph. D.). He is registered as a Professional Geologist in British Columbia, Canada and is a standing member of the International Kimberlite Conference Advisory Committee.

- a. This Report is marked "Draft". Apparently the mining rights application has been initiated on no more than a Draft Conceptual Report for the proposed Riviera Tungsten Mine. (Figures 1 and 2 are also missing for the Draft Report.)
- b. On p. 3 of the Report, Venmyn classifies the Riviera tungsten ore in the resource category "inferred" (as opposed to measured (proven) or indicated (probable)). It appears that this entire proposed mining operation is based on an inferred resource.
- c. The Report also includes some bizarre inaccuracies, such as describing the area as producing "corn" (maize) amongst others. It also describes very inaccurately how to get to the location by road (p.3).
- d. In the Executive Summary, it is stated that "The open pit with the highest open pit value from Whittle was used to determine an ultimate pit for design purposes" (p. i). Needless to say, Bongani must also show low-case and mid-case economic scenarios.
- e. Also in the Executive Summary, it is stated that "Based on the discussed approach, the unqualified Mining Inventory estimate for the Riviera is 11.55 million tonnes (Mt) at an average grade of 0.31% (WO₃)", and later "The confirmatory and additional bulk sampling exploration programme must be carefully planned before the final investment decision is made and should systematically lead the company to the eventual preparation of a pre-feasibility or feasibility study and the confirmation and classification of SAMREC Code compliant tungsten mineral resources."

The Coalition is advised by Dr Grütter that the current geological characterisation of the "deposit" is immature, a long way from SAMREC compliant, and cannot form the basis for claims that it could be economic. There is at least 2 to 3 years' worth of exploration to be done, at a budget that Bongani has not even contemplated, but which could come to some USD 20 million.

H. OUTSTANDING DOCUMENTS NOT PROVIDED WITH THE FSR

Metallurgist's Report

178. In our comments on the DSR, the Coalition specifically requested details of the compositional and mineralogical analysis of the ore, the leaching characteristics of the ore, and heavy metals other than tungsten and molybdenum associated with the ore. I&APs require this information to assess the potential impact on water resources and the risk of water pollution through the leaching of metals. This information should be contained in the Metallurgist's Report, and the Coalition has repeatedly requested this Report from Bongani and WEC.
179. WEC's response in the FSR (p.35, Table 6) is that this will only be made available in the EIA Report. If this is correct, it is astonishing that Bongani is prepared to take this mining rights process so far, at great expense to itself, I&APs and authorities, without having in its possession an analysis of the ore that it wishes to mine.
180. Since the DME also instructed Bongani to include information on "the chemistry of the ore and resultant tailings" in the FSR (Appendix 2b, p. 2), the Coalition is fortified in reiterating that the FSR is incomplete with such fundamental information.
181. On the other hand, on p. 79 of the FSR, WEC state that "the specialist initial metallurgical report has been made available in this Revised Scoping Report". The Coalition would be grateful if WEC could point us to the Appendix that constitutes this "specialist initial metallurgical report", since we do not see it included.

Mining work programme

182. In our comments on the DSR, the Coalition appealed to the DME to require Bongani to make at least the mining work programme submitted to the DME in terms of Regulation 10 and 11, available to I&APs. No such information has been provided.

SAMREC documents

183. In our comments on the DSR, the Coalition requested the following information: “a mineral resource for the properties affected, declared to SAMREC or equivalent reporting code, and clearly signed off by Competent or Qualified Persons”, or “documentation that a SAMREC-compliant mineral resource is to be declared in future, plus disclosure by the Applicant of anticipated exploration activities and related exploration budget to support a resource declaration”. We call on Bongani to respond to our request as a matter of urgency.
184. Kindly acknowledge receipt of this document.

Verlorenvlei Coalition



Dr Bennie van der Merwe

Signed by the Chairperson

Date: 21st August 2009

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The Verlorenvlei Coalition

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254	Engelbrecht	Gert			076 661 0956
255	Engelbrecht	Jacques			
256	Engelbrecht	Janine			078 443 5808
257	Engelbrecht	L		022 962 1615	
258	Engelbrecht	Malie			074 785 0532
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413	Jafta	Hanna			072 358 0075
414	Jafta	Joyce			072 358 0075
415	Jafta	Magrieta			071 582 2058
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417	Jafta	Marie			072 358 0075
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420	Jagers	Johannes			
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Annexure C: Dr Herman Grütter's Report

See attached pdf to report



IAP Grutter
Response to VenMyn

Verlorenvlei Coalition

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Ms Sibongile Kunene
The Acting Regional Manager
Western Cape
Department of Minerals and Energy

19 June 2009

Dear Ms Kunene

Information requested at RMDEC meeting held on Friday, 12 June 2009

Thank you for the opportunity afforded to the Verlorenvlei Coalition to make submissions to the Regional Mining Development and Environment Committee (RMDEC). At that meeting, the Coalition undertook to revert to the Committee with certain factual information requested by Committee members.

- There are sixteen farms in the Moutonshoek valley, with a collective average annual turnover of R69.59 million.
- 134 households reside in the Moutonshoek Valley.
- As submitted to RMDEC, farms in the valley employ approximately 500 permanent workers (most of whom reside on the farms) and an additional estimated 1000 seasonal workers from various parts of the Western Cape.

For ease of reference, we attach copies of the submissions made by Coalition members at the meeting.

Access to information about proposed mine

Before availing ourselves of statutory mechanisms, we would like to request assistance from yourself in gaining access to certain pieces of key information that Bongani Minerals Pty Ltd has refused to provide to the Coalition despite requests through its environmental consultant, Mr Aubrey Withers. These are:

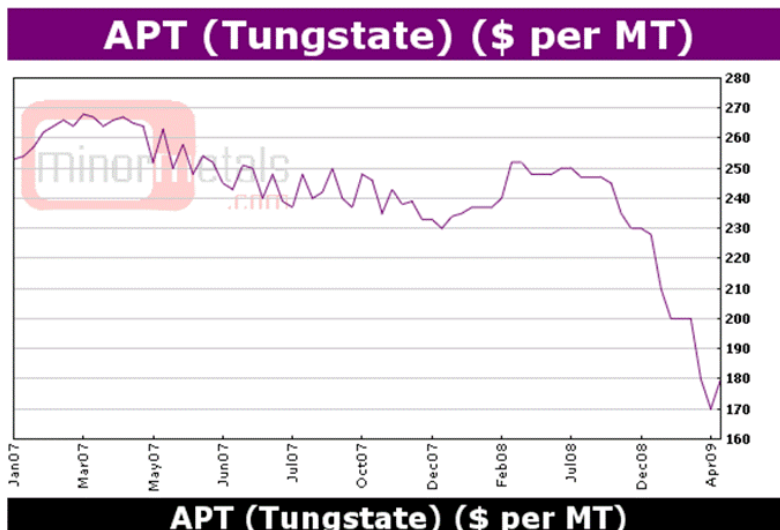
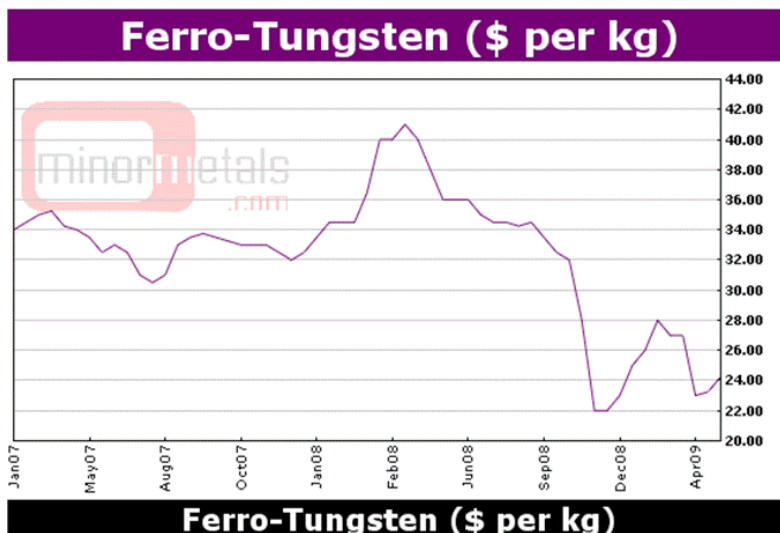
- The **Venmyn Rand Concept Study** referred to in the Draft Scoping Report published by Withers Environmental Consultants. We regard this Concept Report as crucial to our efforts to assess the financial and environmental viability of the proposed mine.
- The **estimated volume of water** that the proposed mine would use.
- The compositional and mineralogical analysis of the ore, the leaching characteristics of the ore, and heavy metals other than tungsten and molybdenum associated with the ore. We anticipate finding this information in the **Metallurgist's Report**, but in any event request this information, with or without the Metallurgist's Report.

Financial viability of the proposed Riviera Tungsten mine

As expressed at the RMDEC meeting, the Coalition is extremely concerned about the financial viability of the proposed mine, particularly considering the extremely low grade of the ore - our research has found no other tungsten deposit with such a low grade as the proposed Riviera mine being mined profitably anywhere in the world.

Our worst fear is that, shortly after construction, mining the tungsten deposit will no longer be financially viable for Bongani Minerals Pty Ltd, leaving the Valley (and authorities) with destroyed businesses and farms, hundreds of unemployed farmworkers, a disrupted community and severe threats to water resources (including the Verlorenvlei wetland). Although we recognise the financial provision for rehabilitation required by the Minerals and Petroleum Resources Development Act, we also recognise that such financial provision has not provided adequate protection from the risks posed by delinquent mines across the country to date.

In support of our concern, we would like to draw your attention to recent price information about ferro-tungsten and tungstate supplied by the digital metals information service known as MinorMetals.com (operated by the London-based Fastmarkets Limited):



A dramatic decrease in the value of tungsten between January 2007 and April 2009 is apparent from these graphs.

Consultation regarding other prospecting and/or mining rights applications

Despite none of its members having been consulted on any other prospecting and/or mining rights applications in the valley, the Coalition keeps hearing rumours of other such applications having been submitted to yourself (you will recall this question being posed at RMDEC, without reply). Please could you now confirm for us:

- whether any such applications for any property in the Moutonshoek or Verlorenvallei have been submitted to yourself; and
- whether DME has accepted and referred any EMPs in support of prospecting rights to the Minister in terms of Section 16(5) of the Minerals and Petroleum Resources Development Act.

As stated above, none of the Coalition members, which include all the landowners and lawful occupiers of land in the Valley, have been consulted on any other applications.

We look forward to your response.

Yours sincerely

Verlorenvlei Coalition

Chair: Dr Bennie van der Merwe

Cc

Gerhard Gerber & Eldon de Boom (Dept Environ. Affairs & Dev. Planning)

Paul Herselman (Provincial Department of Agriculture)

Melvin Charlie (National Department of Agriculture)

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27 October 2009

Cc Withers Environmental Consultants
Attention: Mr Aubrey Withers
Email: info@withersenviro.co.za

Dear Ms Kunene

Comments on new mining right application submitted in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) ("MPRDA") for the mining of tungsten ore and molybdenum ore on Portions 1, 6, 13 of the farm Namaquasfontein No. 76 and Portion 1 of Farm No. 297, Piketberg ("the affected properties") (Ref WC 30/5/1/2/2/385MR)

References

Below, we refer to the two mining right applications in respect of the affected properties submitted to your Department in 2009 as follows:

- the first application for a mining right accepted by the Department of Mineral Regulation (DMR) on 25 March 2009 under the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) ("MPRDA") for the mining of tungsten ore and molybdenum ore on Portions 1, 6, 13 of the farm Namaquasfontein No. 76 and Portion 1 of Farm No. 297, Piketberg dated April 2009 (Ref. No. WC 30/5/1/2/2(328) MR): **"the first mining right application"**; and
- the new and second mining right application accepted by the DMR on 28 September 2009 in terms of the MPRDA for the mining of tungsten ore and molybdenum ore on Portions 1, 6, 13 of the farm Namaquasfontein No. 76 and Portion 1 of Farm No. 297, Piketberg (Ref. no. WC 30/5/1/2/2/385MR): **"the second mining right application"**.

Notice of second mining right application

We acknowledge receipt of a letter from your office dated 5 October 2009, notifying the Verlorenvlei Coalition that Bongani Minerals Pty Ltd ("Bongani") lodged a new application for a mining right for the mining of tungsten ore on 18 September 2009, and that this application has been accepted by your Department "because all the requirements of the Act are met". The accompanying notice advised us that we could comment on the application within 30 days from the date of the notice, which was dated 28 September 2009.



It is not clear why this notice was not sent to the Coalition immediately; the week's delay in dispatching the notice meant that we only had 22 days instead of the required 30 days to provide comments. Nonetheless, we have made every effort to prepare our comments by 27 October 2009.

Access to information

On 6 October 2009, we requested a copy of the full application submitted by Bongani from your office. On the same day, we received a fax from your office attaching the application form (DME276) without annexures. On 13 October 2009, we again requested, in writing, a copy of the full application to enable us to comment meaningfully on the new application. No reply has been received. A similar request has been sent to environmental assessment practitioner Withers Environmental Consultants (WEC). You will also recall that a similar request was made in the first mining right application, without the production of the document in question.

No reason has been provided by your Department or WEC for this crucial information being withheld from I&APs, and the Coalition reserves its rights (a) to make further comments once the full document is made available to us, and (b) to take such steps as are necessary to obtain a copy of the full application.

Reasons provided by Bongani for lodgement of a second mining right application

In recent correspondence, and presumably also in correspondence your Department, WEC has stated that the failure to complete the EIA and the Environmental Management Plan (EMP) within the statutory timeframe was partly due to the fact that specialist consultants were not allowed access to the properties in question. The Coalition strongly disagrees with this statement, and has asked Mr Withers to refrain from repeating that statement in future.

In correspondence to the Coalition, WEC has stated that "*the time frames contained in MPRDA are ridiculous*" (Mr Withers' email to the Coalition dated 15 October 2009), being 180 days from being notified by DMR to commence the EIA (s.39(1) of the MPRDA). WEC has even indicated to us that Bongani Minerals may have to launch a third mining right application to circumvent the required EIA timeframes of the MPRDA:

"We can perhaps predict that since some of the specialist studies will take at least a year to complete, that Bongani Minerals may no doubt need to apply for yet another Mining Right application in order to complete their studies and submit the EIA and EMP reports within the given 180day time frame. There is no way that an EIA for such a proposed mine within such a sensitive area can be completed within 6 months. It is just not possible!"

Secondly, as far as the Coalition is aware, no notice had been given by your Department to Bongani to commence the EIA in the first mining right application in accordance with s.39(1), and therefore no specialist studies could in any event commence.

Thirdly, the Coalition has repeatedly and writing committed itself and its members to



a high quality, legally compliant EIA process as required by the MPRDA. In a letter to WEC dated 12 August 2009, we explained that we regarded a meeting with WEC regarding access to properties for the specialist studies before the closing date for comments on the FSR in the first mining right application, being 21 August 2009, as premature (as it surely was), and requested more details of the activities required to conduct the various studies on the affected properties. We have just received the requested "Scope of Works" report for all the specialist scientists, provided to the Coalition on 22 October 2009.

With respect, in these circumstances it is hardly fair even partly to blame the failure to complete the EIA and EMP within the statutory timeframes on the landowners or the Coalition.

Reasons for the Coalition's objection to the second mining right application

The repetition of the entire mining right application for reasons beyond the Coalition and other I&APs' control, will cause:

- inconvenience and additional legal and other costs to I&APs;
- increased anxiety for I&APs;
- a further contraction of capital investment and employment in the affected area; and
- a further drop in property prices in the affected area.

In essence, the Verlorenvlei Coalition profoundly and unequivocally objects to any proposal of mining in the Verlorenvallei. This area is a productive, profitable and economically growing part of the Bergriver Municipality that not only provides agricultural products for the Western Cape economy and for export, but employs hundreds of people, most of whom would lose their jobs and housing if the proposed mine goes ahead.

Most businesses and residents in the Verlorenvallei rely on ground and surface water resources, which are at serious risk of pollution by the mine. In addition, the pollution risk posed by the mine poses a serious threat to the Verlorenvlei wetland, a site internationally recognised under the Ramsar Convention on Wetlands 1971 and in respect of which South Africa, as a contracting party, has an international law obligation to protect.

Perhaps even more importantly, the Coalition does not believe that the proposed mining operation is financially viable, an argument backed up by reports, the price of ammonium paratungstate (APT) and as set out in detail in our comments on the FSR. Additional reports provided in the FSR raise fundamental questions about the financial viability of the proposed mine: not only does Bongani not have lawful access to the technical information required to produce the desired tungsten product, but the actual market price of APT is far lower than presented in the reports.

Financial inviability creates the real possibility that the newly established mine would be abandoned after a short period, leaving behind environmental destruction (including to the Ramsar site) and rehabilitation responsibilities for which there will be no funding available.



As you are aware, the Coalition made lengthy submissions to WEC in response to the Draft and Final Scoping Reports prepared in the first mining right application. All of those comments, as well as the comments of all I&APs who are also members of the Verlorenvlei Coalition, should be read as incorporated in this document and as constituting comments on this second mining right application.

Both the draft and final scoping reports in the first mining right application emphasise the significant risks posed to water resources, biodiversity and particularly the Verlorenvlei. For example:

- *“Possible impacts include the deterioration in surface and groundwater water quality resulting from mining activities, affecting the Krom Antonies Rivier and the ecologically sensitive Verlorenvlei. The impacts on the surface and groundwater water quality could potentially be HIGH to VERY HIGH.”* (Draft Scoping report P. 37)
- *“Potential impacts [on Freshwater Ecosystems] include:*
 - *increases in sedimentation of the Krom Antonies River system;*
 - *increases in erosion within the Krom Antonies River or its associated tributaries;*
 - *loss of extant wetland areas;*
 - *encroachment into riverine buffer areas (riverine buffer areas of between 30 and 50m from the edge of each river bank should be anticipated);*
 - *diversion of even minor tributaries of the Krom Antonies River, resulting in increased downstream velocities, loss of ecosystem processes that are considered beneficial in terms of water quality amelioration or management of sedimentation and/or erosion;*
 - *abstraction of surface or groundwater flows; and*
 - *changes in the salinity, pH, nutrient loading or loading and/or concentrations of heavy metals and/or other chemical constituents that might impact on freshwater ecosystems within the Krom Antonies River or on the Verlorenvlei River downstream.*

The impacts on the freshwater ecosystems could potentially be HIGH to VERY HIGH.” (FSR p.59)

During the scoping period for the first mining right application, a number of national and provincial authorities submitted lengthy comments on the Draft Scoping Report, and expressed serious reservations regarding the proposed mine. For example:

- *Cape Nature: “Based on the current information available, Cape Nature believes that the proposed mining activities and the associated increase in population, which will bring with it the need for additional roads, water supply, sewage and waste disposal, poses a high level of risk to the terrestrial and aquatic ecosystems in the area and their functioning. We believe that the proposed mine is entirely inappropriate for the area and could have significant and irreversible impacts on the environment.*



We will therefore continue to oppose any open cast mining of this magnitude in the upper catchment of the Verlorenvlei system.” (Letter to DME, 15 May 2009)

- *DEA&DP: “This Department is highly concerned with the proposed impacts that the proposed mining activity poses on the river directly affected by the mining operations, namely the Krom Antonies River as well as the number of smaller tributaries that flow through the site into the larger Verlorenvlei River. The Verlorenvlei, a proposed RAMSAR protected site [sic], is one of the largest wetlands on the West Coast that flows into the Atlantic Ocean at Elands Bay.” (Letter to DME, 5 June 2009)*
- *Western Cape Department of Agriculture: “Natural wetlands are extremely important to agricultural production as they filter silt & other particles out of the water in & around rivers to create clean, usable water. Much of the economy of the rural town Elandsbaai is dependent on the Verlorenvlei – as a declared Ramsar site it is a significant tourist attraction and agriculture practices offer seasonal workers an income & is therefore also a large contributor to the town’s economy. Should mining approval be sought & granted at a later stage the “Ramsar” designation will be withdrawn as one of the requirements of a Ramsar site is that it is ‘not affected by mining activities’ AND there could be significant damage done to the agricultural practices of the region. The result of these events would potentially deprive most residents of their present incomes in an area already reeling under the collapse of the fishing industry on the West Coast.” (Letter to DME, 4 June 2009)*
- *Department of Water Affairs: “This Department have [sic] serious concerns regarding this application and the impacts the project can have on surface and groundwater. This project will also have negative impacts on other water users in this catchment.” (Letter to DME, 5 June 2009)*

Use of the same FSR in the second mining right application

WEC has indicated to I&APs that it intends using the existing FSR “*updated to comply with the requirements of the NEMA*” in both the second mining right application and the application apparently lodged by Bongani for an environmental authorisation under the National Environmental Management Act, 1998 (Act 107 of 1998) for certain listed activities associated with the proposed mining operation. This is unfortunately completely unacceptable to the Coalition.

With regard to the second mining right application, we refer you to the detailed comments on the FSR in the first mining right application submitted by the Coalition dated 21 August 2009. In those comments, the Coalition pointed out numerous ways in which the FSR was non-compliant with the MPRDA and its regulations, as well as with the specific requirements of the DMR and other authorities (see sections C. and D. in those comments. In its response to the DSR (Appendix 2B to the FSR), DEA&DP expressly stated that “*the Scoping Report fails to provide an adequate description of the proposed mining operations, and also fails to identify the magnitude of the potential impacts associated with the proposed mining operations. Adopting the required risk averse and cautious approach, the Scoping Report must not be approved in its current form. Until such time as the environmental issues have been adequately addressed, this Department objects to the granting of approval to*



proceed with the mining operation in terms of [the MPRDA]”).

Should WEC submit the FSR to DMR in the second mining right application in its current form, the Coalition will raise the same objections in those processes.

Additional information on toxicity and bio-accumulation of tungsten

Since the submission of the Coalition’s comments on the DSR and FSR, we have found additional information regarding the toxicity and bio-accumulation of tungsten that we feel obliged to draw to your attention.

We refer you to an article by A. Koutsospyros and four others published in the *Journal of Hazardous Materials* 136 (2006) p. 1-19, entitled “A review of tungsten: From environmental obscurity to scrutiny”. We refer you to the following extracts:

“Tungsten and most of its compounds have traditionally been considered as substances of limited environmental liability. However, recent events reviewed here, implicating tungsten in ALL clusters, have disrupted a pattern of environmental obscurity for tungsten and its compounds signifying an era of environmental scrutiny. This is evident by a surge in recent environmental publications as well as by recent activities of health, environmental and regulatory agencies in the U.S. and other countries.

...

In summary, it appears that environmental obscurity for tungsten and its compounds has ended and environmental scrutiny has emerged. With regulation imminently approaching, treatment of W-bearing waste streams and remediation of contaminated environmental matrices along with environmental management, life cycle assessment, pollution prevention and recycling/reuse may well be additional areas of high research demand.

Although the reviewed body of interdisciplinary literature has not always been convincingly conclusive about the environmental relevance of tungsten and its compounds, the indications presented cannot in anyway justify a benign neglect approach. On the contrary, a more proactive approach is needed based on the precautionary principle. Additional basic research in order to provide clear answers to a number of unresolved issues ranging from occurrence, to environmental chemistry, to fate and transport and toxicology and possibly scientifically justified regulation is urgently needed.”

Also see:

- B. Wilson and F. Brian Pyatt: “Bio-availability of tungsten in the vicinity of an abandoned mine in the English Lake District and some potential health implications”, *Science of the Total Environment* 370 (2006) 401–408;
- B. Wilson and F.B. Pyatt: “Persistence and bioaccumulation of tungsten and associated heavy metals under different climatic conditions”, *Land Contamination & Reclamation* 17 (1), 2009: “*This research examines the dispersion and persistence of tungsten in areas including those surrounding abandoned tungsten mines in the UK, USA and Australia. Soils collected from workings dating back to the mid-19th century, and subsequent analysis of soil*



and vegetation, confirmed the presence of tungsten and other heavy metals. Tungsten, copper, zinc and lead were detected at all sites, and arsenic was present in significant concentrations at the UK site, illustrating the environmental persistence of these metals in areas of diverse climatic conditions. Bioaccumulation of tungsten by vegetation growing in the sites under examination was indicated, and partitioning of target heavy metals within different tissues demonstrated. Unusual bioaccumulation factors relating to tungsten in Australia and Arizona, and their possible relevance to arid ecosystems, are highlighted, and possible accumulation by animals and humans is indicated.”

- Bob Wilson and F. Brian Pyatt “Bioavailability of Tungsten and Associated Metals in Calcareous Soils in the Vicinity of an Ancient Metalliferous Mine in the Corbières Area, Southwestern France”, *Journal of Toxicology and Environmental Health, Part A*, 72: 1–10, 2009: “*The mobility and bioavailability of tungsten and associated metals are examined in calcareous soils and subsequent bioaccumulation by four species of plants is determined. Apparent bioavailability of metalliferous cations indicated by accepted monitoring methods and actual bioaccumulation is compared using regression analysis. Two soil extraction procedures were used without significant correlation between the methods at all stages, with the exception of copper and arsenic. More importantly, perhaps, the bioaccumulation by various tissues of Buxus sempervirens did not significantly correlate for the majority of target metals for each extraction procedure. Possible accumulation of toxic cations by a dying tree species was also examined. The availability of tungsten and associated metals in calcareous soils was compared with previous investigations on acidic soils, resulting in confirmation that tungsten in particular, in naturally occurring ores, is more readily mobilized under alkaline conditions.*”

The Coalition believes that this additional information should be taken into account in the preparation of a new scoping report in the second mining right application.

Public participation

The DMR will be aware that we are dealing with an unusual group of I&APs in the EIA for this mining right application. Some I&APs are not resident in or near the affected area. A large group of I&APs resident in and near the affected area are farmworkers who are primarily Afrikaans-speaking and not all of whom are literate, and most of whom have no access to the internet or email.

The first mining right application caused a great deal of anxiety amongst I&APs, particularly farmworkers who perceive the proposed mine as a serious threat to their livelihood, their families, their community, their heritage and their future. This anxiety was clearly evident at the one and only public meeting held by WEC in May 2009 in the first mining right application (of which video footage is available), and is also evident in the submission made by the Moutonshoek Employees’ Association and individual submissions made by farmworkers and their families in response to the DSR in the first mining right application. Most of these employees have been relying on information from the Coalition since that meeting in May 2009, and have repeatedly asked the Coalition Executive Committee over the past six months when



the next public meeting would take place.

In these circumstances, WEC's proposal to have no further public meetings in either the second mining right application or the NEMA EIA application, and only to rely on correspondence and a single open day after the release of the draft EIA Report and draft EMP, is totally inappropriate and inadequate.

At the very least, the Coalition believes that it is reasonable to request that the combined MPRDA and NEMA EIA public participation process includes:

- two public meetings, one during the scoping phase and one during the EIA phase;
- a questionnaire or opinion survey on the proposed mine;
- that correspondence and reports be produced in at least English and Afrikaans;
- considering the fact that not all I&APs have access to the internet and cannot download lengthy reports, that at least ten hard copies of correspondence and reports be hand-delivered to the Moutonshoek Employees' Association representative, Mr Johannes Erasmus; and
- to facilitate attendance of I&APs resident outside of the affected area, at least 21 days' notice of the public meetings.

Kindly acknowledge receipt of this document.

Dr Bennie van der Merwe
Verlorenvlei Coalition
Chairman

The Regional Manager
Department of Minerals and Energy
Private Bag X9
Rogge Bay
8012
South Africa
30th May 2010

Dear Sir / Madam

**RE: Environmental Management Plan: Riviera Tungsten project, Reference:
WC30/5/1/1/2/434PR A/2010/03/26/001**

On 27th July, I was registered with the Verlorenvlei Coalition, which qualifies me as an Interested and Affected Party (IAP) with regard to the application by Bongani Minerals to procure prospecting rights for the Riviera Tungsten Project in the Piketberg magisterial district.

I have reviewed the documents pertaining to the Environmental Management Plan available at the download section of the WEC website, and I have reviewed the submission made by Dr. H. S. Grütter in regard to the Environmental Management Plan in question. I too, am an economic Geologist by profession, and I wholeheartedly endorse Dr. Grutter's excellent assessment of the EMP and the concerns that he has raised. His is clearly a very professional and expert opinion that leaves nothing unsaid.

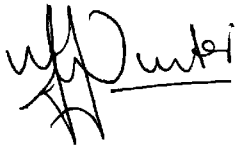
However, I would like to comment on a number of less technical issues that I find rather alarming –

1. The EMP makes no provision for compensating landowners for the loss of the use of their land during the prospecting appraisal phase. The areal extent of the ore body to be appraised is not large, and the Prospecting Work Programme envisages that some 160 boreholes will be drilled. Such intense drilling activity will render the affected area un-useable to the landowner for the duration of the appraisal programme, and probably for a considerable period thereafter. And yet, incredibly, the EMP envisages no compensation? Does this indicate a profound lack of understanding of what an appraisal programme of this nature involves? Does this indicate a profound disregard for the socio-economic environment in which Bongani intends to do business? In my opinion, unless Bongani makes a dramatic re-assessment of this issue, what they propose to do is simply unconstitutional.
2. Does Bongani's underestimation of the water consumption for drilling operations similarly indicate a lack of understanding of what is involved, or does it indicate a complete disregard for the environmental impact of a high water consumption?
3. The fact that provision for the rehabilitation of drill-sites appears to be hopelessly inadequate is equally alarming. As an IAP, how can I be assured that Bongani has the financial capability to adequately rehabilitate 160 drill-sites? Is the underestimate indicative of a lack of understanding of what is required in terms of

- rehabilitation or is it a statement of intent to cap rehabilitation costs at an inadequate level?
4. Without detailed and defensible plans of envisaged drill-site layouts, it is not possible to gauge the environmental impact of drilling operations and consequently flies in the face of statements about the management of the environmental impact of such operations.

In conclusion, there are sufficient fundamental shortcomings in the EMP to warrant a rejection out of hand.

Yours sincerely,



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