



environmental affairs

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Environmental Affairs
REPUBLIC OF SOUTH AFRICA

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APPEAL RESPONSE REPORT

PROJECT NAME/TITLE:

Prospecting activities for gold and silver ore in respect of portions 12, 13, 21 and 22 of the Farm Golden Valley 621IQ situated in the magisterial district of Krugersdorp

PROJECT LOCATION: Portions 12, 13, 21 and 22 farm Golden Valley 621 IQ, Krugersdorp. Gauteng

PROJECT REFERENCE NUMBER: GP30/5/1/1/2/10457PR (DMR)

DATE PROJECT/ACTIVITY AUTHORISED: 21st of February 2019

DATE NOTIFIED OF DECISION: 8th of March, 2019

HAS THE OTHER PARTY/APPLICANT BEEN NOTIFIED OF THE APPEAL: Yes

*PLEASE COMPLETE THIS SECTION TO BEST OF YOUR KNOWLEDGE

DETAILS OF THE APPELLANT	DETAILS OF THE APPLICANT
Name of appellant: Federation for a Sustainable Environment	Name of applicant: COLD GOLD TRADING (PTY) LTD
Appellant's representative (if applicable): Mariette Liefferink	Applicant's representative (if applicable): Environmental Assessment Practitioner: Abraham Maphoso
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GROUNDS OF APPEAL	RESPONDING STATEMENT
<p>1. General</p> <p>The Basic Assessment Report (BAR) and the Environmental Management Programme Report (EMPR) contain incorrect terms grammatical and spelling errors, which affects the substantive matters of these Reports and render some statements meaningless.</p>	
<p>2. Anomalies in BAR/EMPR</p> <p><u>Minerals to be prospected</u></p> <p>The BAR and the EMPR appear to be an assessment report and management plan which were copied and pasted from another project. To exemplify:</p> <p>On page 1 of the BAR and the EMPR we informed that the prospecting application is for the “Mineral: Gold ore and Silver ore” while on page 14 of the same document we are informed:</p>	

“Trace constituents will only be determined for selected samples with proven ore grades in iron ore, manganese and vanadium”. (Emphasis added.)

This anomaly can only be explained if the BAR was copied and pasted from another application, which begs the question whether the information provided in the BAR and the management and mitigation measure are project and site specific and relevant.

Gold/silver ore have different properties, impacts and risks to iron ore, manganese and vanadium. Gold ore within the area has acid producing potential (acid mine drainage) and co-occurs with uranium.

Access Roads

On page 56 we read: ***“Prior to the establishment of new access roads, a heritage impact assessment must be undertaken and mitigation and / or management measures for the protection of such resources must be implemented.”***

Anomalous hereto, we read on page 47 ***“no access roads will be established.”***

While it is confirmed on page 74 that no access roads will be established, the mitigation measures which are proposed are as follows: ***“During the construction of drilling (sic) roads, the topsoil will be removed and stored separately, in which at the latter stage the said topsoil will be used for backfilling”.*** (Emphasis added.)

3. Precautionary principle (gaps in information)

Water

On Page 66 of the BAR/EMPR we are informed that there are *“No assumptions, uncertainties and gaps in knowledge. All mitigation measures are possible and practical.”*

We are, however, also informed on page 12 of the BAR/EMPR: *“Currently it is not known whether there are any water boreholes located on the site and whether access and supply will be granted by the landowners.”* (Emphasis added.)

And

“It is anticipated that water brought onto the site, will be sourced from the nearest stream, Water will be trucked from the nearby to the identified drill sites, water bowers will be deployed to these sites as and when required” (page 12 of the BAR/EMPR).

The lack of certainty regarding the water supply of the operations is of concern since the BAR/EMPR informs us that: *“Continuous water supply will be required during drilling, at an estimated rate of 1,000 litres per hour. On-site water storage tanks with a capacity of 15,000 for water supply to the drill, will be installed”* (page 12 of the BAR/EMPR).

And

“1000 to 10 000/borehole and maximum of 30 000-100 000 litres for the duration of the prospecting right” are the volumes and rate of water use required for the operation (page 71 of the BAR/EMPR).

Notwithstanding the fact that the BAR/EMPR informed us that the water which will be brought on to the site ***“will be sourced from the nearest stream”*** the BAR/EMPR notes that ***“no water use license is required at the moment since the prospecting activities do not trigger water uses”*** (page 71 of the BAR/EMPR).

We are not supplied with the name of the nearest stream. If water is sourced from the nearest stream it may well require a Water Use Licence in terms of Section 21 of the National Water Act.

Potential for Contaminated Water (AMD), sulphate, metals and radioactive material (NORM)

The BAR/EMPR informs us that no specialist studies were undertaken.

Gold ore co-occurs with uranium. There is the potential for contamination of soils, water, sediment and crops with radioactive material during the prospecting activities. The precautionary principle should have been adopted in determining the risk of NORM to fauna and flora and humans as a result of the prospecting activities..

Acid Mine Drainage is a known phenomenon within the project area. It is necessary to explain the relevance of Acid Mine Drainage to the prospecting activities, the background to Acid Mine Drainage, its impacts and the risks of namely:

- **Acid Mine Drainage from defunct and flooded underground gold mines in the West Rand Basin was first manifested in August/September 2002. Acid Mine Drainage (AMD) contains a wide spectrum of metals including radioactive metals. The ramifications of AMD for the sub-region are enormous. The greatest focus in this regard is the Cradle of Humankind World Heritage Site. Of no lesser concern are downstream water users and agricultural activities who are wholly dependent on groundwater for potable and economic use.**
- **Currently 30 million litres per day of mine water are pumped from the Western Basin and neutralised. Neutralisation involves a pH adjustment which allows the water to become alkaline and the metals to precipitate. It should be noted that the metals do not disappear – the metals merely change into a different oxidation state, namely from a soluble state to a solid state. The metals can again be dissolved and mobilised if the water becomes acid. The neutralised AMD also contains high levels of sulphate (2 000 to 3 000mg/l), which renders the water unfit for any use.**

The prospecting area is downstream from the Western Basin AMD Treatment Plant, the AMD decant source and receptor dams and rivers (the Tweelopiespruit and Blaauwbank River) and the Krugersdorp Game Reserve, which lies immediately downslope from the locus of the AMD. A Gold Mine is classified as a Category A Mine in terms of the Department of Water and Sanitation's Mine Water Management Policy since it is acid producing. There is the potential of acid mine drainage as a result of the proposed gold prospecting.

It was imperative therefore that the hydrogeological environment which hosts mine water and the potential for acid mine water be understood and assessed in the BAR/EMPR. There is no reference at all to AMD in the BAR/EMPR.

Wetlands

On page 47 of the BAR/EMPR we are informed: *“There are several wet land (sic) on the site” and as mitigation measures it is proposed that: “There will be 100meters buffer zone (100m away from any wet land)”*, however there are no maps provided in the BAR/EMPR to indicate the wetlands area and the 100 meter buffer zone.

While we found two outdated surface water maps, which lack detail; two locality maps, which lack detail; a Google earth view plan; an outdated conservation and protected areas map; a *‘topography’* plan which lack detail, a municipal boundary map and a vegetation map in the BAR/EMPR, we failed to find a map detailing the drilling locations.

Drilling locations

The BAR informs us that the prospecting operations will include both invasive and non-invasive activities. The BAR furthermore informs us that *“50 boreholes planned for this phase [which] will amount to 100-200 meters of each core drilling. The drilling time is estimated at two month with one drill rig. total drilling 7500 meters”* (page 14 of the BAR/EMPR).

The Applicant was required to:

“Provide a map at an appropriate scale which superimposes the proposed overall activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that

should be avoided, including buffers” (page 63 of the BAR/EMPR). No map was provided.

The BAR contains no indication of the location of the drill holes, trenches or access roads to the drill sites. A map detailing the drilling locations should have been submitted to the relevant landowners, the DWS and the DMPR prior to the authorisation of the application.

Baseline Information

The baseline information is inadequate and superficial e.g. under “*animals*” the BAR/EMPR stated: “*The existence of fauna in the area has largely been altered due to human activities. The dominant animals on the area constitute domestic animals.*” There is no reference to red data species.

23. The “*Bloubank*” (sic) river is identified as a “*specific environmental feature*” in the baseline description. The BAR/EMPR failed however to report that the “*Bloubank*” River is the receptor river of approximately 30 million liters per day of neutralised, but highly saline acid mine drainage (2 000 – 3 000 mg/l sulphate) from the upstream Western Basin AMD Treatment plant via the Tweelopiespruit.

The cultural and tourist value of the area was omitted in the baseline information. The prospecting area is in close proximity to Magaliesburg. The importance of Magaliesburg, at the foot of the Magaliesberg, lies in its tourist value and cultural heritage. Key environmental features include the Magaliesberg Mountains and Cradle of Humankind and the Magaliesberg Natural Protected Environment which extends in an arc from just north-west of Rustenburg in the west to the N1 in the east near Pretoria. To the south, the

<p>Witwatersberg range runs parallel to the Magaliesberg, extending from the town of Magaliesburg in the west to Hartbeespoort Dam in the east.</p>	
<p>4. Land Use</p> <p>In terms of the Maccsand Judgment, the Applicant is required to apply for rezoning before prospecting can commence. The process does not only require the landowner to grant permission to the right holder to apply for rezoning. An application must be lodged with the Municipality where the proposed mining is situated.</p> <p>We have no evidence that this application was lodged with Mogale City Local Municipality and that the municipality decided to grant the rezoning. It should be noted that if the municipality decides to refuse zoning permission, prospecting cannot take place irrespective of DMR granted a prospecting right.</p>	
<p>5. Need and Desirability</p> <p>While prospecting does not always result in mining, there is the possibility that it may well result in mining. It is for this reason that the need and desirability of the project must be adequately motivated.</p> <p>The Applicant argued the need and desirability of the project as follows:</p> <ol style="list-style-type: none"> 1. The prospecting will provide additional information to organs of state e.g. the Council of Geoscience; 	

2. The prospecting will provide the Applicant with information (e.g. dept of mineral, seam thickness, quantity and quality of the resource, geology, etc.)

3. The prospecting will identify areas where prospecting and/or mining rights have not been granted.

The Applicant failed to explain that the prospecting application is the right time and the right place for the prospecting of gold, and to motivate that the prospecting for gold is the most sustainable use of the land.

In terms of Section 24 of the Constitution of the Republic of South Africa, development must be ecologically sustainable and economically and socially justifiable.

The object of the Mineral and Petroleum Resources Development Act 28 of 2002 is to: *“Give effect to section 24 of the Constitution by ensuring that the nations mineral and petroleum resources are developed in an orderly and ecologically sustainable manner while promoting justifiable social and economic development.”*

(Emphasis added.)

It is common cause that the prospecting and mining of gold is not the most sustainable use of the land and that it is not the right time for the prospecting and mining of gold for the following reasons:

Gold mining is in decline.

The recent liquidation of the Mintails Group within the Krugersdorp/Randfontein area is evidence of the economic nonviability or unsustainability of gold mining within the West and Far West Rand gold fields.

Of concern is the fact that the Mintails Group has an unfunded environmental liability of more than R460 million. (Please see page 39 to 53 of the attached Parliamentary Report –“ML 3”, and news media reports (ML 4”, “ML5”, “ML6” and “ML7”). Please also see <https://oxpeckers.org/2018/12/mintails-directors-targeted/>

Notwithstanding the fact that Gold Fields invested R36 billion since 2016 in its South Deep Mine within the West Rand, the South Deep Mine is currently losing R100 million a month and was forced in December 2018 to retrench around 1100 employees and 400 contractors.

AngloGold closed its TauTona mine.

Sibanye-Stillwater is set to cut nearly 7 000 jobs at its operations in South Africa as part of a potential restructuring of its loss-making operations.

Sibanye-Stillwater is currently, in its Randfontein reclamation operations, reclaiming residual gold from its historical tailings storage facilities (TSFs) while ploughing back benefits to the area by backfilling open pits, rehabilitating footprints and removing the source of pollution. There are currently 270 tailings storage facilities within the Witwatersrand gold fields containing 6 billion ton of iron pyrite tailings and 600 000 tons of uranium. The TSFs are significant sources of dust and water pollution. Acid Mine Drainage will continue for hundreds of years after mine closure since TSFs cannot be maintained in a reducing or oxygen free environment.

The remining of these TSFs and the recovery of residual gold while removing the sources of dust and water pollution is the best practicable option of the project area and not new prospecting and mining applications for gold, which

will contribute to and exacerbate the degradation and pollution within the West Rand.

6. Flawed public participation process

Comments and Response Report

We failed to find a copy of the Comments and Response Report attached to or included in the BAR/EMPR. On page 21 titled: “*Summary of issues raised by I&As (Complete the table summarising comments and issues raised, and reaction to those responses)*” we found a table with two entries, one entry records the introduction by the “*speaker*” and the other entry records the comments of B.D.T. van Wyk, with no response to his or her comments.

Notwithstanding the fact that the “*speaker*” (Kagiso Kubyana) stated that the purpose of the Public Participation meeting is to make sure IAPs are given an opportunity to consult with the consultants and that “*it is important to record the concerns from the community and all concerns raised will be addressed constructively*” we failed to find the “*constructive*” responses to the concerns of IAPs.

On pages 28 to 31 we found 4 (four) attached registration and comments sheets of 4 (four) IAPs with comments but with no responses by the EAP to these comments.

7. Alternatives (Best Practical Environmental Option)

The balancing of the negative environmental impacts versus the alleged short term social benefits (which have not accrued in the last period of mining to the

local communities) and the economic advantages can only be assessed if the loss to the environment are evaluated.

In the *“Summary of the positive and negative impacts and risks of the proposed activity and identified alternatives”*, the Applicant motivated the project by stating the *“positive impacts of the activities is the creation of employment which is really required in the region”* but failed to provide detail.

On page 66 of the BAR/EMPR we are informed that *“The option of not approving the activities will result in a significant loss of economic development. All activities should be authorized”*. The loss of economic development was, however, not quantified and an assessment of the opportunity costs, e.g.

- o Understanding the value of the foregone opportunity;
- o The achievement of the desired aim/goal for the specific area;
- o Optimising of positive impacts;
- o Minimising of negative impacts;
- o Equitable distribution of impacts; and
- o The maintenance of ecological integrity and environmental quality

was not undertaken.

Applying the *“opportunity cost”* principle would change the question being asked, namely, by placing a positive duty upon the decision maker to consider if the proposed development will constitute the best use of the resources (i.e. the best practicable environmental option). We allege that the decision maker

<p>(DMR) failed to consider whether the prospecting activities will be the best practicable environmental option for the area, that is the option that causes the least damage to the environment at a cost acceptable to society in the short and long term.</p> <p>No alternative activities or sites were proposed and the no go option was not considered. Based on the opinion of the EAP, the site was regarded as the preferred site and alternative sites were not considered.</p> <p>The reasons provided by the Applicant why the activity should be authorised was “<i>it is the opinion of the EAP that the activity may be authorised.</i>” The decision by the EAP that the activity may be authorised is not grounded or advised by any specialist studies, since according to the BAR/EMPR no specialist studies have been undertaken (page 63 of the BAR/EMPR).</p> <p>Alternative deposits or reserves (historic tailings storage facilities) that can be exploited (reclaimed) in adjacent areas (Randfontein and Krugersdorp) that are not on agricultural land and greenfields but on degraded mine land, were not considered by the EAP.</p>	
<p>8. Conclusion</p> <p>For all the above reasons it is respectfully submitted that the decision of the Regional Manager to grant environmental authorisation of the prospecting activities was premature and should be set aside.</p> <p></p> <p>Mariette Lieferink</p>	

CEO: FEDERATION FOR A SUSTAINABLE ENVIRONMENT 17 March 2019	
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ARR comments by Case Officer

Name & Surname:

Date:

Signature:

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Approved by Superior

Name & Surname:

Date:

Signature:

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