



## **BACKGROUND INFORMATION DOCUMENT**

### **Reef Exploration (Pty) Ltd**

#### **DMRE File References:**

PR Application Ref #: FS 30/5/1/1/2/10695 PR  
EA Application Ref #: FS 30/5/1/1/3/2/1/10695 EM

### Prospecting Right and Environmental Authorisation Application for the Bothaville Consolidated Project

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## **PURPOSE OF THIS DOCUMENT**

- This Background Information Document provides you, as an Interested and Affected Party, with an overview of the proposed project.
- The Background Information Document invites you, as an Interested and Affected Party, to participate in the required Public Participation Process.
- The Background Information Document provides you, as an Interested and Affected Party, with an opportunity to contribute and participate in the formulation of the Basic Assessment Report and Environmental Management Programme.
- The Background Information Document also provides you, as an Interested and Affected Party, an opportunity to provide the project team with your comments, concerns and objections to the proposed project.

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## 1. INTRODUCTION

Reef Exploration (Pty) Ltd (Reef Exploration) submitted an online Prospecting Right and Environmental Authorisation Application to the Free State Department of Mineral Resources and Energy on the 4<sup>th</sup> March 2024. The online application was successful and the project was allocated the reference number FS 30/5/1/1/2/10695 PR. Acceptance of the Prospecting Right application was received on the 20<sup>th</sup> March 2024. If the application is granted, Reef Exploration will be enabled to ascertain if economically viable mineral deposits exist within the application area. The minerals of interest include:

- Silver
- Gold
- Coal
- Diamond (Alluvial)
- Platinum Group Metals
- Rare Earths
- Sulphur
- Uranium

The proposed project will be known as Bothaville Consolidated and it will aim to explore and quantify the potential mineral resources. In order to undertake prospecting activities, Reef Exploration requires a granted Prospecting Right (PR) in terms of the Mineral and Petroleum Resources Development Act, 2002 (MPRDA, Act 28 of 2002). Reef Exploration is also required to obtain an Environmental Authorisation (EA) in terms of the National Environmental Management Act, 1998 (NEMA, Act 107 of 1998) which involves the submission of a Basic Assessment Report (BAR) and Environmental Management Programme Report (EMPR) as well as undertaking the Public Participation Process (PPP). Shango Solutions have been appointed by Reef Exploration as the Environmental Assessment Practitioner (EAP) to assist in complying with these requirements.

## 2. AIM OF THE BACKGROUND INFORMATION DOCUMENT

Public Participation forms an integral part of the Basic Assessment process. The Background Information Document (BID) offers the reader the opportunity to obtain information, comment, raise issues of concern and collaborate in the development of the process. The distribution of this document is a crucial step in advising the reader on how to become involved in the process.

This document aims to provide the reader with basic information regarding the proposed project which includes:

- An introduction to the project, including location details.
- An indication of the proposed activities and the legal framework in which the project is executed.
- Environmental impacts that may potentially occur.
- An explanation of the Public Participation Process (PPP) to be followed.
- An explanation of how to become involved as an Interested and Affected Party (I&AP).

## 3. PROJECT LOCALITY

The project area covers an aerial extent of 18 627.1944 hectares (ha). It is situated in the Magisterial Districts of Bothaville and Viljoenskroon, approximately 30 kilometres (km) east of Bothaville town in the Free State Province of South Africa. Fifty (50) farm portions extend over the application area (Figure 1). Table 1 indicates the property details within the project area.

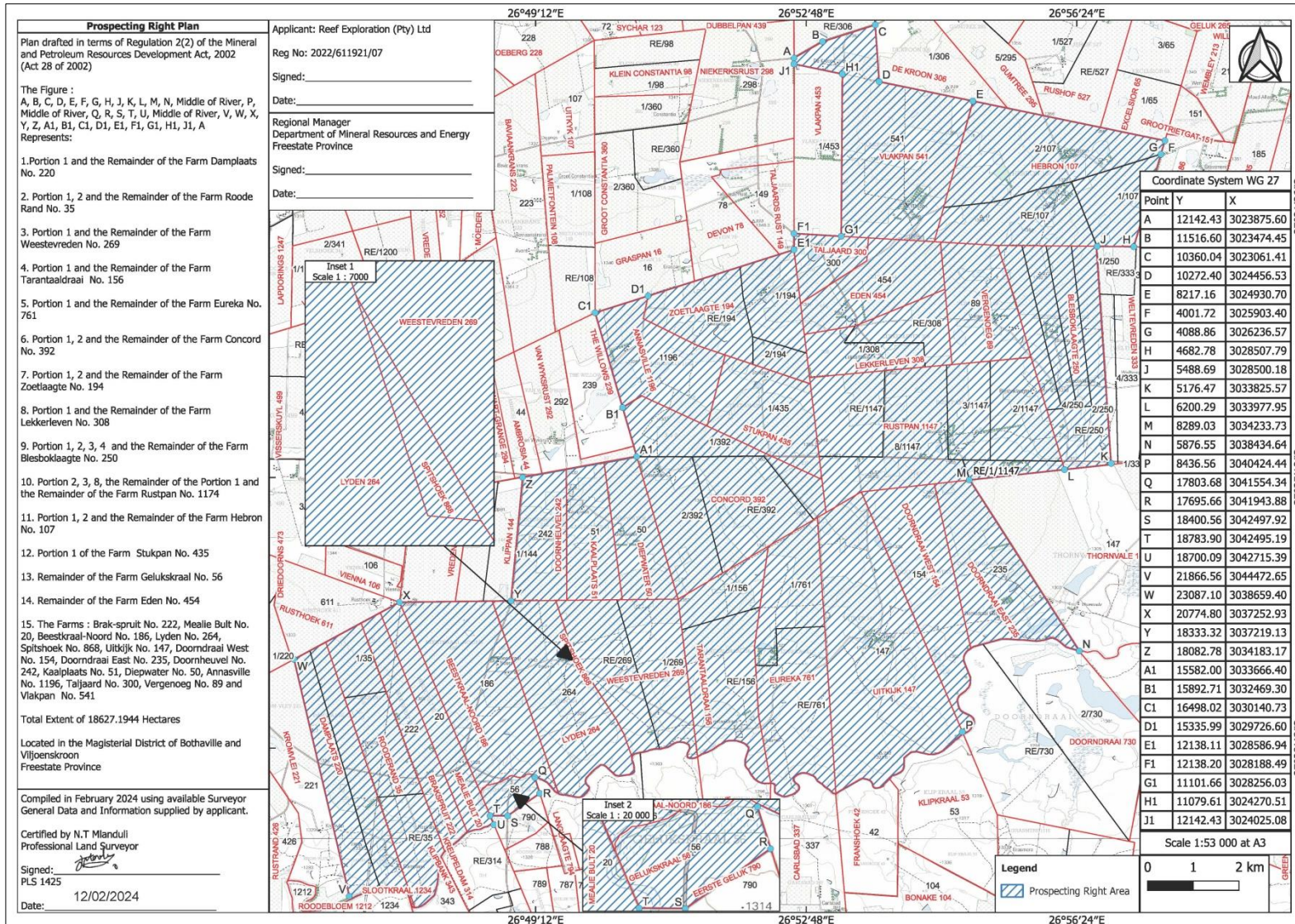


Figure 1: Locality map (Regulation 2 (2) Plan).

Table 1: Property details.

No.	Farm Name	Farm Portion	Surveyor General Code
1	Annasville No. 1196	Farm	F0050000000011960000
2	Beestkraal-Noord No. 186	Farm	F0050000000001860000
3	Blesboklaagte No. 250	Remainder	F0360000000002500000
4	Blesboklaagte No. 250	1	F0360000000002500001
5	Blesboklaagte No. 250	2	F0360000000002500002
6	Blesboklaagte No. 250	3	F0360000000002500003
7	Blesboklaagte No. 250	4	F0360000000002500004
8	Brak-spruit No. 222	Farm	F0050000000002220000
9	Concord No. 392	Remainder	F0050000000003920000
10	Concord No. 392	1	F0050000000003920001
11	Concord No. 392	2	F0050000000003920002
12	Damplaats No. 220	Remainder	F0050000000002200000
13	Damplaats No. 220	1	F0050000000002200001
14	Diepwater No. 50	Farm	F0050000000000500000
15	Doorndraai East No. 235	Farm	F0360000000002350000
16	Doorndraai West No. 154	Farm	F0360000000001540000
17	Doornheuvel No. 242	Farm	F0050000000002420000
18	Eden No. 454	Remainder	F0360000000004540000
19	Eureka No. 761	Remainder	F0050000000007610000
20	Eureka No. 761	1	F0050000000007610001
21	Gelukskraal No. 56	Remainder	F0050000000000560000
22	Hebron No. 107	Remainder	F0360000000001070000
23	Hebron No. 107	1	F0360000000001070001
24	Hebron No. 107	2	F0360000000001070002
25	Kaalplaats No. 51	Farm	F0050000000000510000
26	Lekkerleven No. 308	Remainder	F0360000000003080000
27	Lekkerleven No. 308	1	F0360000000003080001
28	Lyden No. 264	Farm	F0050000000002640000
29	Mealie Bult No. 20	Farm	F005000000000200000
30	Roode Rand No. 35	Remainder	F005000000000350000
31	Roode Rand No. 35	1	F005000000000350001
32	Roode Rand No. 35	2	F005000000000350002
33	Rustpan No. 1147	Remainder	F0050000000011470000
34	Rustpan No. 1147	Remainder of 1	F0050000000011470001
35	Rustpan No. 1147	2	F0050000000011470002
36	Rustpan No. 1147	3	F0050000000011470003
37	Rustpan No. 1147	8	F0050000000011470008
38	Spitshoek No. 868	Farm	F0050000000008680000
39	Stukpan No. 435	1	F0050000000004350001
40	Taljaard No. 300	Farm	F0360000000003000000
41	Tarantaaldraai No. 156	Remainder	F0050000000001560000
42	Tarantaaldraai No. 156	1	F0050000000001560001
43	Uitkijk No. 147	Farm	F0050000000001470000
44	Vergenoeg No. 89	Farm	F0360000000000890000
45	Vlakpan No. 541	Farm	F0360000000005410000

46	Weestevreden No. 269	Remainder	F00500000000026900000
47	Weestevreden No. 269	1	F00500000000026900001
48	Zoetlaagte No. 194	Remainder	F00500000000019400000
49	Zoetlaagte No. 194	1	F00500000000019400001
50	Zoetlaagte No. 194	2	F00500000000019400002

## 4. PROJECT DESCRIPTION

The following prospecting activities are detailed as part of the PWP during Year 1 to Year 5 of the project:

### 1. Data Gathering

#### Desktop Studies:

Data Acquisition:

[Year 1: 12 months]

All historical data detailing the position and economic potential of the target horizons will be revisited. The data obtained will be in the form of historical borehole information, cadastral maps, geological maps, geophysical surveys (all available existing published gravimetric, radiometric, magnetic, seismic data, remote sensing data, as well as any information pertaining to previous exploration or mining will be consulted and integrated). Data will be scrutinised and verified (QA/QC procedure).

Database, Map Generation and Development of Geological Model:

[Year 1: 6 months]

The data will be compiled into a geological database for the area that will be utilised to present the relevant geological data in useable GIS digital map format. These different data sets will be plotted on a base map of the project and surrounding areas in order to develop a geological model. This model will be used to further refine the exploration programme for the target area.

Field Visit:

[Year 1: 1 week]

A field visit will be undertaken to familiarise the applicant with surface features (such as infrastructure, outcrops, water bodies and wetlands) in the project area and to meet the surface landowners. During this visit farm boundaries within the project area and farming activities will be verified. An effort will be made to identify any factors that may impact the exploration programme.

### 2. Geophysical Surveys

Geophysical Survey and Seismic Survey:

[Years 2: 12 months]

Data Compilation and Interpretation:

[Year 2: 12 months]

Refinement of Geological Model:

[Years 2: 12 months]

Geophysical surveys conducted by mining companies are available and could be acquired without the need for further surveys. A seismic survey was conducted along a line of 60km long by Anglo Gold Ashanti and initial discussions indicate that it might be possible to purchase this line. Regional aeromagnetic surveys are available and will be acquired and interpreted in conjunction with the borehole and other data. Based on a favourable outcome of the work in Year One, the decision will be taken to purchase this survey.

### 3. Revisit Key Historic Borehole Core, and Re-logging and Re-sampling

[Year 2: 6 months]

Based on the initial geological model, specific key boreholes previously drilled in the area will be re-visited and negotiations with the owners undertaken to obtain access to the core. Once access to the historical core is obtained, the core will be re-logged and, if necessary, re-sampled. This activity will allow verification of the historical borehole logs and consequently increase confidence in the data underpinning the geological model.

#### 4.1 Drilling

[Year 3: 12 months]

Based on the initial geological model established, a diamond drilling programme comprising of three boreholes (each to a depth of 700 metres (m)) will be undertaken.

#### 4.2 Revise Geological Model

[Year 3: 6 months]

The data obtained from the logging and sampling of the historical boreholes will be integrated into the geological model to confirm the geology and drilling targets.

#### 5.1 Drilling

[Year 4: 12 months]

Should the drilling programme prove to be successful in Year 3, an additional three holes (each to a depth of 700 m) will be considered to be drilled. It is imperative to note that the drilling in Year 4 is dependent on positive outcomes from the drilling in Year 3.

#### 5.2 Finalisation of 3D Geological Model

[Year 5: 4 months]

Based on the logging and sampling of the core, the 3D geological model will be updated and finalised for use during resource estimation.

#### 5.3 Code Compliant Resource Estimation

[Year 5: 4 months]

Utilising the finalised geological model together with historical assay results and any results from the drilling programme, a code compliant resource estimate will be performed.

#### 5.4 Concept Study

[Year 5: 4 months]

Should the exploration activities yield promising results, a concept study will be conducted. During this investigation, resources will be converted to reserves and a conceptual mine plan and schedule shall be established. This will reveal whether the deposit is economically mineable or not.

## 5. GEOLOGY AND PROSPECTING TARGETS

The surface geology of the prospecting area contains (i) thin Quaternary sediments, mostly recent sand and gravel in the river valleys, as well as (ii) the Karoo Dolerite Suite and (iii) the sedimentary rocks of the Karoo Supergroup. The Witwatersrand Supergroup which hosts gold is generally overlain by 500 m of Karoo Supergroup strata, which is predominantly consisting of horizontally bedded sandstones and shales of the Eccra Group. The Eccra Group contains coal at shallow depths which might be exploitable.

The Welkom Goldfield hosted eleven mines in the triangle between Allanridge, Welkom and Virginia, 270 km southwest of Johannesburg. Historically, these mines have collectively produced in excess of 9.6 Million kilograms Au (gold). The Central Rand Group of the Witwatersrand Supergroup is present at Bothaville with four potentially economic placer deposits. The mineralised reefs at Bothaville are the Basal Reef, Big Pebble Conglomerate, A Reef and the B Reef. In addition to gold, the primary exploration target, silver, uranium, sulphur, diamonds, rare earths and platinum group metals are currently and have been historically, extracted as by-products of gold mining.

## 6. REGULATORY REQUIREMENTS

The proposed project will include the following application processes with associated activities:

- Compilation of a BAR and EMPR.
- Compilation of a Closure Report.
- Undertaking a PPP.

It is anticipated that the following NEMA listed activities will be triggered by this application:

- **Listing Notice 1 - Activity 20 of GNR 327 (as amended on 11 June 2021):** Any activity including the operation of that activity which requires a prospecting right in terms of Section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002), as well as any other applicable activity as contained in this Listing 3 of 2014, required to exercise the prospecting right.
- **Listing Notice 3 - Activity 12(b)(i) and (ii) of GNR 324 (of 2017):** The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of such indigenous vegetation is required for maintenance purpose undertaken in accordance with a maintenance management plan (i) within any critically endangered or endangered ecosystem listed in terms of Section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004 and (ii) within critical biodiversity areas identified in bioregional plans.

## 7. TYPICAL IMPACTS ASSOCIATED WITH THESE ACTIVITIES

The following impacts *inter alia* will be included and assessed in the BAR:

- Safety and security risks to landowners and lawful occupiers.
- Interference with land-use.
- Sense of place.
- Loss/destruction of habitat.
- Damage to existing infrastructure.
- Perceptions and expectations.
- Clearance of vegetation.
- Soil instability/compaction/pollution.
- Erosion and sedimentation.
- Disturbance/damage of heritage features.
- Noise.
- Introduction of alien invasive species.
- Fugitive emission (dust).
- Hydrocarbon spills/contamination.
- Surface and groundwater pollution.
- Generation and disposal of waste.

## 8. BASIC ASSESSMENT PROCESS

The key steps involved in a typical Basic Assessment process are described below.

### Initiation and Application

- Compile and submit application forms.

### Public Participation Process

- Identification of I&APs.
- Preparation of notification documents (BID, letter, advert, site notice, registration form).
- Notification of I&APs and relevant stakeholders of the project.
- Placement of site notices and advertisement.

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### BAR and EMPR

- Compilation of baseline environment data and identification of potential impacts associated with the project.
- Assessment of alternative project aspects.
- Specialist studies undertaken (if applicable).
- Potential impacts are rated and mitigation measures proposed.
- Monitoring programmes proposed to ensure mitigation measures are efficient.
- Draft BAR/EMPR is made available to the public and Authorities for public review and comment.
- Final BAR/EMPR is updated to include all comments prior to submission to the DMRE.
- DMRE accepts the BAR/EMPR or requests additional information.

### Record of Decision



- DMRE makes a decision and either approves or rejects the application for an Environmental Authorisation.
- All I&APs are notified of the outcome of the application, and their right to appeal.

## 9. AVAILABILITY OF THE BASIC ASSESSMENT REPORT AND DETAILS OF THE OPEN DAY

The draft Basic Assessment Report and Environmental Management Programme (BAR and EMPR) will be made available for public review, for a period of 30 days, **from the 18<sup>th</sup> June 2024 until 22<sup>nd</sup> July 2024**, for the perusal and comment of all I&APs. A hard copy of the report is available at the following public venue:

Venue	Address	Contact Details
Bothaville Golf Club	Off Greyling Street, Bothaville GPS co-ordinates: -27.394164, 26.625155	056 515 2951 083 409 5214

Furthermore, an electronic copy will also be obtainable on the Shango Solutions website ([www.shango.co.za/public-documents/](http://www.shango.co.za/public-documents/)) from the 18<sup>th</sup> June 2024. In order to present the findings of the Basic Assessment process to the public and to solicit comments on the report, an Open Day will be held. The schedule for the Open Day is as follows:

Date	Time	Venue	Contact Details
11 <sup>th</sup> July 2024	09:00-14:30	Bothaville Golf Club	056 515 2951 083 409 5214

All input from the public with regards to the draft BAR and EMPR will be incorporated into the revised report that will be submitted to the Competent Authority, the DMRE.

## 10. PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED

The Environmental Authorisation is required for the same duration as the associated Prospecting Right.

## 11. NEED AND DESIRABILITY OF THE PROJECT

Should prospecting prove successful and a resource is quantified, it would indicate a potential viable economic activity in the form of mining. Mining will contribute greatly to local economic growth through direct employment, future business opportunities, royalties and tax revenues.

## 12. PUBLIC PARTICIPATION PROCESS

The reader is hereby invited to participate freely and submit any questions or information that may contribute to the Basic Assessment process. Public involvement is an essential component of the process. It addresses the right of I&APs to be informed of the proposed activities and to be involved in decisions that affect them. It also affords the EAP the opportunity to address the issues and concerns raised by I&APs thus allowing the EAP to assess all the potential impacts of the proposed project.

## 13. INVITATION TO REGISTER

In order to ensure that you are identified and registered as an I&AP (if you are not already identified as one) and to comment on the BAR and EMPR, please complete and submit the attached questionnaire and your comments to Shango Solutions by **no later than 22<sup>nd</sup> July 2024**.

It is important to note that the Basic Assessment process is guided by legally stipulated timeframes. As such, in order to ensure your continued and valuable involvement in the project, we request that your registration requests and any preliminary comments are submitted by no later than the date provided above. Please include the project reference

name (Bothaville Consolidated) in all correspondence. Please note that only registered I&APs will be notified of further opportunities for involvement in this process.

**Any queries, comments, or concerns with regards to this application can be directed to Shango Solutions:**

- Tel: 011 678 6504
- Fax: 011 678 9731
- E-mail: tshililo@shango.co.za
- Contact person: Ms Tshililo Malange
- Project name: Bothaville Consolidated
- Postal address: P.O. Box 2591, Cresta, 2118, South Africa

**Any comments or concerns regarding this application can also be directed to the Department of Mineral Resources and Energy (and a copy sent to Shango Solutions):**

- Tel: 057 391 1395
- Fax: 057 357 6003
- Contact person: Ms Happy Maphisa
- Postal address: Private Bag X33, Welkom, 9460
- DMRE reference number: FS 30/5/1/1/3/2/10695 EM
- Attention: Regional Manager – Free State Region Mineral Regulation