



## Operations Underway at the Gravelotte Emerald Project, South Africa

### ASX Release

30 May 2019

**Magnum Mining and  
Exploration Limited**  
ABN 70 003 170 376

### ASX Code

MGU

### Non-Executive Chairman

Howard Dawson

### Chief Executive Officer

Grant Button

### Non-Executive Director

Francesco Cannavo

### Company Secretaries

Grant Button  
Jacqueline Barry

### Issued Shares

279,578,818

### Unlisted Options

9,000,000

### Email

info@mmel.com.au

### Website

www.mmel.com.au

Suite 2, Churchill Court  
234 Churchill Avenue  
SUBIACO WA 6008

PO BOX 8209  
SUBIACO EAST WA 6008

T +61 8 6280 0245  
F +61 8 9381 2855

- Trial Mining of the Cobra pits has been completed and the mined material stockpiled for processing.
- Commissioning of the crushing and wash plant has been completed using material from the low grade and waste dumps.
- Processing of the Cobra mined material through this plant has now commenced and the product stockpiled for the secondary processing by XRF sorting.
- XRF unit is on site and being calibrated for commencement of operation.

### Gravelotte Project (South Africa)

Magnum's 74%-owned Gravelotte Project is located in the Limpopo Province of South Africa.

Emeralds were discovered in the province in 1927 and, since then, several companies have explored for and mined within the broader region for emeralds.

From 1929 to 1982 the total recorded emerald production from the Gravelotte Project, as well as the area surrounding the nearby Gravelotte township, was nearly 113 million carats.

It is reported that during the 1960's the Gravelotte Project itself was the largest emerald mine of its type in the world, employing over 400 sorters.

### *Why is Magnum at Gravelotte?*

The Gravelotte project provides Magnum with a medium term production opportunity in a niche commodity such as emeralds where demand is growing.

The project offers established infrastructure, existing and accessible open cuts together with extensive low grade dumps, a large (albeit incomplete) historic data base, a nearby and available work force, local on-site technical expertise and a nearby township that can serve as a supply centre.

The Company has maintained and refurbished much of the extensive mine site infrastructure at Gravelotte including offices, laboratory, workshops, garages, management accommodation complex and a mine hostel to accommodate mine workers.

The mine site is well situated with utilities and logistics being serviced by ESKOM grid power, has a sealed road to the mine gate and has a working airstrip.

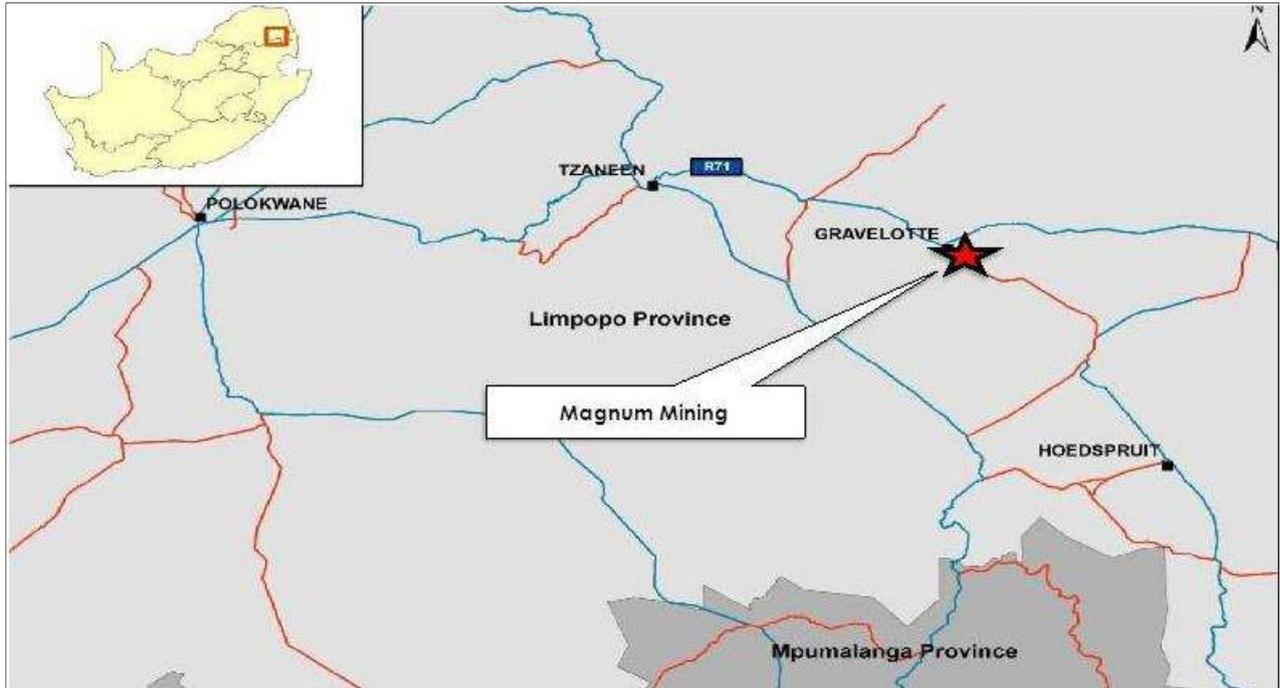


Figure 1: Gravelotte Location Map

### ***Evaluation Programme***

Magnum has the benefit of a significant mining and exploration data base at Gravelotte.

This has allowed Magnum to fast track the evaluation of the project for the potential near term establishment of a modern emerald mining and production operation.

The final key steps in this evaluation programme have been to undertake testing to determine the best crushing, washing and processing techniques for the Magnum material and then utilise this information in a trial mining exercise utilising the existing historic open pits.

The first part of this programme was completed in 2018 and Magnum now has a strong understanding of the crushing and beneficiation characteristics of the Gravelotte emerald bearing rocks.

The second part of the programme – the mining of hard rock from the Cobra and Discovery historic pits, commenced in March 2019 and to date around 7,500 tonnes has been stockpiled from the Cobra pits. An estimated 2,000 tonnes remains to be trucked and stockpiled from the Discovery pit.

Magnum has had a crushing and washing plant capable of processing around 2,000 tonnes per month constructed on site and the commissioning of this plant was completed earlier this month (May 2019) utilising low grade and waste material from the historic mining operations.

Processing of the Cobra mined material through this plant has now commenced and the product stockpiled for the secondary processing by XRF sorting.

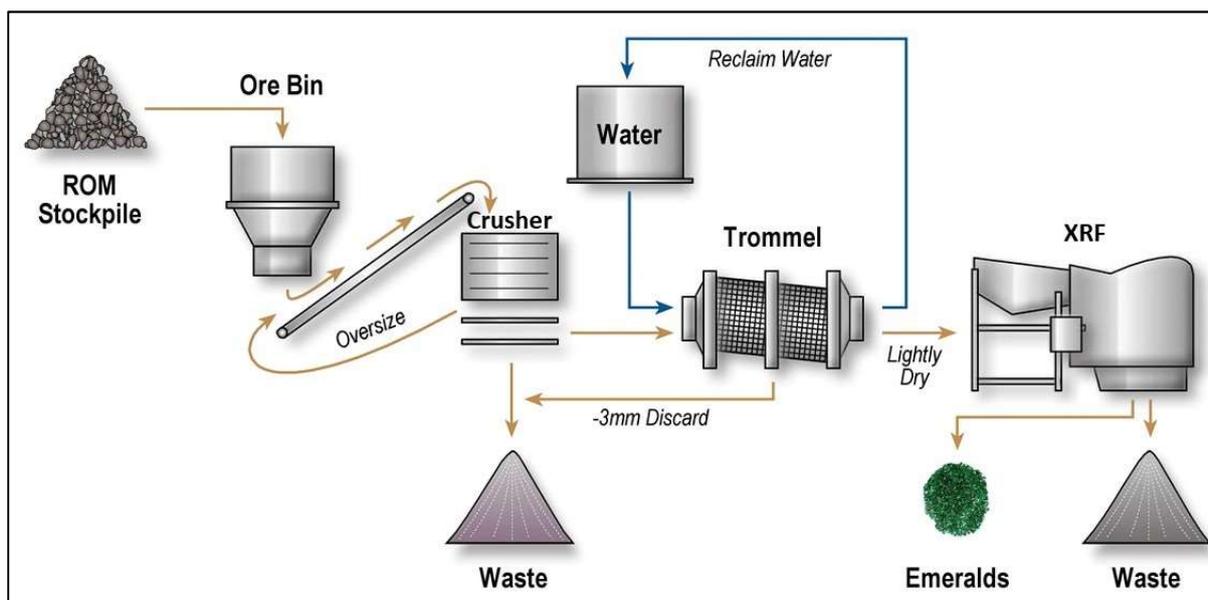


Figure 2: Flow Diagram of the processing circuit

The XRF unit is now on site and is undergoing calibration prior to the commencement of the secondary processing. This calibration is scheduled to be completed in the first week of June 2019.

Based on a conservative base case it is targeted for around 250,000 carats of emeralds to be produced from the mined material.

***What is the next step after the processing of the mined material?***

The current processing of the mined material has been designed to recover a parcel of emeralds from Gravelotte of a sufficient size to allow a commercial assessment of pricing for the emeralds through a tender process.

There has been a significant increase in demand for emeralds reported since 2000 so this will provide vital data for assessing the current demand and consequent pricing for emerald product from Gravelotte.

This in turn will allow the financial modelling for a potential future commercial mining operation to be completed.

It is anticipated that the definitive financial modelling will commence in the December 2019 quarter.

**GRANT BUTTON**  
**Chief Executive Officer/Joint Company Secretary**

Further information please contact:

Magnum Mining and Exploration Limited

Grant Button

+61 8 6280 0245

email: [info@mmel.com.au](mailto:info@mmel.com.au)

*The information in this announcement that relates to Exploration Results and Mineral Resources complies with the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) and has been compiled and assessed under the supervision of Mr Howard Dawson, Non-Executive Director of Magnum Mining and Exploration Limited. Mr Dawson is a member of the Australian Institute of Geoscientists and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the JORC Code. Mr Dawson consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.*