



**ASX Release**  
12 March 2018

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## Trial Mining Program Commences at Gravelotte Emerald Project, South Africa

Mining well underway with start of processing imminent

### HIGHLIGHTS

- **Phase 1 of 2-phase 10,000-tonne trial mining and processing program has commenced.**
- **First phase comprises testing of historical waste dumps to determine grade and recovery characteristics.**
- **Mining of around 2,100 tonnes from waste dumps now completed and processing will commence today.**
- **The second phase will mine and process 8,000 tonnes of hard rock sourced from the Cobra and Discovery pits and will commence in April 2018.**
- **Targeting recovery of +250,000 carats of emeralds from the total trial mining and processing programme.**

Magnum Mining Limited (ASX: MGU) is pleased to advise that it has commenced a key trial mining and processing program at its 74%-owned **Gravelotte Emerald Project**, located in the Limpopo province of South Africa.

The trial mining program is designed to provide critical information to assist with the re-establishment of commercial mining operations at Gravelotte – which was a major producer of emeralds over several decades up until the early 1980s.

The program is designed to confirm historical emerald grades, optimise mining and processing techniques and recoveries, and allow the Company to establish the value of the emeralds produced in the open market.

Emeralds were discovered in the Limpopo 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 mine of its type in the world, employing over 400 sorters.

During the past 36 months, Magnum has worked to re-establish the historical database and develop a strong understanding of the geology, structure and controls of mineralisation within the project area. The trial mining and program is expected to generate strong news-flow and allow Magnum Mining to enhance its knowledge of the various parameters to re-establish an emerald mining and processing operation in South Africa.



**Photo 1: Aerial view of the Gravelotte Mine Site showing key infrastructure with Cobra and Discovery Pits in background.**

The Company has maintained extensive mine site infrastructure at Gravelotte including:

- Mine offices, laboratory, administration offices and health clinic;
- Seventeen on-site three bedroom houses;
- Management accommodation complex, club house, swimming pool and social amenities;
- Workshop and garages; and
- Mine hostel that can accommodate 350 mine workers.

In addition, the mine site is serviced by ESKOM grid power, has a sealed road to the mine gate and has a working airstrip and explosives magazine.

### ***Historical Records***

An extensive database of information is available for the Gravelotte Project. This database covers the historical open pits – Cobra North, Cobra South and Discovery.

The Cobra pits were developed on a hill and only mined to approximately 10 metres below plain level.

The Discovery pit was developed near the cessation of historic mine operations and at its deepest point is only around 25 metres below plain level.

Historical records indicate that the average recovered grade from hard rock mining in the final two decades of mining was around 6.2 g/t (31 carats/tonne)



**Photo 2: Gravelotte schist host with emeralds.**

Included within the Mining Lease are an estimated 850,000 tonnes of coarse tailings and untreated ore, contained within multiple dumps (“Dumps”).

The Dumps are mostly from the historic mining and processing of the Cobra and Discovery pits.

Mine records show that, in the period from 1977 to 1982, an estimated 50,000 tonnes from the Dumps were processed for a recovered grade of 2.7g/t of emerald (13.5 carats/tonne).

### ***Trial Mining and Processing Exercise***

The 10,000-tonne trial mining and processing exercise has been designed by Magnum as an important precursor to potential commercial mining operations at Gravelotte.

This program will be conducted in two phases, with around 2,000 tonnes sourced from the Dumps and around 8,000 tonnes sourced from the Cobra and Discovery pits.

The key objectives of the trial mining exercise are:

- To confirm historical emerald grades within the Dumps and the respective Cobra and Discovery open pits;
- To optimise the mining and processing techniques to be used in a potential commercial operation, including determining the optimum blast pattern, the best type and size of mining equipment to be utilised, the preferred crushing and screening technique and how best to process and recover the resultant emeralds; and
- To determine the likely value of Gravelotte emeralds in the open market place using the emeralds recovered during the trial mining and processing program.

The mining and processing of the Dumps will also provide valuable information on the commercial benefits of any mining operation commencing with the processing of this potential already-mined resource.



**Photo 3: Cobra Pits.**

Based on the average recovered grades from the hard rock and waste dump processing over the near 70-year production history of Gravelotte, the trial mining exercise is projected to recover in excess of 250,000 carats of emerald.

### ***Timing of the Trial Mining Exercise***

Mobilisation of contractors commenced to site in late February and the mining of around 2,100 tonnes from the Waste Dumps has now been completed.



**Photo 4: Excavation of Waste Dump**



**Photo 5: Excavated waste dumps stockpiled for processing**



Processing of this material – which will involve crushing, screening and hand sorting – will commence today and will be carried out within the Company's mine site facilities.

Mining of the hard rock is expected to commence in April 2018, with a more precise timing to be advised once scheduling of the mining equipment has been confirmed. The hard rock mining and crushing activities are planned to be completed within the June quarter. The Company will provide an update on the estimated completion of the hand sorting process, once optimum sorting and recovery parameters have been confirmed.

A handwritten signature in black ink that reads "G. Button".

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

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