

Magnum Mining and Exploration Limited

Gravelotte Update - May 2019

ASX:MGU

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Investment Highlights



Hard Rock Trial Mining of Gravelotte emerald project underway after successful conclusion of Trial Processing Phase 1.



Near term commercial development opportunity with mining license and permits granted.



Significant mining history and geological data, resulting in a de-risked opportunity.



Extensive infrastructure leading to low capital expenditure requirements.



Emerald brand awareness, with strong interest in the product from initial discussions.



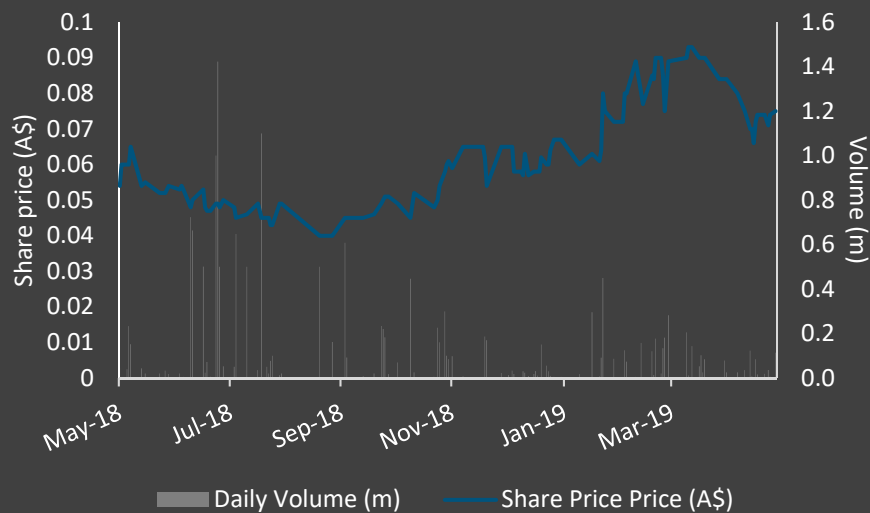
Located in a mining friendly jurisdiction of the Limpopo Province, South Africa.

Corporate Overview

Company overview:

- Magnum Mining and Exploration Limited (“Magnum” or the “Company”) is focused on the development of its 74% owned Gravelotte Project (“Gravelotte” or the “Project”), located in the Limpopo Province of South Africa.
- Gravelotte provides Magnum with a medium term opportunity for the production of emeralds.
- Magnum also holds an interest in the Tanami West Project located in the Northern Territory of Australia, with the option to earn 80% through exploration expenditure of A\$1.1m.

Share price vs volume – 1 year:



Capital structure as at 30 May 2019

| | | |
|---------------------------------|---------------|-------------|
| Share price | (A\$) | 0.081 |
| Shares outstanding | (m) | 279.6 |
| Options ¹ | (m) | 9.0 |
| Market capitalisation (diluted) | (A\$m) | 22.6 |
| Cash | (A\$m) | 0.6 |
| Debt ² | (A\$m) | 1.3 |
| EV | (A\$m) | 23.4 |

Note¹: options exercisable at A\$0.075, expiring 31 December 2019 which have not been included in the EV calculation even though they are in-the-money.

Note²: related to 1,250 unsecured redeemable convertible notes with a maturity date of 2 November 2019 at an interest rate of 10% p.a. on maturity. The notes can be converted to shares at either the lower of A\$0.05 or a 20% discount to 10 day VWAP.

Company Directors

| | Position |
|-------------------|-------------------------|
| Howard Dawson | Non-Executive Chairman |
| Grant Button | Chief Executive Officer |
| Francesco Cannavo | Non-Executive Director |

Major Shareholders

| | % |
|---|------|
| HSBC Custody Nominees (Australia) Limited | 7.44 |
| Sunshore Holdings Pty Ltd | 6.37 |
| Citi Corp Nominees Pty Ltd | 6.22 |
| Farmingacre Limited | 6.08 |
| Rogue Investments Pty Ltd | 5.01 |

Project Overview - Gravelotte

- 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 Gravelotte as well as the area surrounding the nearby Gravelotte township was nearly 113 million carats.
- It is reported that during the 1960's Gravelotte was the largest emerald mine of its type in the world, employing over 400 sorters.
- Since acquiring the project Magnum has undertaken comprehensive field studies to better understand the geology, structural and geochemical controls of the emerald mineralisation.
- In conjunction with these studies a concerted effort to assemble and then digitise the extensive data base over the project has been continuing.
- Gravelotte comprises; established infrastructure, existing and accessible open cuts together with extensive low grade dumps, a large historic data base, a nearby and available work force, local onsite technical expertise and a nearby township that can serve as a supply centre.
- Gravelotte provides Magnum with a medium term production opportunity in a niche commodity where demand is growing.



Gravelotte location map

Gravelotte Project – Site Photo



Exceptional Production History

- In the 1950's & '60's , Gravelotte was the largest emerald mine in the world, employing over 400 sorters, recovering a total of **112.7 million** carats of emeralds over the life of operations.
- Whilst a complete historical data package is not available, the data that has been sourced has provided high confidence for the projected re-development of Gravelotte.
- Operations in the early 1980's are reported to have returned a recovered grade in excess of **6g/t (30 carats/t)** of exportable emerald.
- Anecdotal evidence from previous owners indicates that processing security was poor and as a result the historical recovered grade is considered to be very conservative.
- Magnum's evaluation of Gravelotte is at an advanced stage with the Company's studies targeting an initial production level of around **3 million carats per annum**.

Advanced Development Potential

- Historic drilling and mining data confirms continuation of emerald grades and emerald bearing schist thickness at depth.
- Significant tailings opportunity situated onsite.
- Existing infrastructure in place.
- Historic Cobra and Discovery pits targeted for near term hard rock development.
- Marketing information from the sale of emeralds recovered from the Phase 2 Trial Mining will underpin the commercial development decision.





Extensive Existing and Maintained Infrastructure

- 55km from Phalaborwa and the Kruger National Park.
- Serviced by ESCOM grid power and supplement by an onsite generator.
- Major sealed road to mine gate.
- Mine offices, laboratory, admin offices and clinic.
- Workshop and garages.
- Mine hostel that can accommodate 350 mine workers.
- Guest house, 17x3 bedroom houses, club house, and amenities.

Phase 1 – Trial Processing

Successful completion of Phase 1 Trial Processing has allowed the Company to finalise the Phase 2 Hard Rock plant parameters.

Results of Phase 1 Trial Processing:

- Treated **256.6 tonnes** of crushed dump material from four low grade and waste dumps and recovered **11,775 carats of emeralds**. This is an average recovered grade of **46 carats** per tonne.*
- Successfully determined the optimum crushing methodology to maximise the liberation of emeralds from the host rock, whilst minimising damage to the emeralds (9.5mm - 12.5mm).
- Determined the critical data for the design and construction of a trial mining plant capable of processing 2,000 tonnes of ore per month.
- Allowed detailed assessment of hand, optical and XRF sorting solutions specific to Gravelotte material.
- Testing of all sorting methodologies was successful, however XRF technology appears most favourable.

** Refer to ASX announcement 9 July 2018 for more detail.*

Phase 2 Trial Mining – Key Parameters

Milestones completed

- ✓ Mining completed and material stockpiled.
- ✓ Processing Plant Commissioned.
- ✓ XRF machine onsite and undergoing commissioning.

Forward looking program

- Tonnage to be processed : 8,000 tonnes of hard rock.
- Hard Rock Pits – Cobra North, Discovery.
- Processing: On site, crushing, washing and XRF / hand sorting.
- Projected recovered volume: +250,000 carats.



Plant assembly.



Internal view of the shed being prepared for plant construction.

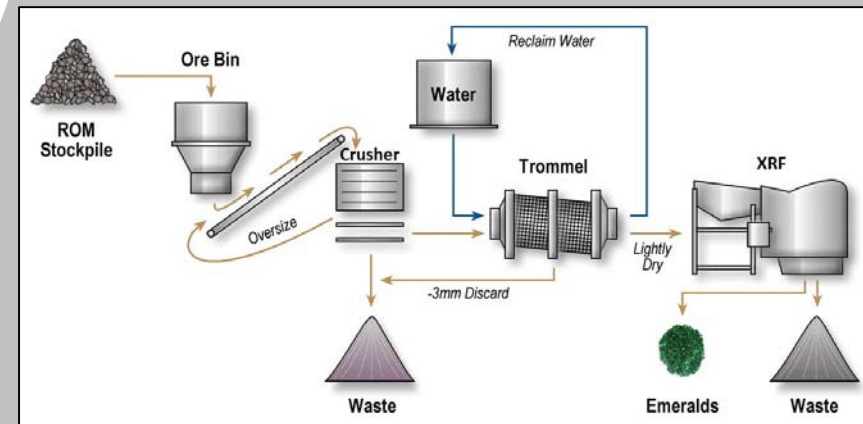
Phase 2 Trial Mining – Processing Flowsheet

Commentary

- Run of Mine (ROM) dry crushed to -20mm.
- Crushed material then wet and put through trommel to clean and reduce fragment size further.
- Material then lightly dried before putting through XRF.
- Post XRF material containing emeralds is hand sorted and graded.



Plant crusher and trommel circuit.



Flow diagram of the processing circuit.

Phase 2 Trial Mining – Planned Timetable

September Quarter 2019

- Completion of processing 8,000 tonnes of hard rock.
- Cleaning, sorting and grading of emeralds commences.

December Quarter 2019

- Marketing of emeralds.
- Auction of emeralds.



Emeralds – 3mm



Biotite schist host with emeralds

XRF Machine

- Well understood and proven technology.
- Extensively trialed for emerald recovery.
- High level of efficiency and accuracy.
- Does not require extensive training.
- XRF unit sourced from established industry participant.



XRF Machine on site

Gravelotte Summary

- Historic mining area with geology well known and understood.
- Hard rock as well as tailings resource potential once economic parameters have been established.
- Cobra branded emeralds in demand and well known in market place with discussions around the potential sale of product already commenced.
- Existing infrastructure with granted Mining Licence and Permits resulting in a near term and simple production pathway.
- Minimal capital expenditure compared to typical greenfields project development, resulting in attractive project economics.
- South Africa open again for mining.

The information in this presentation 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 presentation of the matters based on his information in the form and context in which it appears.

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