



**MAGNUM**  
MINING & EXPLORATION LIMITED

- *Gravelotte Emerald Project*
- *Hard Rock Trial Mining to commence in early 2019, after successful Phase 1 Trial Mining of dump material*



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## Key Points

- ✓ Near term commercial development opportunity.
- ✓ Granted Mining Licence and Permits.
- ✓ Significant mining history and geological data.
- ✓ Extensive infrastructure.
- ✓ Emerald brand awareness.
- ✓ Gravelotte is located in the Limpopo Province, South Africa

Gravelotte





## Strong 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 **6 g/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**.



# Phase 1 – Dump Mining

Successful completion of Phase 1 Trial Mining has allowed the Company to finalise the Phase 2 Hard Rock Plant Parameters.

## *Results of Phase 1 Dump Mining:*

- Treated **256.6 tonnes** of crushed dump material from four 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 Optical and XRF sorting solutions specific to Gravelotte material.
- ✓ Testing of both sorting technologies has been successful, however XRF technology appears most favourable. Detailed tests to be concluded shortly.

\* Refer to ASX announcement 9 July 2018



## Phase 2 Trial Mining – Key Parameters

- Tonnage to be mined : 8,000 tonnes - hard rock.
- Hard Rock Pits – Cobra North, Discovery.
- Processing: On site, crushing, washing and XRF/optical sorting.
- Projected recovered volume: +250,000 carats.
- Projected all up operating costs: <US\$2/ct.
- ✓ Crush size determined.
- ✓ Plant designed.
- ✓ Crusher, washing plant and sorter budgeted \$750,000 (2,000 tonne/month)



Excavation of waste dump



Excavated waste dumps stockpiled for processing





## Phase 2 Trial Mining – Planned Timetable

### November 2018

- Select and purchase/lease sorting option
- Purchase refurbished cone crusher
- Fabricate/refurbish washing plant

### February 2019

- Commission plant and sorter
- Mine 8,000 tonne
- Commence treating 2,000 tonne per month

### June 2019

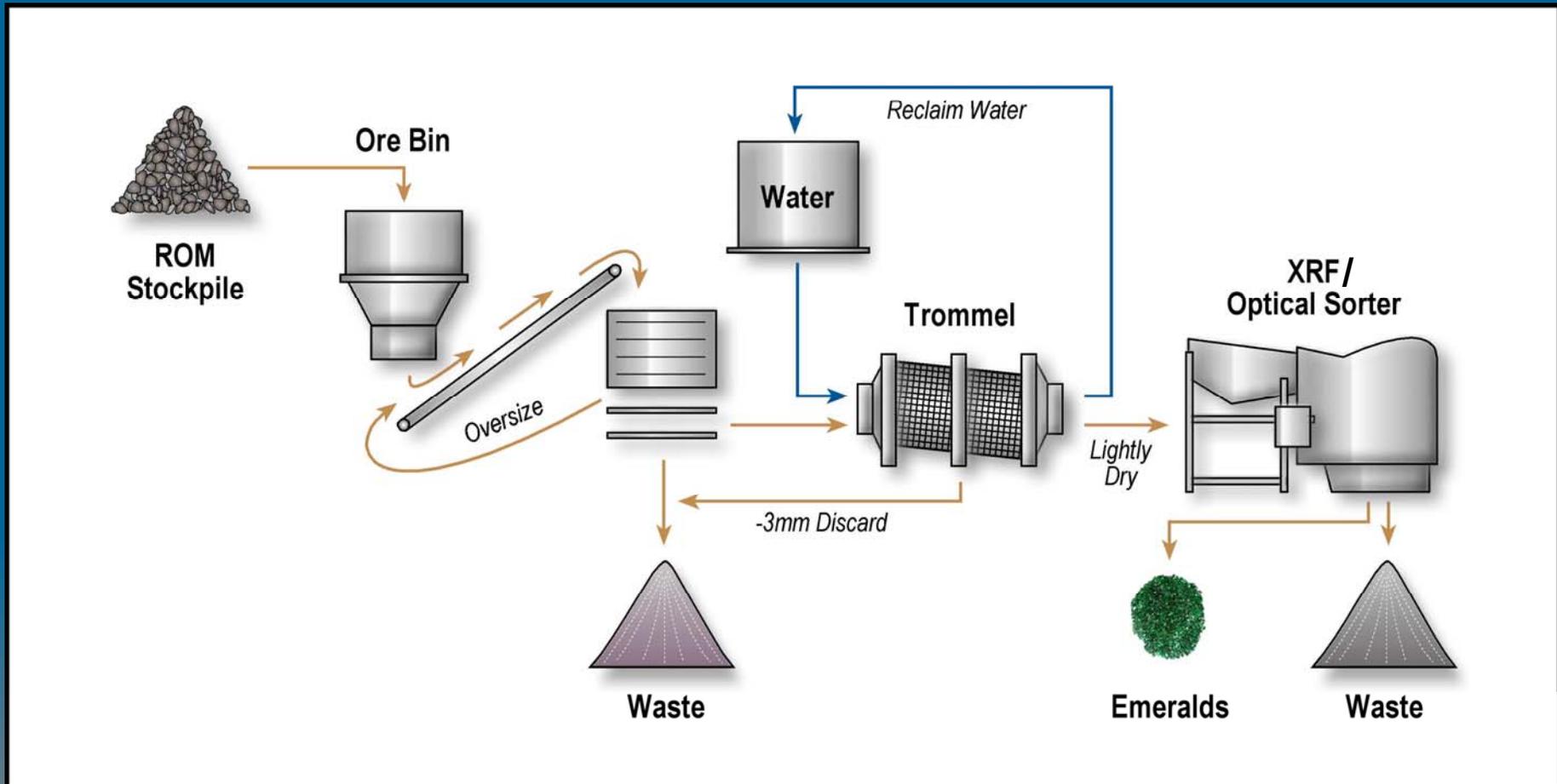
- Completion of processing 8,000 tonne
- Cleaning, sorting grading of emeralds commences

### August/September 2019

- Marketing of emeralds
- Auction of emeralds



# Phase 2 Trial Mining – Processing Flowsheet





# Advanced Development Potential

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



Schist host with emeralds



41.5 carat emerald



Partially cleaned emeralds ranging from 3.5 to 41.5 carats in weight and 5-25mm in size



## Extensive Infrastructure

- ✓ 55km from Phalaborwa and the Kruger National Park.
- ✓ Serviced by ESCOM grid power.
- ✓ Major sealed road to mine gate.
- ✓ Guest house, 17 x 3 bedroom houses, club house, and amenities.
- ✓ Mine offices, laboratory, admin offices and clinic.
- ✓ Workshop and garages.
- ✓ Mine hostel that can accommodate 350 mine workers.





## Gravelotte Summary

- ✓ Historic mining area
- ✓ Geology well known and understood
- ✓ Hard rock as well as tailings resource potential once economic values have been established
- ✓ Cobra branded emeralds well known in market place
- ✓ Existing infrastructure
- ✓ Granted Mining Licence and permits
- ✓ Simple pathway to commercial operations
- ✓ Reduced capex compared to green fields development
- ✓ Attractive economics
- ✓ In demand commodity
- ✓ South Africa open again for mining



## Issued Capital and Company Directors

- No. of Shares on Issue: 279,578,818
- No. of Unlisted Options: 9,000,000

### Directors:

Howard Dawson – *Non-Executive Chairman*

Grant Button – *Chief Executive Officer*

Francesco Cannavo – *Non-Executive Director*



# Magnum Summary

- Phase 2 Trial Mining to commence in early 2019.
- Near term production opportunities.
- Tight company structure.
- Parcel of emeralds to be produced will provide feedback on demand and value of emeralds.

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