Update on the Phase 1 Trial Mining Campaign at Gravelotte

Phase 1 campaign delivers over 11,700 carats of emeralds to date, with test work results to assist with proposed re-establishment of commercial mining operations

Photo 1: Partially cleaned emeralds ranging from 3.5 to 41.5 carats in weight and 5-25mm is size

HIGHLIGHTS

- **Phase 1 of Trial Mining campaign at Gravelotte Emerald Project, South Africa, delivers to date:**
  - **11,774.8 carats of emeralds recovered from the treatment of 256 tonnes of dump material**
  - **Average recovered grade of 46 carats per tonne**
- **Conceptual plant design completed and being evaluated**
- **Investigation of optical sorting solutions underway with ongoing test work**

Magnum Mining Limited (ASX: MGU) is pleased to provide an update on its trial mining operation at the Gravelotte Emerald Project in South Africa, where the Company is targeting the re-establishment of commercial mining operations.

In late February, Magnum commenced Phase 1 of a trial mining programme which was to mine and crush 2,112 tonnes of material sourced from four historic low grade and waste rock dumps ("dumps") onsite.

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Phase 1 of the trial mining programme was designed to provide critical data for the design of a trial mining processing plant which would then lead to the potential re-establishment of commercial mining operations at Gravelotte.

The key objectives of phase 1 of the trial mining operation were therefore:

- Recover a sample of emeralds of a sufficient quantity to enable a commercial appraisal and valuation of Gravelotte emeralds to be made.
- Determine the optimum crushing methodologies to maximise the liberation of emeralds from the host rock, whilst minimising damage to the emeralds.
- Determine the optimum ore processing plant design to maximise recoveries of emeralds.
- Assess the relative viability of traditional hand sorting methods versus modern optical sorting alternatives for the recovery of emeralds from the processed ore.

Based on the results of the Phase 1 programme, the Company has made significant progress on assessing each of these key objectives, and to allow a final costing and timetable for the construction of a trial mining processing plant to commence.

Phase 2 of the trial mining programme which will be to treat to treat around 8,000 tonnes of hard rock material will commence once the processing plant has been constructed. A more precise timing will be provided once contracts have been let.

Phase 1 Trial Mining Programme – Results

Dump assessment results

To date, the Phase 1 of the trial mining programme has treated 256.6 tonnes of crushed dump material from four dumps and recovered 11,774.8 carats of emeralds. This is an average recovered grade of 46 carats per tonne.

There is limited grade information available on the various dumps onsite, and the dumps chosen to be mined were selected based on a combination of size, accessibility and being broadly representative of run-of-mine material.

The only available mine records reflect that, in the period from 1977 to 1982, an estimated 50,000t of dump material was processed for an average recovered grade of 12 carats per tonne.

Please note that the average grade in carats is a measure of the quantity of emeralds per tonne but does not necessairily represent the number of carats per tonne that have economic value. Emeralds, in common with other precious stones such as diamonds, rubies and sapphires for example, exhibit a broad range of characteristics peculiar to each stone. As a consequence the value of each stone can vary considerably. As previously reported a prime objective of the trial mining programme is to generate a sufficient parcel of emeralds that will allow the Company to market to a range of buyers to determine a ROM average value per carat for Gravelotte emeralds.

The Company mined 52.2 tonnes from Dump 25 and to date has treated 46.9 tonnes of ore from this dump for a recovery of 9,135.8 carats. This is an average recovery of 194.9 carats per tonne. This is considered to be an abnormally high-grade dump and approximately half of this small dump was mined in the Phase 1 trial mining programme.

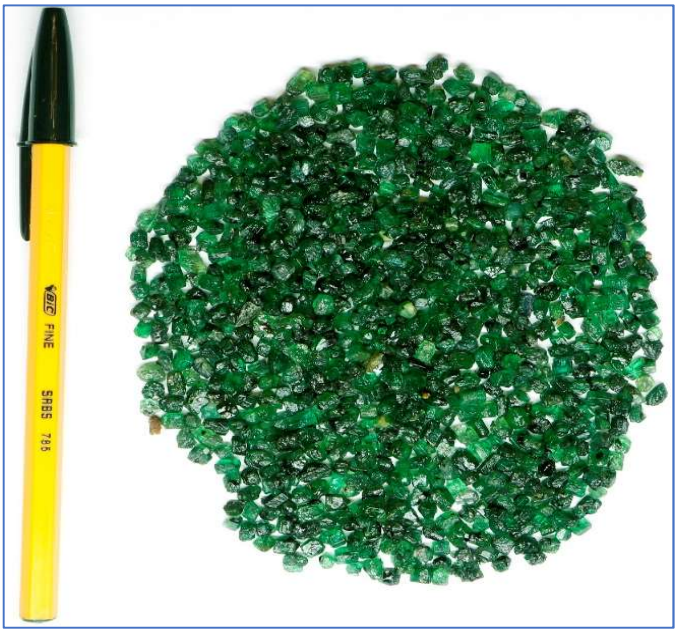

Photo 2: Emeralds 3mm

Photo 3: Emeralds +3mm

Photo 4: Emeralds +4mm

A further 536.1 tonnes were mined from Dump 001, with 38.0 tonnes treated to date and 132.0 carats recovered. This is an average recovery of 3.5 carats per tonne.

At Dump 100, the Company mined 612.0 tonnes, treated 34.1 tonnes and recovered 170.3 carats. This is an average recovery of 5.0 carats per tonne.

At Dump 86, the Company mined 667.4 tonnes, treated 137.6 tonnes and recovered 2336.8 carats. This is an average recovery of 17.0 carats per tonne.

The grade variability between dumps, highlights that a detailed sampling programme will need to be undertaken as a pre-cursor to the commercial exploitation of these dumps.

The Trial Mining Plant will be available onsite to undertake this sampling programme.

Crushing work

Phase 1 of the trial mining programme tested both jaw and SAG crushing to determine the optimum method to maximise liberation of the emeralds, minimise damage to the emeralds, and provide a uniform ore fraction size for efficient recovery of the emeralds.

The ore material from the dumps was stockpiled before crushing using a mobile jaw crushing plant. The crusher's sizing gap was operated at different settings (25mm and 50mm) to test which aperture would produce the better particle size distribution for sorting and recovery.

Both crush sizes reported oversize material and tests have been undertaken to determine if the volume of oversize material can be easily reduced without increasing emerald breakages.

Two studies were consequently completed onsite to simulate a SAG mill process to assess its suitability in achieving this aim. The results are currently being evaluated.

In addition, Magnum has also commenced an onsite small-scale crushing operation to evaluate different crush sizes and methods to re-crush the oversize material. This test work will look at oversize material that has been through the sorting process previously, but which requires a re-crush to see if additional emeralds can be recovered.

The data received from this ongoing test work will be used to finalise the crushing circuit for the trial plant.

Hand Sorting

The Company has trained eight employees to recover emeralds by hand washing and sorting the crushed material. The Company originally sorted over sorting tables with 1mm, 2mm and 3mm screens. All sorting tables have now been changed to 3mm screens.

Photo 5: Hand washing and sorting

The change to larger screens on all tables and natural improvement in methodology has led to a steady but slow increase in current daily throughput.

A review of operating performance has shown that hand sorting is significantly slower than anticipated, and our external consultants have recommended the evaluation of an optical sorter for emerald concentration.

Optical Sorting

Optical sorters have a history of use in the emerald industry and it is likely that the use of an optical sorter will significantly increase the efficiency of future operations at Gravelotte.

In this regard, Magnum's external consultants have highlighted the potential for optical sorting to significantly increase the processing rate, security and recovery rate of the recovery circuit, whilst reducing operating costs.

Phase 1 of the trial mining programme has allowed Magnum to provide freshly crushed and processed ore to optical sorter manufacturers for further detailed assessment.

The work has highlighted the need for additional testing to clarify issues around uniformity of particle size, moisture content and washing of material in order to maximise the recovery of both liberated and host rock-attached emeralds.

The optical sorting trials being undertaken will focus on the customisation of the sorter's various parameters to suit the Gravelotte Project requirements. This work is planned for late July, and once completed, the Company will be able to assess the merits of the various alternative optical sorting alternatives available.

Processing Plant design

The current treatment methodology employed on site is for the ore to be washed over a 3mm screen to remove the minus 3mm material and clean up the ore for hand sorting and recovery.

In a positive implication for the potential commercial operation the testing to date indicates that a significant percentage of the crushed ore reports to the minus 3mm fraction which, even when emerald bearing, has little to no commercial value.

This has highlighted the importance of a Trommel to wash the ore to remove the fine material and hence the volume of ore to be sorted which in turn will maximise the utilisation and efficiency of an optical sorter.

The Phase 2 trial mining plant ("Processing Plant") will be designed to recover and re-use all water used in the Trommel washing operation.

The Processing Plant will also require sizing of various ore fractions to accommodate maximum efficiency parameters of the optical sorter.

Assuming a single shift operation on a 5 day week, the Processing Plant is being designed to be able to treat 2,000 tonnes of ROM ("Run of Mine") per month.

This Processing Plant has now been conceptually designed and plant specifications have been completed. The Company is currently assessing the design and specifications to ensure they are appropriate for a trial mining plant. The Company is currently scoping various service providers for indicative pricing and timing.

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