MINE SCHEDULE DELIVERS HIGHER GRADES, LOWER STRIP

Magnum Mining & Exploration (ASX: **MGU**, "**Magnum**" or "the **Company**") has completed a short term mining schedule for its 100% owned Buena Vista Iron Project in Nevada, USA. The purpose was to investigate a short term expedited mine development plan opportunity.

HIGHLIGHTS

- A five year mine schedule has been completed
- The plan delivers 2.5Mt of ore to a beneficiation plant per year
- Ore will support an average annual concentrate production of 800,000t
- Ore grade averages 29.1% Fe over the five years
- Strip ratio averages (W:O) 0.29 over the five years
- Further optimisation is being pursued to make use of a resulting low grade stockpile

A Scoping Study for the Buena Vista Iron Project was based on an annual production rate of 1.6 million tonnes per year (Mt/a) of high grade magnetite concentrate[1]. A fast start-up option is under consideration. The option may deliver earlier cash flows based on accessing higher grade portions of the existing resource[2, 3] As part of that review, a mine schedule has been constructed to enable the production of 800,000t of high grade magnetite concentrate per year. Industry leader SRK Consulting out of Reno, Nevada, USA were contracted to undertake this work.

MINE SCHEDULE PARAMETERS

The mine schedule was developed using the following parameters:

- Supply 5 year's of mill feed at a cutoff grade of 10% Fe
- Pit to access an average 2.5Mt/a of ore
- Maximise ore grade while minimising the strip ratio
- Optimised pit should not sterilise any resource
- Pit slopes are to be conservative at 43° in the absence of sufficient geotechnical data

[1] ASX:MGU "Positive Scoping Study Validates Buena Vista Iron Project", 14 August, 2023.
[2] ASX:MGU "Maiden JORC 2012 Resource for Buena Vista Magnetite Project", 23 March, 2021.
[3] The Company confirms that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

Magnum Mining & Exploration Ltd
ABN: 70 003 170 376
311-313 Hay Street, Subiaco WA 6008
Tel: 08 6489 0699
Email: info@mmel.com.au
Web: www.mmel.com.au

PIT OPTIMISATION DELIVERS HIGHER GRADE AT LOW STRIP RATIO

To find a balance between highest grade and lowest strip ratio, SRK generated a series of nested pit shells using the pseudoflow algorithm with simplified economic inputs. To generate the shells, the price input was slowly increased and larger and larger shells were produced. SRK evaluated these shells against both the internal cutoff for that shell (the optimal Strip Ratio for the given inputs) as well as a flat 10% cutoff.

The resulting optimised Pit 2 is shown in Figure 1.

A starter pit was added (Pit 1) to the optimised Pit 2 to allow higher grade material to be extracted earlier in the schedule. The two pit phase solids were divided into benches and loaded into Hexagon's MinePlan Schedule Optimizer™. A monthly mine plan was generated based on bench material quantities. Linear optimization was utilised to balance ore and waste while shifting grade forward in the schedule as much as possible while maintaining a practical mining sequence.

Only iron grade was considered in the optimisation and schedule construction.

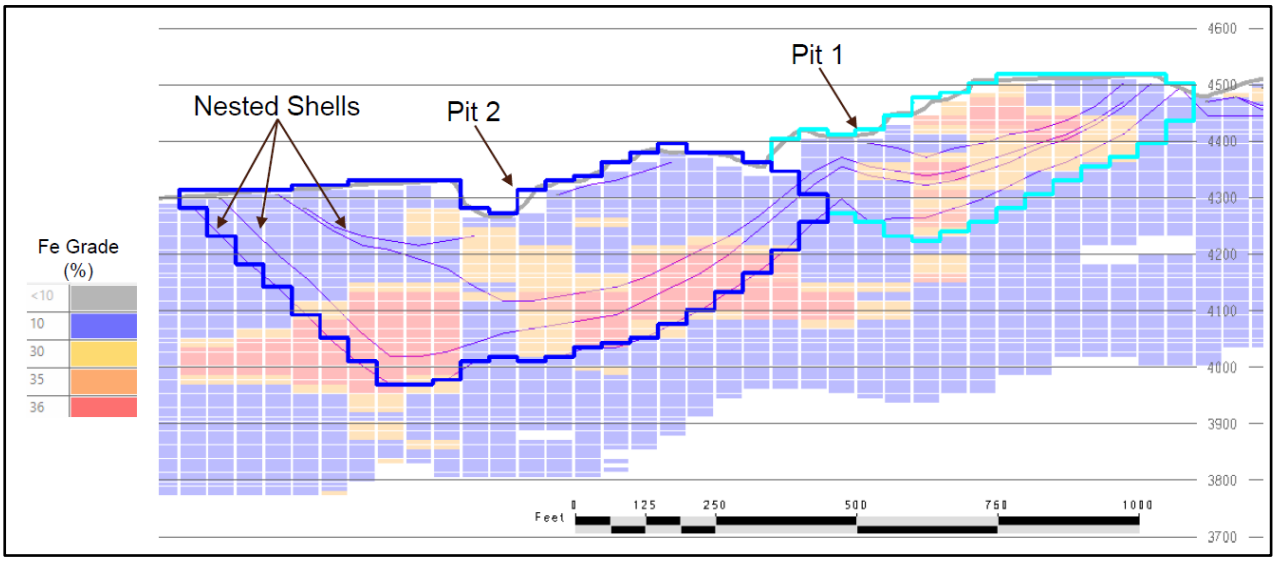

Figure 2 Optimised pit shell vs resource modelled grade. Note that linear units are in feet (1 foot = 0.3048m).

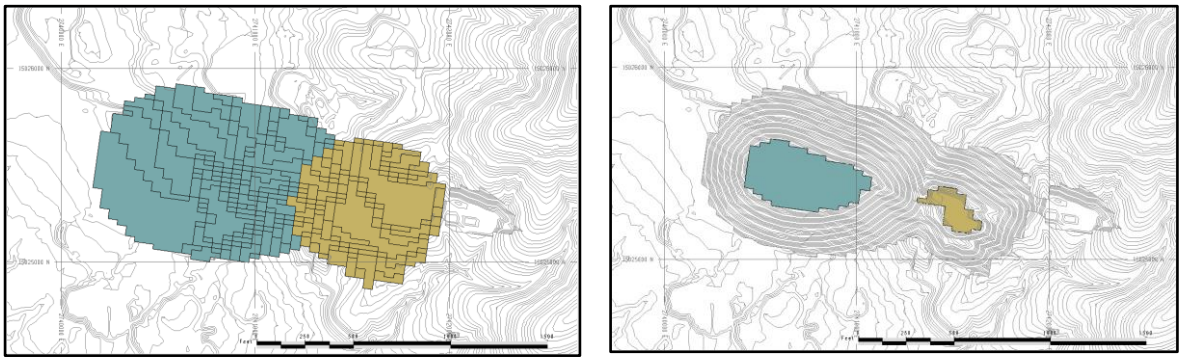

Figure 1 Comparison between the plan views of the Year 0 pit outline (left) and end of Year 5 operations (right).

HIGH GRADE LOW STRIP RATIO ORE

The resulting optimised pit schedule delivers grades between 25.3 and 37.1% Fe with an average over the life of the pit at 29.1% Fe.

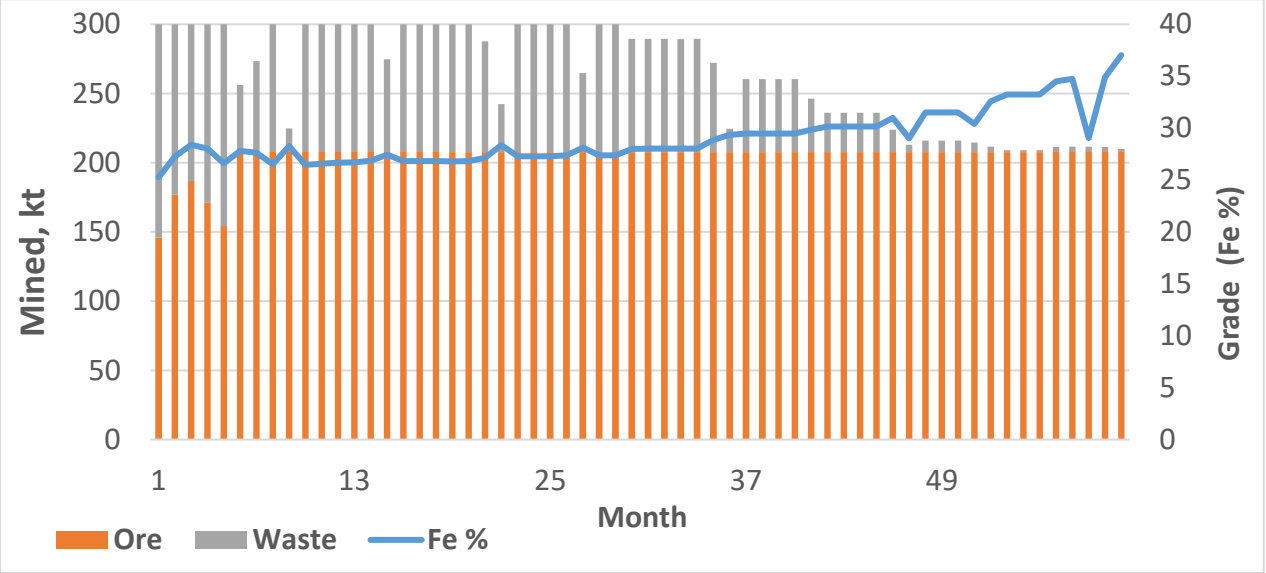

Figure 3 Ore, waste, and grade profile of the five year schedule.

The Strip Ratio (waste:ore) is highest in the first year, at 1.06, and decrease to 0.01 in the last few months (Figure 4).

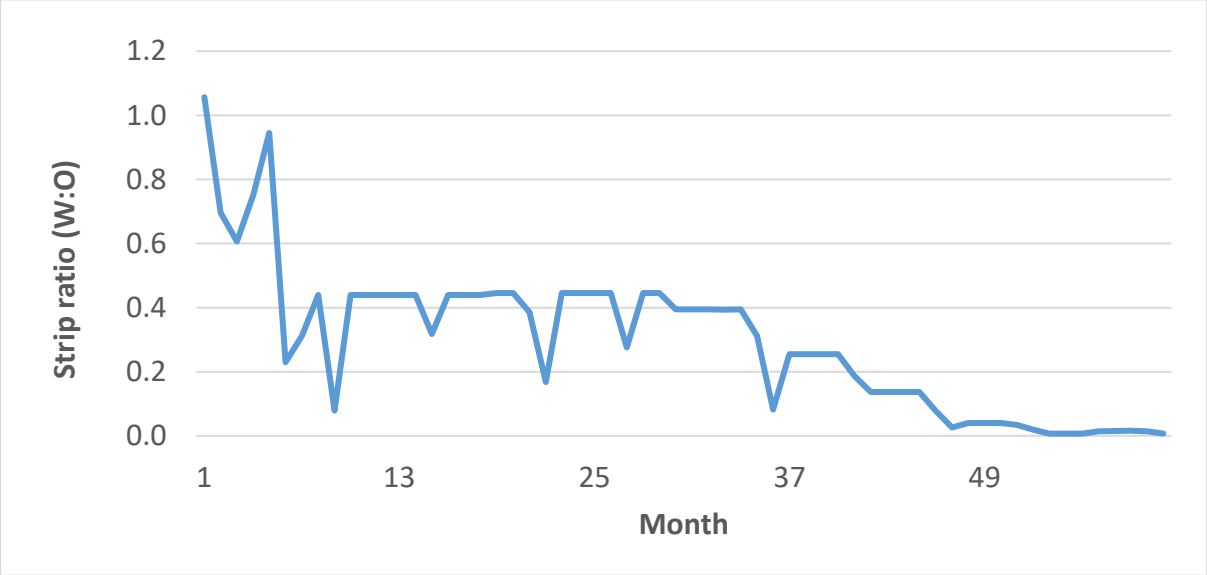

Figure 4 Five year strip ratio profile: Waste:Ore.

Due to the aim to deliver the highest grades possible, a total of 3.53Mt of waste at a grade of 12.4% Fe is produced over the five year schedule.

CAUTIONARY NOTES ON THE IMPLIED PRODUCTION TARGET

The mine schedule is based on 100% Indicated Resources as outlined in announced in a Mineral Resource Estimate[4]. No Inferred Resources are used. The Company confirms that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

Mineral Resources underpinning the implied production target have been prepared by a competent person in accordance with the requirements of the JORC Code (2012).

Pit optimisation is based on pricing and costing parameters used in the Scoping Study[5] The production target in that announcement continue to apply and have not materially changed.

No forecast financial information is derived from the mine scheduling presented here.

FURTHER WORK

Investigations are underway to determine the impact of feeding ore from the resulting low grade stockpile into the mill during periods of high grade ore production. The aim will be to smooth out ore feed grade to improve the mill's performance.

[4] ASX:MGU "Maiden JORC 2012 Resource for Buena Vista Magnetite Project", 23 March, 2021.
[5] ASX:MGU "Positive Scoping Study Validates Buena Vista Iron Project", 14 August, 2023.

THE BUENA VISTA IRON DEPOSIT

Buena Vista Iron Deposit is located approximately 160km east-north-east of Reno in the mining friendly state of Nevada, United States. It was discovered in the late 1890s and in the late 1950s to early 1960s around 900,000 tonnes of direct shipping magnetite ore with an estimated grade of 58% Fe was mined.

In the 1960s, US Steel Corporation acquired the Buena Vista Project and carried out extensive exploration including 230 diamond drill holes and considerable metallurgical test work. Richmond Mining Limited, an ASX listed company, acquired Buena Vista in 2009 and commenced a detailed exploration program culminating in a Feasibility Study (2012). A key component of the FS was an investigation of the optimal logistics plan for the deposit's development. This included the negotiation of in-principle agreements with existing rail and port operators and the securing of all major mining permits. Detailed costings were completed on the trucking or slurry pipeline options to deliver the concentrate to the rail head located some 50 kilometres from mine site. A significant decline in iron ore prices to less than US$50/ tonne caused the then proposed development of Buena Vista to be deferred.

Geology

The Buena Vista Project magnetite deposits are the product of late-stage alteration of a local intrusive gabbro that resulted in intense scapolitisation and the deposition of magnetite. The most well-known example of this type of magnetite mineralisation is the Kiruna magnetite deposit in Sweden, which has been in production since the early 1900s.

The distribution of the magnetite mineralisation is a function of faulting and fracturing, forming a series of open fractures and breccia zones. These ground conditions produce variations in mineralisation types from massive pods grading +60% magnetite to lighter disseminations grading 10-20% magnetite.

Metasomatic magnetite deposits such as those at Buena Vista have important positive beneficiation characteristics over the other main type of magnetite deposit which is a banded iron hosted magnetite, also known as a taconite.

The Buena Vista ore is coarser grained and softer than banded iron hosted ores. Standard crushing, grinding and magnetic separation produces a concentrate grade of +67.5% Fe with very low levels of impurities.

Resource

The Mineral Resource Estimate (JORC(2012)) is[6]:

Category	Million Tonnes	Fe %	DTR %
Indicated Resource	151	19	23.2
Inferred Resource	81	18	22
Total Resource	232	18.6	22.6

The Company confirms that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

An Exploration Target Estimate was calculated from 3D inversion of high resolution magnetic data, the magnetite mineralisation being closely mapped by the magnetic method[7]:

Category	Million Tonnes	Fe %
Exploration Target	407 to 540	15 to 22

The potential quantity and grade of the Exploration Target is conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

This Exploration Target represents a long term opportunity and will be tested by drilling once the proposed Buena Vista Mine completes 10 to 15 years' mining of its 20 year Life of Mine plan.

Development

Mining permits are in place to develop the Buena Vista Iron Mine. The Company has re-aligned the project from a simple mining, concentration and exporting model to a proposed green pig iron producer. Using cutting edge technology in tandem with biochar sources, the Company aims to capitalise on a first-mover advantage to supply green pig iron to the USA steel industry.

[6] ASX:MGU – 'Maiden JORC 2012 Resource for Buena Vista Magnetite Project', 23 March 2021.

[7] ASX:MGU – 'Significant Exploration Target Defined', 13 January 2023.

CAUTIONARY STATEMENTS

FORWARD LOOKING STATEMENTS

This release contains "forward-looking information" that is based on the Company's expectations, estimates and projections as of the date on which the statements were made. This forward-looking information includes, among other things, statements with respect to studies, the Company's business strategy, plan, development, objectives, performance, outlook, growth, cash flow, projections, targets and expectations. Generally, this forward-looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'likely',' believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. Persons reading this news release are cautioned that such statements are only predictions, and that the Company's actual future results or performance may be materially different. Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the Company's actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking information.

Forward-looking information is developed based on assumptions about such risks, uncertainties and other factors set out herein, including but not limited to general business, economic, competitive, political and social uncertainties; the actual results of current development activities; conclusions of economic evaluations; changes in project parameters as plans continue to be refined; future prices of metals; failure of plant, equipment or processes to operate as anticipated; accident, labour disputes and other risks of the mining industry; and delays in obtaining governmental approvals or financing or in the completion of development or construction activities. This list is not exhaustive of the factors that may affect our forward-looking information. These and other factors should be considered carefully, and readers should not place undue reliance on such forward-looking information.

Neither the Company, nor any other person, gives any representation, warranty, assurance or guarantee that the occurrence of the events expressed or implied in any forward-looking statement will actually occur. Except as required by law, and only to the extent so required, none of the Company, its subsidiaries or its or their directors, officers, employees, advisors or agents or any other person shall in any way be liable to any person or body for any loss, claim, demand, damages, costs or expenses of whatever nature arising in any way out of, or in connection with, the information contained in this document. The Company disclaims any intent or obligations to or revise any forward-looking statements whether as a result of new information, estimates, or options, future events or results or otherwise, unless required to do so by law.

COMPETENT PERSONS STATEMENT – RESOURCE ESTIMATION

The information in this report that relates to Mineral Resources is based on information compiled by Mr Jonathon Abbott, a Competent Person who is a Member of the Australian Institute of Geoscientists and a full time employee of MPR Geological Consultants Pty Ltd. Mr Abbott has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the "Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves". Mr Abbott consents to the inclusion of the matters outlined in Appendix A in the form and context in which it appears.

The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified.

COMPETENT PERSONS STATEMENT – EXPLORATION TARGET ESTIMATION

The information in this report that relates to an Exploration Target is based on information compiled by Mr Marcus Flis, a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy and a

full time employee of Rountree Pty Ltd. Mr Flis has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the "Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves". Mr Flis consents to the inclusion of the matters outlined in Appendix A in the form and context in which it appears.

BY ORDER OF THE BOARD

Luke Martino
Company Secretary
Email: info@mmel.com.au
Phone: +61 403 635 555

Evan Smith
Investor Relations
evan.smith@advisir.com.au
Phone: +61 431 176 607