



## BUENA VISTA IRON PROJECT PROGRESSING ON MULTIPLE FRONTS

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### HIGHLIGHTS

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- Road trip to North America to progress possible listing, financing, and partner engagement
  - Access agreements for port, rail, and roads crystallising for Buena Vista's fast tracking to production
  - Bulk ore sample to be processed to validate flowsheet and provide premium grade product sample
  - Mine site historic stockpiles being evaluated for fast and easy access to already mined ore
  - Optimised mine planning being initiated to deliver high grade feed, decrease payback period, and reduce risk
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Magnum Mining & Exploration (ASX: MGU, "Magnum" or "the Company") is aggressively progressing its 100% owned and controlled Buena Vista Iron Project in Nevada, USA:

### North American Marketing

Messrs Athan Lekkas (Executive Director) and Neil Goodman (CEO) are undertaking a USA road trip, starting in New York. The trip has a number of goals:

- Progress talks with financial institutions and funding parties,
- Formal kick off with legal counsel to commence the process for a North American listing,
- Meetings with Mitsubishi, steel mills and other potential off take partners, and
- Confirm engineering firms for final mine and plant design work.

Major Japanese steel mills will be engaged with on the return trip to gauge potential off take interest from the Japanese market.

### Logistics Negotiations

Discussions and negotiations are advancing for access to port and rail for Buena Vista magnetite concentrates. The Buena Vista Iron Project has multiple port and rail options, placing it in an unique position to engage in competitive tendering. It is rare for a project such as this to have this level of optionality; the Company will be pushing strongly for the best economic and efficient solution for product movement for the project.

Permits are being updated for the use of county roads for heavy haulage to the proposed railway loadout. The County in which the mine exists has expressed enthusiasm for the Project.

### Bulk Sample to Demonstrate Product Quality

The proposed process flow sheet has been recently optimised<sup>1</sup>. A 30t bulk sample from the proposed Initial Mining Area will be taken to confirm the efficacy of the flow sheet. The sample will deliver approximately 7.5t of Direct Reduction Iron grade concentrate. The concentrate will be made available to potential customers, including Mitsubishi, with which Magnum has an off take Memorandum of Understanding<sup>2</sup>. The processing will be undertaken by industry recognised laboratory, a number of which have engaged with the Company through a tendering process.



### Mine Site Stockpile Evaluation

The Buena Vista mine site has a number of historic stockpiles that were built during US Steel's operation of the mine as a Direct Shipping Ore producer. Ten stockpiles and dumps have been identified. A systematic surface sampling campaign has been completed on three of the high grade stockpiles with assay results now being awaited. The stockpiles will provide the proposed beneficiation plant with easily accessible feed during plant commissioning and initial production at little or no cost.

### Mine Planning

A re-evaluation of the mine schedule is being initiated. The schedule is being optimised to deliver the highest grade iron feeds to the proposed beneficiation plant to ensure a minimum payback period and fast reduction of capital debt. While lowering the grade of the long term resources, the early reduction in capital depreciation will allow those grades to be mined and processed profitably in the future.

*"The Buena Vista iron mine is being progressed rapidly to take advantage of the steel industry's insatiable appetite for low emissions feeds", said Mr Neil Goodman, CEO of Magnum. "Our activities are focussed on rapid development and end-user consultation. The road show to the USA will further those efforts by engaging this market and tapping into the financing opportunities it represents."*

<sup>1</sup> Refer to ASX:MGU "Test Work Confirms +68% Fe High Grade Iron", 10 March, 2023.

<sup>2</sup> Refer to ASX:MGU, "Mitsubishi enters into an offtake MOU with Magnum", 10May, 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 1890's and in the late 1950's to early 1960's around 900,000 tonnes of direct shipping magnetite ore with an estimated grade of 58% Fe was mined.

In the 1960's, US Steel Corporation acquired the Buena Vista Project and carried out an extensive exploration program 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 definitive feasibility study in 2013. A key component of these studies was extensive 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 localised intrusive local gabbro that resulted in intensely scapolitised lithologies 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 1900's.

The distribution and nature of the magnetite mineralisation at Buena Vista is a function of ground preparation by 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 of magmatic origin and as a consequence is coarser grained and softer than banded iron hosted ores. Industry 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)) at Buena Vista is<sup>3</sup>:

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.*

Additionally, an Exploration Target Estimate exists<sup>4</sup>:

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.*

### 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.

<sup>3</sup> Refer to ASX:MGU – 'Maiden JORC 2012 Resource for Buena Vista Magnetite Project', 23 March 2021.

<sup>4</sup> Refer to ASX:MGU – 'Significant Exploration Target Defined', 13 January 2023.

## CAUTIONARY STATEMENTS

### COMPETENT PERSON'S 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 this announcement in the form and context in which it appears.

### COMPETENT PERSON'S 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.

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

### NO NEW INFORMATION

The Company confirms that it is not aware of any new information or data that materially affects the information included in this announcement and that all material assumptions and technical parameters underpinning the estimates in the announcement of the 'Maiden JORC Resources for the Buena Vista Magnetite Project' dated 23 March 2021 continue to apply and have not materially changed.

### 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.

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#### **BY ORDER OF THE BOARD**

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