MAGNUM
MINING AND EXPLORATION LIMITED

LITHIUM DISCOVERED AT BUENA VISTA!

HIGHLIGHTS

- Reconnaissance stream sediment geochemistry survey returned anomalous lithium
- Multiple sample sites confirms veracity of lithium anomaly
- Pegmatite and rhyolite-hosted lithium target styles to be investigated
- Iron minerals claims have had no previous multi-commodity exploration undertaken on them
- Opportunity to capitalise on the USA's insatiable lithium demand with prospect close to the world's largest lithium battery factory

Magnum Mining & Exploration (ASX: MGU, OTC: MGUFF) ("Magnum" or "the Company") is delighted to announce that a lithium geochemistry anomaly has been discovered on its Buena Vista Green Pig Iron Project ground in Nevada, USA (Figure 2).

The discovery is the first non-iron mineralisation identified on the property. Mr Neil Goodman noted: "*Magnum's strategy to evaluate the full mineral potential of its holdings at Buena Vista is showing early success. The team is committed to fully assessing this area for any minerals that bring shareholder value*."

During a Board and Executive visit to the site in November 2022, a limited scope stream sediment survey was undertaken over a wide area of the claims Magnum holds. The samples were collected as a first pass assessment to assist in planning a comprehensive multi-commodity testing of the ground. Interpretation of the recently completed high resolution aeromagnetic survey is identifying non-iron targets that may be prospective for precious, rare earth, and base metals. While that interpretation is ongoing the recent site visit afforded an opportunity for early sampling.

Figure 1 Magnum's CEO, Mr Neil Goodman, in the field at Buena Vista with USA based staff.

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It has been noted that past workers have not undertook exploration for commodities other than iron ore in the area. This is in spite of gold and silver, (eg, Coeur Rochester Mine) occurring on the same mountain belt as Buena Vista and within 40 km of the property.

Figure 2 Buena Vista Green Pig Iron Project Location, Nevada, USA

Ten stream sediment samples and three rock chip samples were collected during the field trip. Assays for the stream sediment samples have now been received from ALS Laboratories.

LITHIUM ASSOCIATED WITH DEEP SEATED FAULTS

Sample 2211006 has returned an assay of 74.3ppm Lithium (Figure 3). A second sample, 221009 is also anomalous at 41.1 ppm Li. These are well above the background lithium 13.1 to 24.9 ppm Li which is taken as the local background value.

Both samples are closely associated with major north-west trending faults that bisect the Buena Vista magnetite deposit. The deposit is intruded by a number of dykes and it is speculated that pegmatite dykes also occur in the area. Pegmatite dykes are the dominant source of lithium in Australia but far less common in the USA.

Rhyolites are a more common source of lithium in the western USA. Buena Vista occurs within a volcanic package that includes this lithology, though none has been mapped in the mine area. However, this style will also be explored for.

A summary listing of key geochemical assay results presented in Table 1.

Table 1 Summary of a selected assay results

Element	Min ppm	Max ppm
Au	0.001	0.002
Ag	0.02	0.16
As	7.7	400
Cu	5.8	33.9
Li	13.1	74.3
Ni	21.2	115
P	830	4220
Pb	2.5	22
Sc	3.3	10.8
Y	9.21	20.6
Zn	14	53

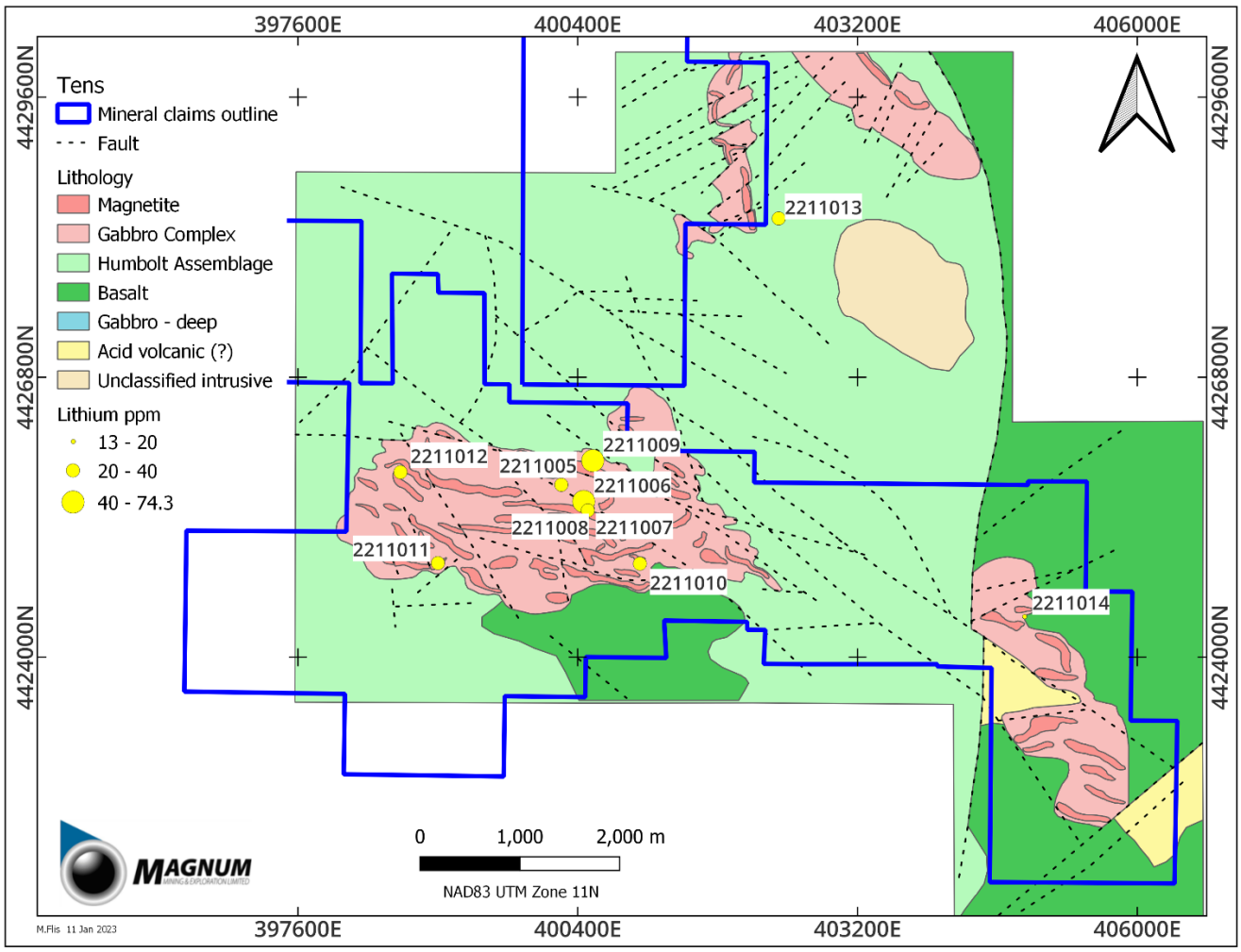

Figure 3 Buena Vista stream sediment results: Lithium. The geological map is interpretative and is preliminary only.

ESCALATING LITHIUM DEMAND ON BUENA VISTA'S DOORSTEP

Figure 4 Tesla's Sparks gigafactory outside Reno, Nevada. This factory is planned to treble in size.

Tesla's giant lithium battery gigafactory in Sparks, Nevada is less than 150km from the Buena Vista area. The Sparks plant is presently only a third of its planned size but already is the single largest producer of lithium cells in the world. It is planned to have raw material processing capacity on site[1].

[1] https://electrek.co/2022/10/03/tesla-expand-gigafactory-nevada/

Figure 5 Inside Tesla's lithium ion battery plant

The USA imports approximately 25% of its lithium demand[2]. In Q1 2022, this amounted to 13,560t. "U.S. battery manufacturing capacity is expected to increase 10-fold between 2021 and 2025."[3] While the majority of this will come from South America, an increasing amount is coming from other countries. Meanwhile, the USA Federal Government is actively encouraging domestic lithium production: "**Biden administration making $3 billion investment in lithium ion battery production"[4],** and has announced incentives for "friend shoring" to encourage supply from, or companies domiciled in countries that have a free trade agreement with the USA. Australia is such a country.

NEXT STEPS

A systematic soil sampling survey is being planned to follow-up these results. In addition, a more extensive stream sediment sampling programme is being put in place to comprehensively test the entire property. This will include testing for precious metals, rare earth elements, and base metals. Positive results may be augmented by geological mapping before testing by drilling. USA based staff will undertake this work during 2023.

COMPETENT PERSONS STATEMENT

The information in this report 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

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[2] https://www.statista.com/statistics/1294043/us-net-import-reliance-on-lithium/
[3] https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/us-lithium-imports-up-69-yoy-in-q1-as-automakers-build-out-ev-battery-capacity-70486646
[4] https://edition.cnn.com/2022/05/02/politics/biden-administration-lithium-batteries/index.html

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 (ASX:MGU 23 March 2021) is:

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.

In addition, an Exploration Target has been estimated (ASX: January, 2023)

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 green pig iron producer. Using cutting edge technology in tandem with biochar sources, the

Company is capitalising on a first-mover advantage to supply green pig iron to the USA steel industry.

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Table 1 - (JORC Code, 2012 Edition)

Section 1 Sampling Techniques and Data

CRITERIA	COMMENTARY
Sampling techniques	• Stream sedimens were collected from dry creek beds and sieved down to -1mm. Approximately 250gm of material was collected at each site. • ALS' AuME-TL44 assaying process for low level gold and multi-element analysis was used with a 50gm sample size • The sample were assayed by ICPMS techniques for the following elements: Au, Ag, Al, As, B, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Ga, Ge, Hf, Hg, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn, Zr
Drilling techniques	• Drilling is not being reported
Drill sample recovery	• Drilling is not being reported
Logging	• Drilling is not being reported
Sub- sampling techniques and sample preparation	• No sub-sampling was done
Quality of assay data and laboratory tests	• The assay method used is designed to measure trace level gold in stream sediments. The technique involves aqua regia digestion of a 50g sample which dissolves both native gold as well as gold bound in sulphide ore minerals. • Quartz flushes were used after every sample • Internal ALS Chemex Laboratory QAQC is routinely done • QAQC samples are monitored on a batch-by-batch basis
Verification of sampling and assaying	• Field note book was used to record primary data in the field. Primary data was then entered digitally and is stored and archived to Magnum's server in Excel format. Data is visually checked and validated prior to import and additional validation is carried out upon entry to the database. • No adjustments or calibrations were made to the assay data..
Location of data points	• Handheld GPS was used to determine sample locations with an accuracy of approximately +/-5m. • Grid Co-ordinate system used is NAD83, UTM Zone 11N. • Original Handheld GPS co-ords are maintained in the database. • This is considered appropriate at this early stage of exploration..
Data spacing and distribution	• Data spacing for samples are varied as samples were taken at creek crossings. • Data spacing is sufficient for this early stage of exploration • No sample compositing has been applied
Orientation of data in relation to geological structure	• Not applicable – the survey is a regional survey
Sample security	• Bagged samples were transported by an independent consultant, sieved in the office and then delivered to the laboratory by consultant geologists
Audits or reviews	• No audits were done.

Section 2 Reporting of Exploration Results

Criteria listed in the preceding section also apply to this section

CRITERIA	COMMENTARY
Mineral tenement and land tenure status	• The project contains mineral rights over 234 separate claims covering an area of 2,457Ha (6,071 acres). Of these 45 are patented mining claims with the balance being either former railroad fee title land or unpatented claims • The 45 patented mining claims covering 777 acres are all secured through lease agreements and have overriding royalties. • The project has surface rights to the Section 5 patented land claim (528 acres). These rights provide for the housing of Buena Vista's proposed production facilities, plant, workshops stockpiles and waste dumps. • All tenements are in good standing. • Relevant tenements to this announcement are T24NR34E Section 4, Section 5, Section 7, Section 8, Section 17, Rover 1832, Albatross 1832, Wyoming 1832, Cactus 1832, NVFe2,3,4,5,6,7,8, Iron Mountain 2MS14880,3MS14880, 6MS14880, 7MS14880, 10MS14880, 12MS14880, 13 MS14880, 14MS14880, 15MS14880
Exploration done by other parties	• The database compiled for resource modelling comprises 218 holes for 36,084 m of drilling. Diamond drilling by Columbia Iron Mines in 1960 provides around 50% of the combined drilling (112 holes for 18,215 m), with 2010 Richmond Mining Pty Ltd diamond drilling contributing 4% (8 holes, 1,415 m), and 2012 Nevada Iron Limited RC and diamond drilling contributing 10% and 36% respectively (19 holes, 3,431 m and 50 holes, 13,024m).
Geology	• Buena Vista magnetite iron mineralisation occurs within scapolite-hornblende-clinopyroxene-calcite-magnetite altered gabbro. Magnetite mineralisation varies from fine disseminations to massive pods up to tens of metres in dimensions, reflecting variable ground preparation of the gabbro. The mineralisation generally dips moderately to the north, striking approximately east-southeast (~098 to 120) for most of the property area, and trending southwest-northeast in the East Deposit area (~070). • The magnetite mineralisation is cross cut by late-stage steep, generally east-west trending dykes ranging in thickness from less than 1m to rarely ~60 m. • The mineralisation generally outcrops, but in the west of the project, including the Section 5 Deposit and western portions of the West Deposit it is overlain by around 3 to rarely 25m of un-mineralised surficial alluvial gravels. • The mineralisation shows no significant oxidation, with fresh material occurring at shallow depths
Drill hole information	• No drill hole results are reported in this announcement.
Data aggregation methods	• No aggregation has been applied.
Relation between mineralisation widths and intercept lengths	• Not applicable.
Diagrams	• See diagrams included in this announcement.

Balanced reporting	• All lithium geochemical results from recent survey are plotted on attached maps.
Other substantive exploration data	• Geological interpretive map is included in the announcement. • Ground magnetic and gravity surveys exist over the area.
Further work	• Future exploration programs are currently under development

Section 3 Estimation and Reporting of Mineral Resources

Criteria listed in the preceding sections also apply to this section

Mineral Resources are not being reported in this announcement.