AEROMAGNETICS HIGHLIGHT MULTIPLE TARGETS

HIGHLIGHTS

- High resolution aeromagnetic survey completed over Buena Vista Green Pig Iron Project claims

- Survey exceeds expectations in clearly identifying exploration targets and structures that may control the magnetite mineralisation

- High potential to expand the existing resource by identification of orebody extensions

- Full interpretation and 3D voxel modeling of the data has commenced

- Exploration drilling programme will be designed to follow up on opportunities

- Data will inform mine layout to ensure no resource is sterilised

Magnum Mining & Exploration (ASX: MGU, "Magnum" or "the Company") advises that the high resolution aeromagnetic survey of its Buena Vista Green Pig Iron Project announced on 5 October, 2022 has been completed and final data delivered to the Company.

The survey covered the majority of Magnum's claims in and around the Buena Vista mine in Nevada, USA (Figure 1).

The Buena Vista iron resource consists of disseminated to massive magnetite that is ideally mapped by the magnetic method.

HIGH RESOLUTION REQUIREMENTS MET

The aeromagnetic survey was undertaken using a helicopter platform. Sensor height achieved an average of 27m above ground level. With a flight line spacing of 50m and close along line data readings this survey is considered high resolution.

Figure 1 - Buena Vista Green Pig Iron Project Location

The data quality promises to greatly assist in the aims for the survey, namely:

- Lithological mapping,
- Structure identification
- Identification of magnetite high grade zones
- Basis for ground sterilisation prior to mine build

Figure 2 - The survey was completed at low altitude to maximise data resolution using a helicopter platform.

SURVEY CONFIRMS AND PRIORITISES TARGETS

The new survey allows the previously identified targets to be prioritised. New areas for expanding the existing resource have been identified. These targets are (Figure 3):

- West Deposit SE Extension
- Section 5 Deposit SE Extension
- East Deposit North Extension
- Iron Point East and West
- BV-D target
- Fisk, Fisk North, and Fisk SE targets
- Ute and Ute West targets
- Section 27 target
- Iron Horse and Iron Horse West

NEW DATA ALLOWS CONSISTENT APPROACH TO ASSESSMENT

With the standardised magnetic coverage of the claims by the new survey, Magnum is able to undertake optimised inversion of the data to a 3D voxel model. This process divides the earth into cubes and a magnetic susceptibility assigned to those cubes to explain the magnetic response observed in the aeromagnetic data. In general, the magnetic susceptibility is directly proportional to the magnetite content of the rock encompassed by the cube, allowing Magnum to predict areas likely to contain possibly economic concentrations of magnetite. The process will be calibrated over areas of drilling and resource estimation.
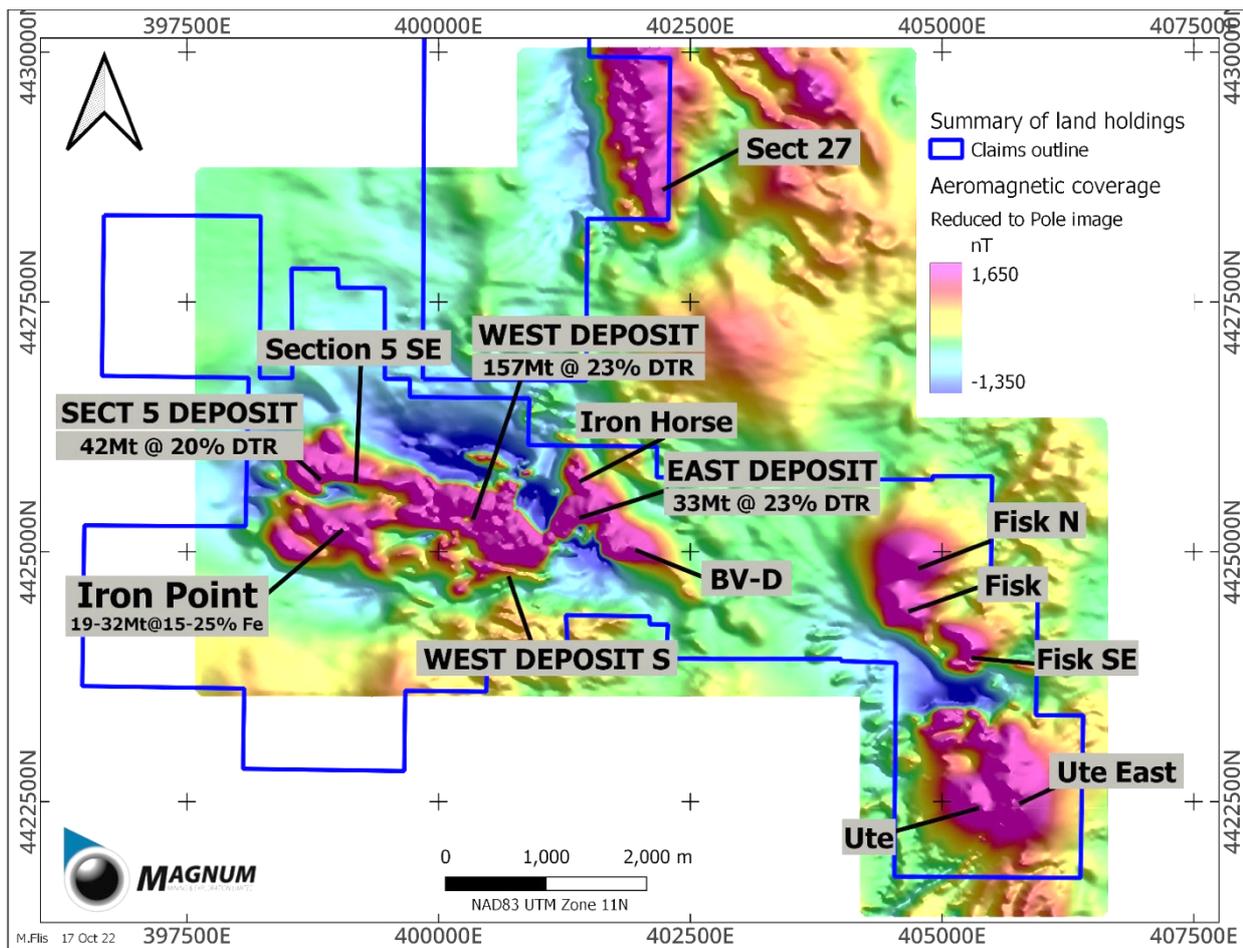

Figure 3 - Buena Vista Green Pig Iron Project: Image of recently collected aeromagnetic data showing resources and exploration prospect locations.

NEXT STEPS

A full interpretation of the data, supported by the 3D voxel inversion, will be undertaken. Area prioritisation will follow with identification of drilling targets. The strategic aim will be to assess and prioritise targets in the Company's land holding in support of the proposed green pig iron project (ASX release 29 August 2022).

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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 current 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 at Iron Point has been estimated (ASX:MGU 2022):

Category	Range Mt	Range Fe %
Exploration Target	19 to 32	15 to 25

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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CAUTIONARY STATEMENTS

In accordance with ASX Listing Rule 5.3.2, the Company advises that no mining development or production activities were conducted during the March 2022 Quarter.

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.

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 – 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

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APPENDIX B

Table 1 - (JORC Code, 2012 Edition)

SECTION 1 – SAMPLING TECHNIQUES AND DATA

CRITERIA	COMMENTARY
Sampling techniques	• Sampling is not being reported
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	• Drilling is not being reported
Quality of assay data and laboratory tests	• A Cesium vapour magnetometer was used with a 20Hz sampling rate. The base station was a Geometrics G856AX proton precession magnetometer. The radiometric data was obtained using a RSI Spectrometer at a 2 Hz sampling rate.
Verification of sampling and assaying	• All data is checked on a daily basis by field staff and consultants. Data falling outside the tolerances of the survey are recollected.
Location of data points	• Data points were located by a KRA405B altimeter. • Locational accuracy is better than 1m. • The grid system is NAD83, UTM Zone 11N.
Data spacing and distribution	• Flight lines are 50m apart. • Magnetics data was collected in 0.05 second intervals and Radiometric data at 0.5 second intervals • No sample compositing has been applied.
Orientation of data in relation to geological structure	• Flight lines are east-west (true north) • Geological strike varies across the survey area with the target lithology, a gabbroic intrusive, having no strike direction
Sample security	• The survey was undertaken by Precision GeoSurveys Inc. of Langley, BC Canada • Survey data was processed by Precision GeoSurveys
Audits or reviews	• No audits or reviews have been carried out. • Data quality will be assessed at the data interpretation stage.

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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 surface rights provide allow the housing of all of the 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 (around 098 to 120) for most of the property area, and trending southwest-northeast in the East Deposit area (around 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 around 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 drill hole results are reported in this announcement.
Relation between mineralisation widths and intercept lengths	• The mineralisation dips to the north or northeast at around 35°, approximately perpendicular to the generally 45° to 60° south to southeasterly inclined drill holes giving true thicknesses of mineralised intersections generally approximating 87% to 97% of intercept down-hole intersection lengths.
Diagrams	• See diagrams included in this announcement.
Balanced reporting	• No drill hole results are reported in this announcement.
Other substantive exploration data	• The large number of Davis Tube Recovery tests available for Columbia's drill hole samples and more comprehensive test-work by Nevada Iron demonstrate the mineralisation is amenable to concentration by simple magnetic processes. • The land holdings in the area of the reported resources is covered by ground magnetometry and gravity surveys.
Further work	• Interpretation and modelling of the magnetic data, by inversion to a 3D voxel model, will be done • Prioritisation of exploration targets will be done following modelling and interpretation • Drilling may be recommended for the highest priority targets

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.

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