MAGNUM MINING AND EXPLORATION LIMITED

DRILLING AND SURFACE SAMPLING CONFIRMS HIGH GRADES

HIGHLIGHTS

- Assays from extensive surface sampling and drilling at Buena Vista have been received
- Outcrops grading up to 67.4% Fe mapped
- Drilling confirms thick zones of magnetite ore not sampled by previous drilling
- First drill holes into Iron Horse Prospect returns high grade intercepts of iron from surface up to 52.5% Fe
- Results to feed into the technical feasibility refresh currently underway

Magnum Mining & Exploration (ASX: MGU, OTC: MGUFF) ("Magnum" or "the Company") is pleased to report on assay results from the recent surface sampling and shallow drilling carried out on its 100% owned Buena Vista Iron Project in Nevada, USA (Figure 2).

As reported previously, a shallow drilling campaign was undertaken on the historic mine site to assess the opportunity for a Direct Shipping Ore operation (ASX:MGU "Drilling Campaign Completed at Buena Vista", 23 May, 2023).

A high grade outcropping magnetite sampling exercise has also been completed (ASX MGU Sampling Maps High Grade at Buena Vista", 5 June, 2023). A total of 32 channel samples for an aggregate 243 feet were collected. In addition, eleven magnetite breccia samples were collected to undertake a broad spectrum analysis to test for an intrusive related volcanogenic mineralised system.

Figure 1 The Buena Vista Iron Project.

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HIGH GRADE MAGNETITE OUTCROPS UNDERPIN LOW STRIPPING RATIO

Massive and disseminated magnetite outcrops are common throughout the Buena Vista mine site (Figure 2). Channel sampling – ie, taking a continuous line of rock chips along an outcrop, was done to determine their bulk grades. The samples were collected across the face of the outcrops and averaged 7.5' (2.3m) in length. Buena Vista is an intrusive related deposit and has no consistent dip and strike. The best iron grade recorded is 66.7% Fe over two feet, while the 43 samples averaged 47.4% Fe.

Figure 2 Massive magnetite outcrops in the wall of the historic Buena Vista pit.

Anomalous lithium had been previously reported in the area (ASX:MGU "Lithium discovered at Buena Vista, 16 January, 2023"). Surface samples were assayed for lithium and Rare Earth Elements to assess the Buena Vista mineralisation style as an IOCG system. The Total Rare Element Oxide assays averaged 124ppm with the highest being 543ppm. Lithium averaging 9ppm with the highest being 91ppm. REE and lithium exploration in the mine area will be discontinued, though Magnum's greater landholding is still to be assessed. Figure 2 displays the iron assays obtained, whilst Table 1 shows the significant results.

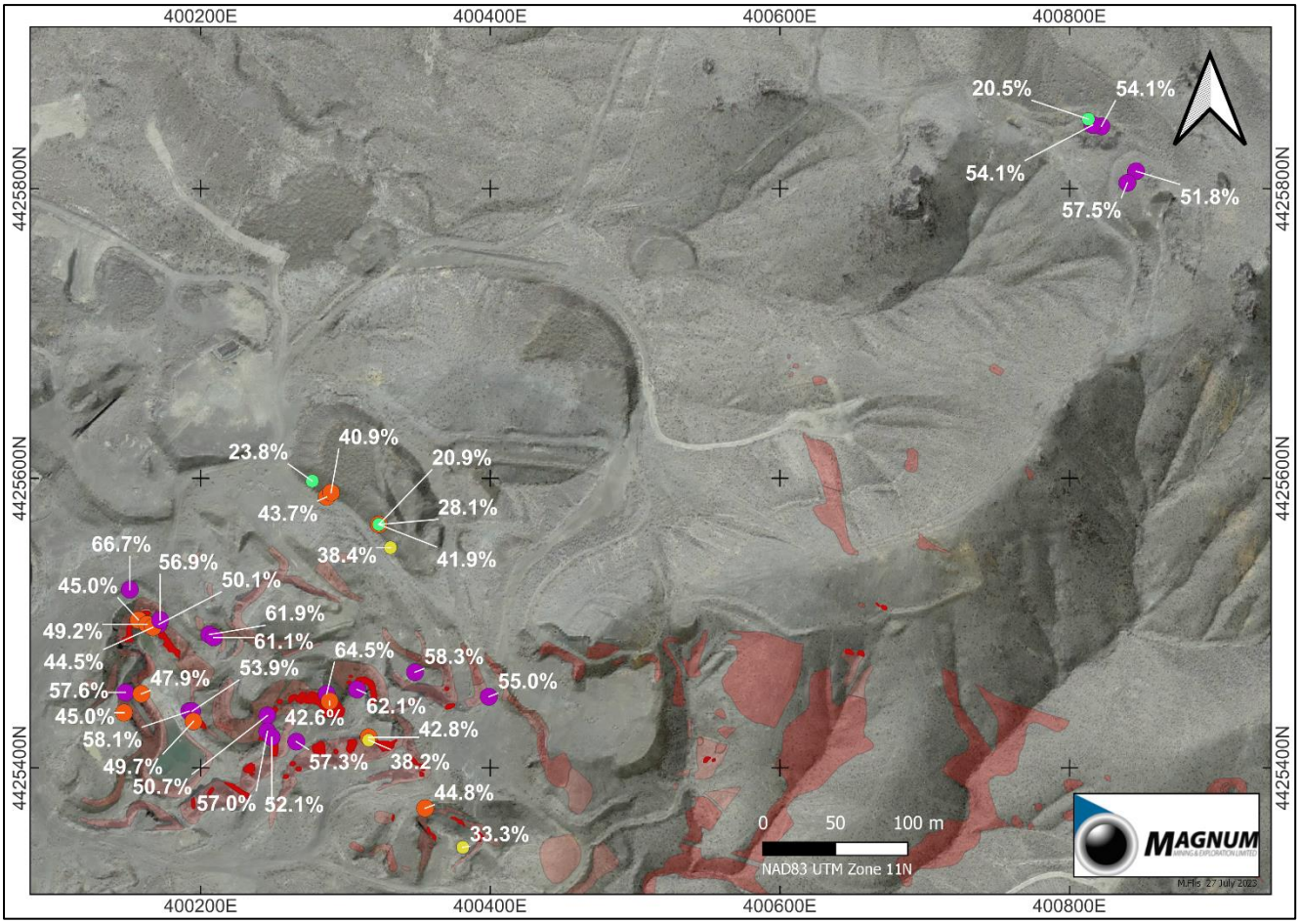

Figure 3 Iron assays from channel and breccia sampling at Buena Vista.

Table 1 Significant assays from the surface sampling at Buena Vista. REEs are expressed as Total Rare Earth Oxides (TREO).

SAM-PLE	Channel length (ft)	Channel length (m)	Fe %	Li ppm	TREO
NF01	**4**	**1.22**	**61.9**	91	18
NF02	**4**	**1.22**	**61.1**	18	48
NF03	**2**	**0.61**	**66.7**	8	9
NF04	6	1.83	45.0	9	170
NF05	5	1.52	49.2	7	55
NF08	8	2.44	56.9	6	28
NF09	5	1.52	58.1	7	70
NF10	4	1.22	53.9	9	186
NF11	5	1.52	49.7	7	173
NF13	5	1.52	54.1	4	67
NF16	10	3.05	57.5	16	257

SAMPLE	Channel length (ft)	Channel length (m)	Fe %	Li ppm	TREO
NF17	12	3.66	57.3	10	292
NF18	12	3.66	50.7	17	433
NF19	12	3.66	57.0	9	244
NF21	**10**	**3.05**	**64.5**	5	11
NF25A	12	3.66	57.6	4	106
NF26	6	1.83	47.9	4	148
NF27	**12**	**3.66**	**62.1**	10	56
NF29	10	3.05	58.3	4	113
NF30	4	1.22	55.0	4	64
SC10	-	-	54.5	4	543
SC11	-	-	**62.9**	3	130

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DRILLING CAMPAIGN CONFIRMS AT SURFACE HIGH GRADE ORES

A total of 14 Reverse Circulation (RC) holes for 2,220' (~677m) were drilled to test the depth extent of outcropping high grade magnetite. This is a shallow drilling campaign to assess these outcrops for easily available DSO ore.

Harris Exploration Drilling were contracted to do the drilling. Collar locations are detailed in Table 2 and shown in Figure 5.

The drilling campaign successfully outlined high grade, near surface ore, with significant results shown Collar shown in Figure 5 and Table 3.

Figure 4 Drill rig on hole IM14A.

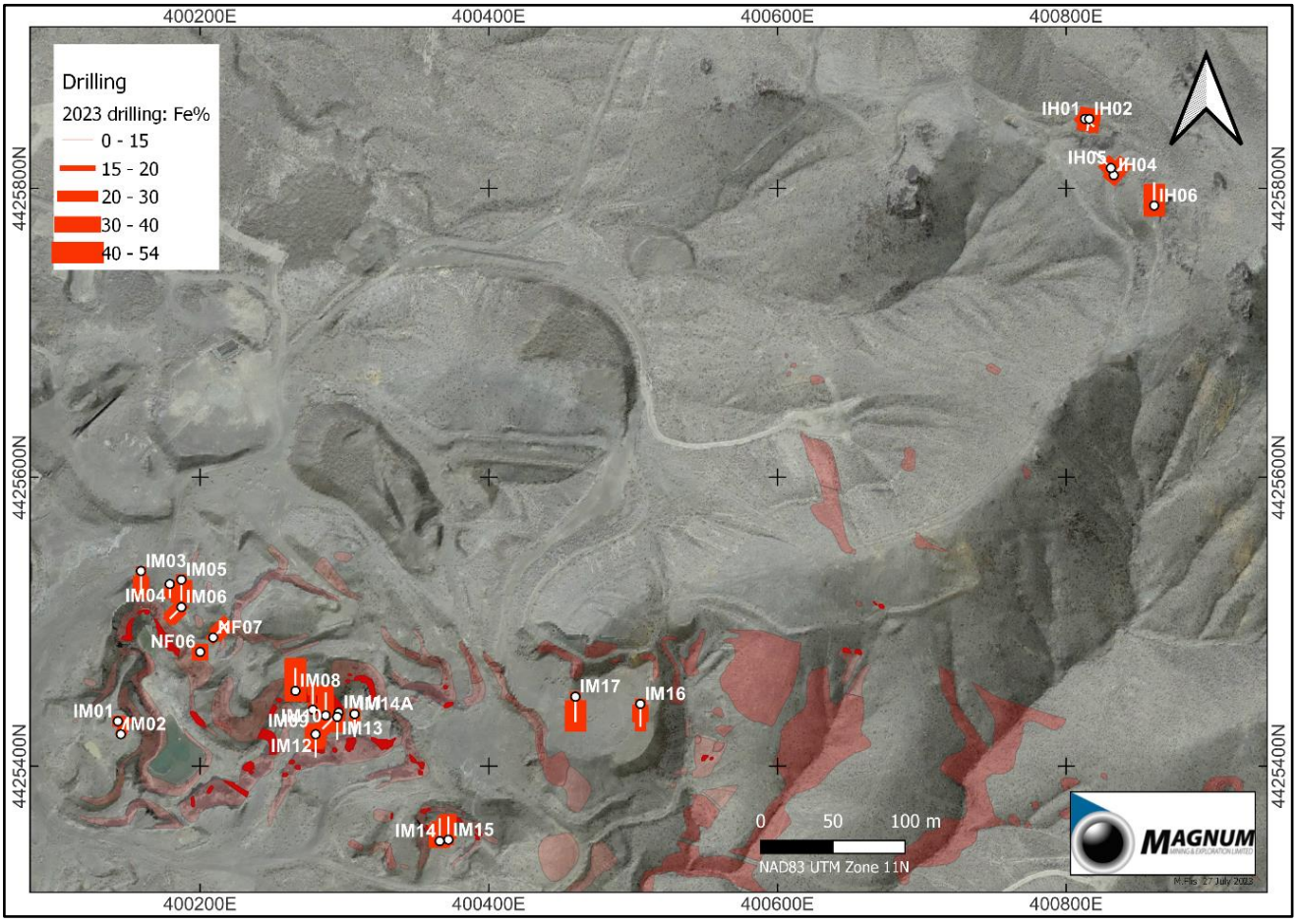

Figure 5 2023 drilling locations and summary of iron intercepts.

The first drill testing of the Iron Horse Prospect, by holes IH01 to IH06, indicates that he surface mineralisation there extends to depth with grades of up to **52.5% Fe** being intercepted. A resource has not been defined for this area yet with more drilling needed to support any mineral resource estimate.

Table 2 Collar statistics from the shallow drilling campaign. Projection is NAD83z11N.

Hole	Prospect	Easting NAD83z11N	Northing NAD83z11N	Azimuth	Dip	Depth (ft)	Depth (m)
IM01	Main Pit	400143	4425431	0	-90	100	30.48
IM02	Main Pit	400145	4425422	20	-70	100	30.48
IM03	Main Pit	400159	4425535	180	-60	100	30.48
IM04	Main Pit	400179	4425526	180	-60	60	18.29
IM05	Main Pit	400187	4425529	180	-60	90	27.43
IM06	Main Pit	400187	4425510	225	-60	70	21.34
IM08	Main Pit	400266	4425452	0	-60	100	30.48
IM09	Main Pit	400278	4425439	0	-60	100	30.48
IM10	Main Pit	400287	4425435	0	-60	100	30.48
IM11	Main Pit	400296	4425437	225	-60	100	30.48
IM12	Main Pit	400280	4425422	180	-60	100	30.48
IM13	Main Pit	400295	4425434	180	-60	100	30.48
IM14	Main Pit	400366	4425348	0	-60	100	30.48
IM14A	Main Pit	400307	4425436	180	-60	100	30.48
IM15	Main Pit	400372	4425349	0	-60	100	30.48
IM16)	Upper Pit	400505	4425443	180	-60	100	30.48
IM17	Upper Pit	400460	4425448	180	-60	110	33.53
IH-01	Iron Horse	400813	4425848	130	-60	50	15.24
IH-02	Iron Horse	400816	4425848	190	-60	50	15.24
IH-04	Iron Horse	400833	4425809	40	-60	100	30.48
IH-05	Iron Horse	400831	4425814	315	-60	100	30.48
IH-06	Iron Horse	400861	4425788	0	-60	100	30.48
NF06	N Main Pit	400200	4425479	0	-90	100	30.48
NF07	N Main Pit	400209	4425489	45	-60	90	27.43

The importance of this drilling can be seen in Figure 6. The current drill hole spacing does not capture much of the near surface mineralisation. The shallow drilling campaign has shown the presence of possibly substantive high grade iron at or near surface.

NEXT STEPS

The Company has embarked technical feasibility refresh to accelerate Buena Vista into production (ASX:MGU 14 July, 2023). This work includes a renewed mining schedule that will access at and near surface high grade ores for near term DRI grade concentrate production. Results from this drilling and the outcomes of sampling the existing stockpiles are to be incorporated into that schedule to maximise grades and recoveries from the proposed beneficiation plant.

An in-fill drilling programme, targeted at supporting the short term mine plan is being developed.

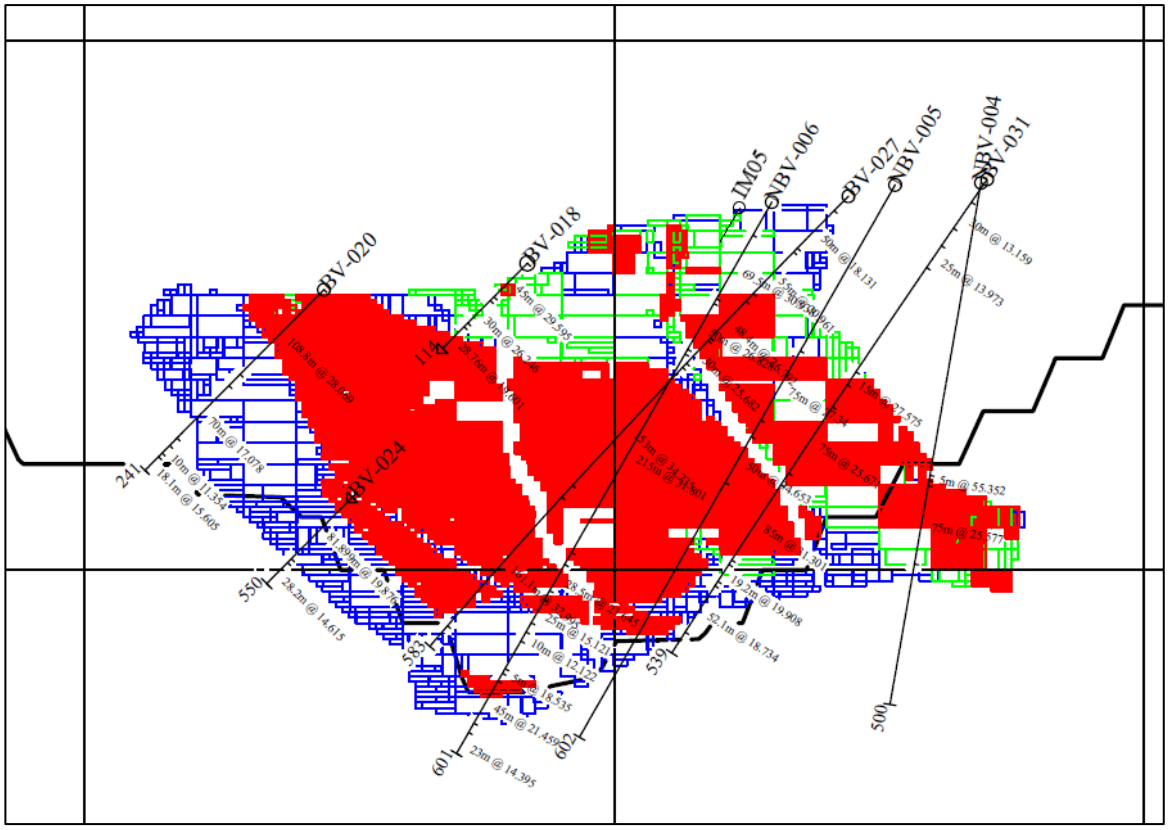

Figure 6 IM05 cross section of the Mineral resource estimate block model. Red areas signify ore grades greater than 30% Fe. Note the absence of those grades around hole IM05 in the original model. IM05 intersected ~6m @ 37.2% Fe. Grid is 500m x 500m. Pit outline is notional only.

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 this announcement and the form and context in which they appear.

Table 3 Notable intercepts from the shallow drilling campaign. Original samples were collected at 5 foot intervals. Iron assays are rounded to one decimal place.

Hole	From (m)	To (m)	Fe %
IH01	0	15	21.2
incl	0	3.05	35.1
IH02	0	3.05	**52.5**
IH04	0	3.05	28.6
and	9.1	15.2	27.2
IH05	0	6.1	26.5
IH06	0	3.05	38.7
and	10.67	18.29	34.3
IM01	0	21.3	21.7
IM02	13.71	15.24	20.5
IM03	12.19	25.9	27.2
IM04	9.14	10.67	28.4
IM05	0	25.91	23.7
incl	13.72	19.81	37.2
IM06	0	21.33	23.2
incl	10.67	21.33	27.3
IM08	0	28.96	37.2
incl	0	12.19	**44.5**
and	22.86	28.96	**47.2**
incl	24.38	27.43	**53.8**
IM10	0	28.96	25.4
incl	10.67	15.24	31.6
incl	22.86	30.48	28.6

Hole	From (m)	To (m)	Fe %
IM11	7.62	19.81	31.9
and	21.34	27.43	25.6
IM12	0	10.67	34.8
incl	0	3.05	39.3
IM13	0	13.72	28.7
IM14	0	12.19	33.9
incl	15.24	19.81	28.7
IM14A	0	3.05	27.7
IM15	0	3.05	20.9
and	9.14	15.24	28
and	19.81	25.91	29
IM16	0	3.05	28.4
and	12.19	15.24	27
and	22.86	30.48	25.4
IM17	0	33.53	27.1
incl	18.23	33.53	38.4
NF06	0	3.05	32.2
and	15.24	30.48	32
NF07	0	22.86	25.5
incl	12.19	22.86	30.1

BY ORDER OF THE BOARD

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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 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.

Table 1 - (JORC Code, 2012 Edition)

Section 1 Sampling Techniques and Data

CRITERIA	COMMENTARY
Sampling techniques	• Reverse Circulation drilling is used to obtain samples at five foot intervals from depths ranging from 50 to 120 feet. • The entire sample is collected and subsampled using a spear. • Sample numbers are a concatenation of hole number and "from" and "to" footage. • In field pXRF data is collected. • The sample are assayed by multi-acid digestion followed by ICPMS analysis for the following elements: Ag Al As Ba Be Bi Ca Cd Ce Co Cr Cs Cu Fe Fe Ga Ge Hf 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 • Outcrop sampling was done by channel sampling. • Channel sampling consists of cutting channels across the face of exposed ore with a geological pick and collecting resulting chips, fragments and dust from each channels to make a composite sample. • The direction of the channel is typically across the width of the outcrop. • Mineralisation at Buena Vista is not stratabound so sampling direction is arbitrary
Drilling techniques	• Reverse Circulation with a 4"face sampling hammer
Drill sample recovery	• Samples were recovered from the RC rig via a cyclone at 5 foot intervals directly into plastic bags and weighed to estimate recoveries • Two subsamples are taken from each interval using a spear • One sample set is collected from site by the assaying laboratory for analysis, the second sample is kept in a secure storage facility on site
Logging	• Geological logging was conducted on five foot samples. • Representative samples are washed and sieved and stored in chip trays • Magnetic susceptibility measurements are carried out through the bulk bags
Sub- sampling techniques and sample preparation	• The RC sample is subsampled using a spear. Multiple spears are taken to ensure sample representativeness. • The samples are weighed, crushed, and ground to -200 mesh by the laboratory • A 7gm subsample is made for the final analysis. • Outcrop sampling is submitted to the laboratory as the whole sample, ie, there is no subsampling.
Quality of assay data and laboratory tests	• The laboratory uses blanks, standards, and repeats to ensure quality control • Referee assaying is being done at a different laboratory • QA/QC is primarily done by 1 in 25 sample repeats • 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 is 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. • Laboratory assays are compared to the in-field pXRF data. • No adjustments or calibrations were made to the assay data.
Location of data points	• Handheld GPS was used to determine sample and drill collar 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	• Drilling was on spot sites and not on a consistent grid. • Outcrop sampling was restricted to high grade magnetite outcrops. • Data spacing is sufficient for this early stage of exploration • No RC sample compositing has been applied. • Channel sampling is a composite sample over the length of the channel.
Orientation of data in relation to geological structure	• Drill holes were aligned orthogonally to a perceived strike direction. • Outcrop channel sampling is done across the width of the outcrop. • The target geology is an intrusive and so has no primary strike • Mineralisation appears to be controlled bu east-west faulting; drilling was generally to the south or to the north.
Sample security	• Bagged drill samples were transported by the independent laboratory personnel and secured at their premises. • Outcrop samples were delivered to the Company's Reno office by the independent consulting geologist and hence to the laboratory by the Company's employee.
Audits or reviews	• An audit will be completed once the referee samples are assayed. • In-field pXRF readings are used to review the laboratory assaying

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, 13MS14880, 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	• Drill collars are put in by, and measured by, hand held GPS to a reproducible accuracy of ±5m. • Hole collar RLs are taken from a recent high accuracy LIDAR DEM survey done by drone of the area. • Location of new drillholes are tabulated in the body of the release. • Co-ordinates, in the NAD83, UTM Zone 11N projection are based on hand held GPS and will be updated when DGPS data priot to any MRE update • Locational data are generally accurate to ±5m (locational) and ±1.5m (RL)
Data aggregation methods	• No aggregation has been applied.
Relation between mineralisation widths and intercept lengths	• Unknown at this time. • All intercepts are reported as downhole depths and may not represent true widths • Mineralisation is intrusive related so has no primary strike and dip.
Diagrams	• See diagrams included in this announcement.
Balanced reporting	• Tabulations of hole and outcrop sampling statistics are shown in the body of the release.
Other substantive exploration data	• Geological interpretive map has been included in previous announcements. • 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.