ASX Release: 13 September, 2022

EXPLORATION TARGET DEFINED, FIELD WORK BEGINS

HIGHLIGHTS

- Exploration Target of **19 to 32 million tonnes at 15 to 25% Fe** defined for the Iron Point Prospect

  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.

- Exploration Target is estimated from historic drilling on the prospect
- Iron Point Prospect defined exploration target is within the proposed Buena Vista Iron Mine development area
- Davis Tube Recovery of the Exploration Target is expected to be similar to the existing resource based on comparable geology and mineralisation style
- Drillhole database updated and audit completed
- Drill programme to commence in support of technical and metallurgical studies
- High resolution aeromagnetic survey due to begin in early September 2022
- Negotiations with neighboring iron assets commence

Magnum Mining & Exploration's (ASX: MGU, "Magnum" or "the Company") is pleased to report the estimation of an Exploration Target at the Iron Point Prospect, a defined prospect within the Buena Vista Green Pig Iron Project in Nevada, USA (Figure 1).

The Company has estimated a Mineral Resource (JORC(2012)) Buena Vista Green Pig Iron Project, announced on 23 March 2021, of:

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.

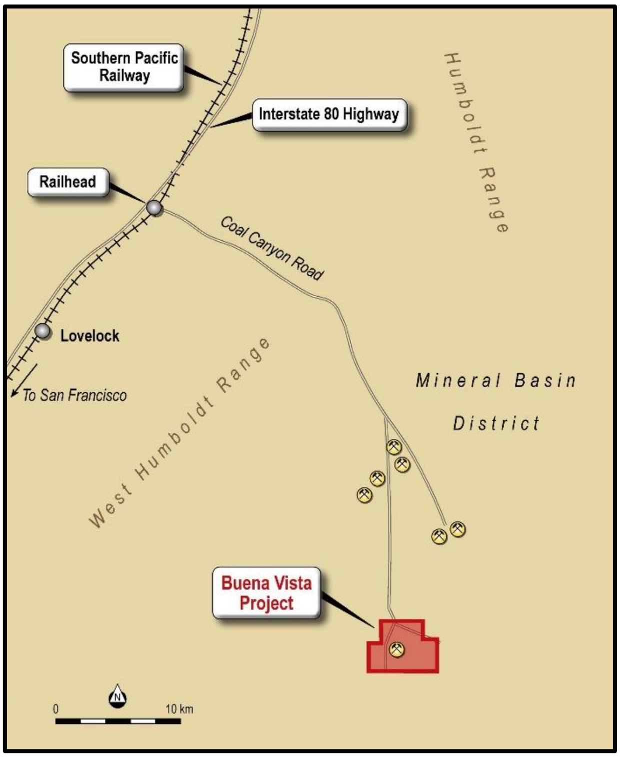

Figure 1: Buena Vista Green Pig Iron Project Location

DRILL HOLE DATABASE AUDIT AND VERIFICATION

Following the estimation of the Mineral Resource at Buena Vista, the Company recognised that a large portion of historic drill hole data had not been captured in its drill hole database. Over 400 historic holes occur within the Company's claims. The quality of the data for those holes varies greatly.

The process of hole compilation and digitisation is ongoing and is expected to be largely completed by the next Quarter.

IRON POINT EXPLORATION TARGET

An early outcome of the exercise has been the identification of an Exploration Target in the Iron Point area, located about 400 metres south of the existing deposits (Figure 2).

The historic nature of the Iron Point drilling and a lack of complete data describing these holes has precluded their use in any Mineral Resources Estimate. However, they are a rich source of information and detail areas where significant additional magnetite mineralisation occurs.

The Iron Point Prospect was drilled in 1977 - 79 by US Steel following up on a 1958 drilling campaign by Southern Pacific. Forty-six holes were drilled for a total of over 5,300m. The method of drilling is unknown, as is hole location accuracy, and sampling methodology. Spot field checks have verified that hole collar locations are reasonable. A tabulation of the hole collars is included as Appendix A while Figure 3 shows the hole distribution with summary of intersected iron grades.

Visibly mineralised magnetite intercepts from these holes were assayed by Satmagan, a method that estimates magnetite content by the sample's magnetic susceptibility. Figure 4 is a histogram of all assays recorded in these holes. This method typically underestimates iron content as the method is not appropriate for oxidized or partially oxidized samples. Geochemical assays were not done and concentrations of other elements are unknown.

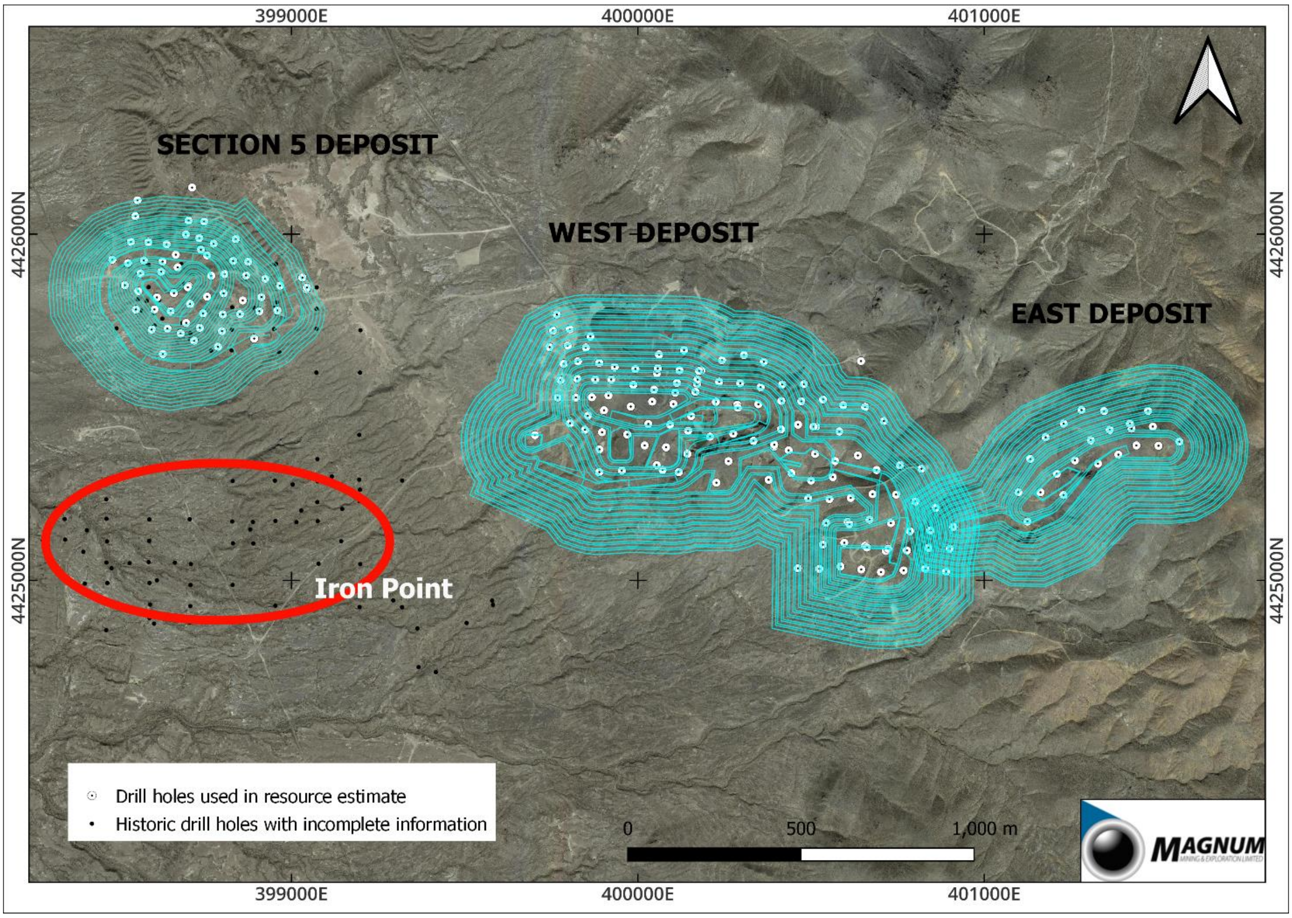

Figure 2: Iron Point Prospect area in the Buena Vista Green Pig Iron Project showing drill holes used in the MRE, other holes, and the proposed and conceptual pit locations and designs.

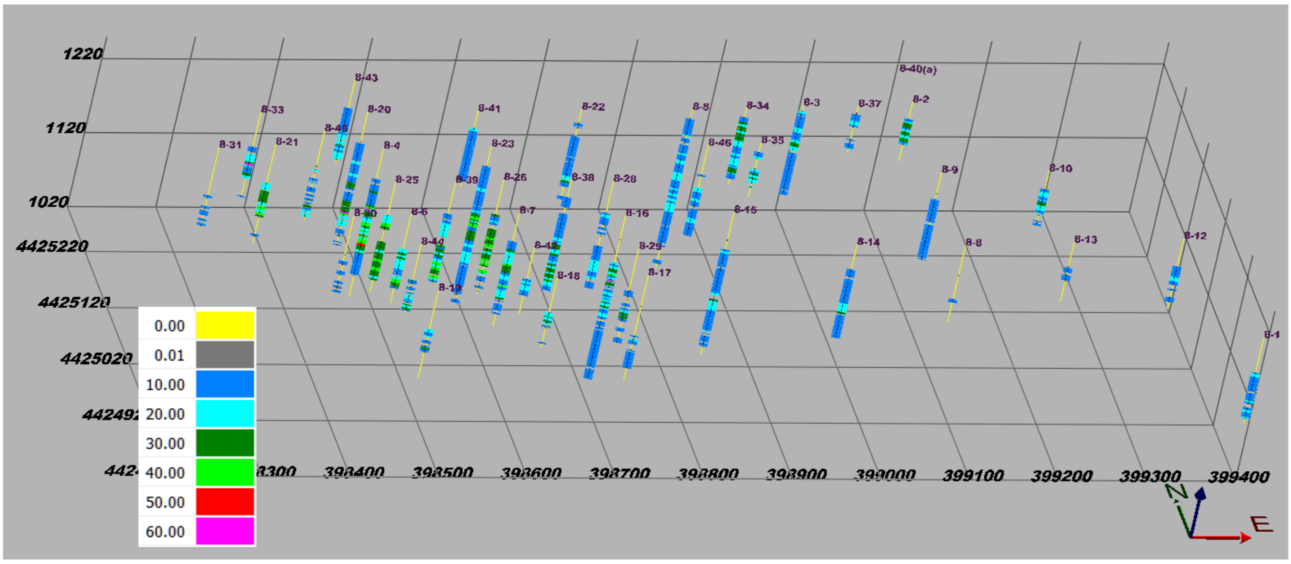

Figure 3: Summary of Iron Point Prospect drilling data used in the Exploration Target estimation. The grid is 100x100m (NAD83 Zone 11N).

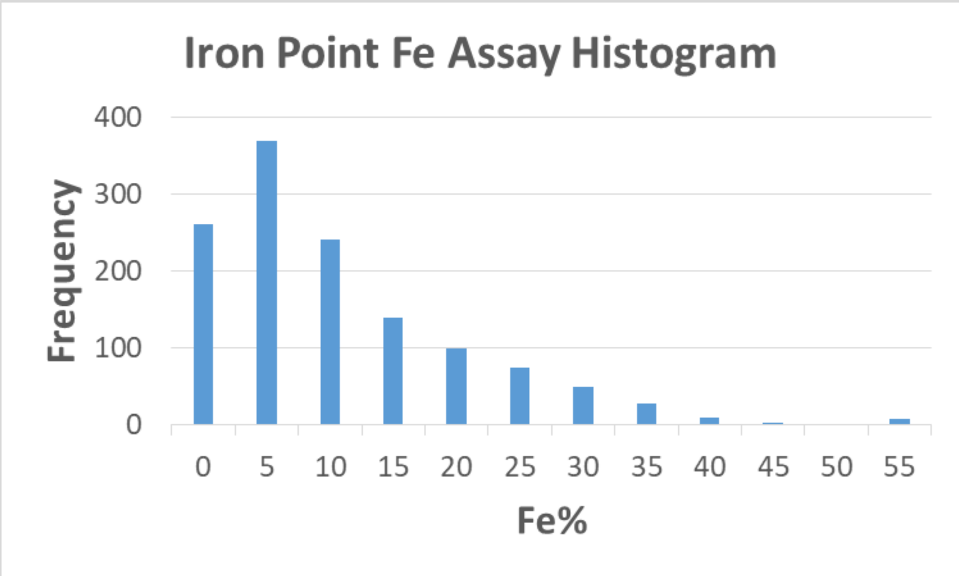

Figure 4: Histogram of iron estimates from historic Iron Point drilling. The estimates were derived from Satmagan measurements.

IRON POINT EXPLORATION TARGET ESTIMATION METHODOLOGY

The lack of essential drilling details means the historic Iron Point drill holes cannot be used in a JORC-compliant Mineral Resource Estimate at this stage. However, these holes' locations, azimuth, and dip, together with the estimation of magnetite content, by Satmagan measurements, provide sufficient evidence to estimate an Exploration Target.

A wireframe shell was created that encompasses the iron grades assuming that only the visibly mineralised lithologies were assayed by Satmagan. This wireframe is shown in Figure 5.

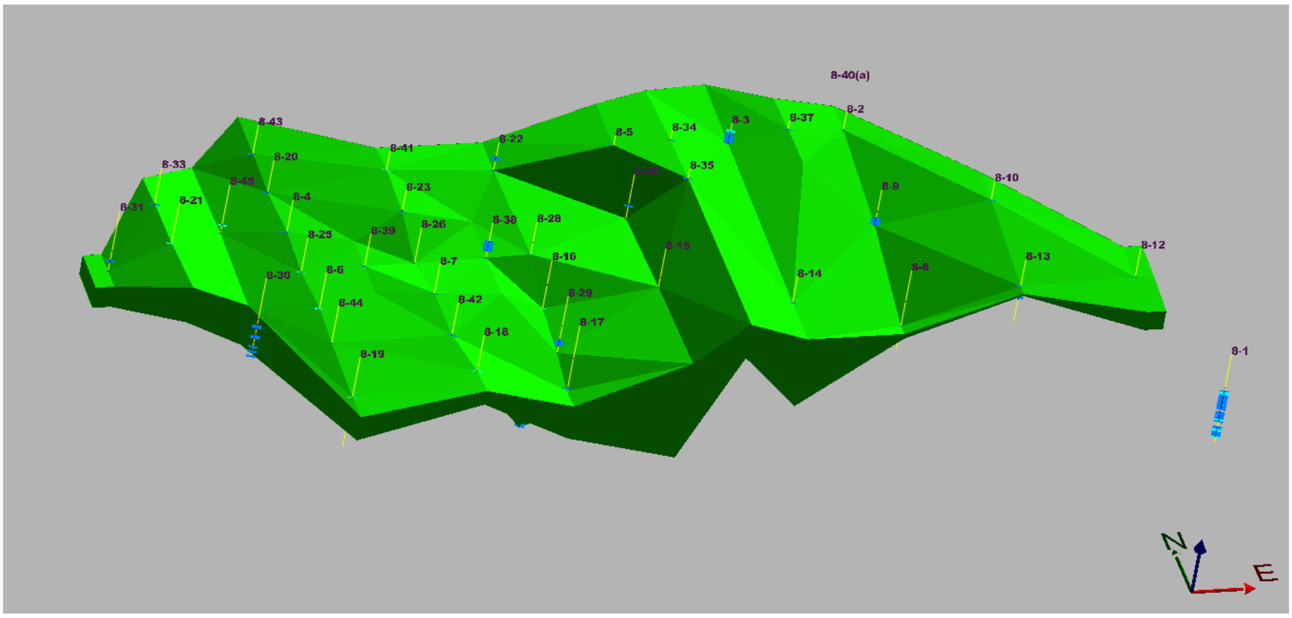

Figure 5: Wireframe encompassing the mineralised holes at Iron Point. Refer to Figure 3 for scale.

An Inverse Distance Squared estimation was applied inside the wireframe shell on a regular 75m x 75m x 2m (vertical) radii search ellipse to estimate the grade blocks.

The volumes of the blocks above 10% Fe, the chosen bottom cutoff, are then summed up to produce a total volume and a density applied to convert that volume to a tonnage. A density of 3.0g/cc is chosen as the density. This is considered conservative as mineralised intercepts from the existing deposits have an average density of 3.17g/cc. An error of +/-25% is then applied to the resulting estimate to arrive at the Exploration Target:

Category	Range Mt	Range Fe%
Exploration Target	**19 to 32**	**15 - 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.

The Exploration Target has been checked with 3D voxel modelling of existing ground magnetic data as an independent check on its veracity. The target is considered to be conservative based on this check and the parameters used in calculating it.

DRILLING CAMPAIGN TO BEGIN IN MID-SEPTEMBER 2022

A Reverse Circulation drilling campaign is planned to start in mid-September. National Drillers, who have drilled on the project in the past, have been contracted to do this work.

The purposes for the drilling are threefold: check critical areas of the Mineral Resource Estimate for grade and continuity, provide evidence for the veracity of historic drilling, and provide additional representative material for metallurgical and technical test work. The campaign is expected to take 7 to 10 days with assaying completed within one month.

HIGH RESOLUTION AEROMAGNETIC SURVEY TO BEGIN

Magnum has commissioned Canadian company Precision GeoSurveys of British Columbia, Canada, to undertake a high-resolution magnetic survey of all of Magnum's land holdings in the Buena Vista Green Pig Iron Project. The survey will be flown by helicopter at as low a flying height as safety permits. The purpose of the survey is to map out all magnetite occurrences to focus exploration in support of the proposed iron mine development.

Notwithstanding inclement weather conditions, the survey is expected to start in early September and be completed in a few days. Delivery of final data is expected by late September/early October.

POTENTIAL TO AMASS A SUBSTANTIAL RESOURCE BASE

A number of privately owned iron deposits occur in the district around Buena Vista. With Magnum's drive to bring the project into production, it is apparent to the owners of those deposits that there is an opportunity to deliver additional ore to the project. Magnum is actively engaging with third parties to maximise the potential of the Buena Vista Green Pig Iron Project.

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.

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.

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 announcement 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.

This document has been authorised for release to the ASX by the Company's Board of Directors.

BY ORDER OF THE BOARD

John Dinan
Company Secretary

13/09/2022
Email: info@mmel.com.au

Magnum Mining & Exploration Limited (ASX: MGU)

Appendix A: Drill hole collars for holes used in the Exploration Target estimation.

Hole	EAST (m) NAD83z11N	NORTH (m) NAD83z11N	RL (m) NAD83z11N	Depth (m)	Azim	Incl
8-1	399367	4424750	1267.1	116.4	0	-90
8-2	399075	4425171	1264.0	79.9	0	-90
8-3	398953	4425172	1258.4	120.7	0	-90
8-4	398467	4425113	1242.0	201.5	0	-90
8-5	398829	4425170	1253.1	212.8	0	-90
8-6	398468	4424993	1243.8	120.1	0	-90
8-7	398590	4424993	1246.3	153.9	0	-90
8-8	399074	4424923	1258.5	104.2	0	-90
8-9	399078	4425048	1262.2	117.7	0	-90
8-10	399198	4425047	1265.8	74.7	0	-90
8-11					0	-90
8-12	399319	4424923	1269.4	94.8	0	-90
8-13	399196	4424924	1263.3	81.1	0	-90
8-14	398953	4424927	1255.8	125.9	0	-90
8-15	398830	4424987	1253.0	191.7	0	-90
8-16	398708	4424987	1248.1	221.6	0	-90
8-17	398707	4424879	1249.3	142.0	0	-90
8-18	398603	4424875	1247.4	93.3	0	-90
8-19	398465	4424857	1244.3	118.0	0	-90
8-20	398466	4425178	1241.7	180.7	0	-90
8-21	398347	4425118	1242.8	132.9	0	-90
8-22	398706	4425177	1247.9	121.6	0	-90
8-23	398589	4425114	1244.6	211.2	0	-90
8-24					0	-90
8-25	398466	4425052	1242.4	147.7	0	-90
8-26	398588	4425053	1245.3	154.2	0	-90
8-27					180	-45
8-28	398709	4425047	1248.7	144.5	0	-90
8-29	398708	4424926	1249.6	126.8	0	-90
8-30	398403	4424991	1243.0	103.6	0	-90
8-31	398282	4425116	1240.3	109.1	0	-90
8-32	399579	4424942	1279.8	101.8	0	-90
8-33	398345	4425178	1240.8	114.3	0	-90
8-34	398889	4425169	1256.3	103.6	0	-90
8-35	398890	4425107	1256.6	72.8	0	-90
8-36					0	-90
8-37	399014	4425169	1259.9	62.8	0	-90
8-38	398663	4425052	1247.0	148.9	0	-90
8-39	398533	4425050	1243.9	137.2	0	-90
8-40	399074	4425226	1263.7	95.7	180	-65
8-41	398589	4425177	1245.1	102.1	0	-90
8-42	398591	4424931	1246.1	90.7	0	-90
8-43	398465	4425234	1242.0	111.3	0	-90
8-44	398466	4424940	1244.1	93.0	0	-90
8-45	398409	4425145	1240.7	119.8	0	-90
8-46	398831	4425107	1252.5	121.9	0	-90

Appendix B

Table 1 - (JORC Code, 2012 Edition)

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	• The database compiled for resource modelling comprises 218 holes techniques channels, random chips, or specific 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 limiting the broad meaning of sampling. holes, 13,024m). • Richmond's 2010 drilling generally paired Columbia holes and although it provides useful confirmatory information, does significantly directly alter resource estimates. • Nevada Iron holes were drilled in western portions of the project not tested by earlier drilling. Average spacing for these holes is notably closer than for earlier drilling and they have proportionally less impact on estimated resources than Columbia's drilling. • For the eastern portion of the West Deposit, which hosts the majority of estimated resources, Columbia's drilling provides around 85% of the estimation dataset, with Richmond and Nevada Iron drilling contributing 7% and 8% respectively. • Whole core samples from Columbia's drilling were collected over primary sample intervals ranging from 0.3 to 35.4 foot (0.1 to 10.8 m) and average around 2.7m. Sample intervals honoured geological contacts within longer intervals representing 25 foot (7.6m) vertical benches, or 35.4 feet (10.8m) down-hole for the generally 45o inclined holes. Material from these primary samples were composited over longer intervals representing "Bench Composites" for additional analyses. • Richmond's diamond core was quarter-core sampled over generally 7 foot (2.1 m) down-hole intervals with a masonry saw. • Nevada Iron's diamond core was quarter-core sampled over generally 5 foot (1.5 m) down-hole intervals with a masonry saw. Nevada Iron's RC holes were sampled over 5 foot (1.5 m) down-hole intervals and sub-sampled by riffle splitting. • Primary samples averaging 2.7m in length and generally 10.8m bench composites from Columbia's drilling were analysed by the Colorado School of Mines Research Foundation Inc (CSMRF). Available data files contain total iron grade chemical analyses and Davis Tube mass recovery (DTR) analyses for around 18% of Columbia's primary sample intervals. For the remaining 82% of these intervals available data files include DTR analyses but not head iron grades. MPR assigned iron grades to the sample intervals without chemical iron analyses from DTR values utilising a formula derived from samples with both

	analyses. The general reliability of these assigned grades was confirmed by comparison with Bench Composite head grade analyses, and nearest neighbour comparisons with assays from newer drill holes. • Rather than original assay values, the available data files for Columbia's East Deposit drilling include generally 10 foot (3.05m) down-hole composites calculated for previous resource modelling. Uncertainty over the reliability of these data is reflected by classification of all estimates for the East Deposit as Inferred. • Samples from Richmond's diamond core drilling were analysed by SGS in Perth, Western Australia. After oven drying, samples were crushed to 90% passing 6mm, with 0.3 Kg riffle split sub-samples pulverised to 85% passing 100 microns analysed by XRF. • Samples from Nevada Iron's drilling were analysed by ALS, which samples prepared at the ALS facility in Reno, Nevada and pulps sent to ALS in Perth, Australia for analysis for a suite of attributes including iron by XRF and LOI by gravimetric analysis. Sample preparation comprised crushing and pulverizing of riffle split sub-samples to 85% passing 75 microns. • Davis Tube mass recovery tests were not performed on samples from Richmond's and Nevada Iron's drilling. MPR assigned DTR recovery values to these samples from iron grades using the DTR vs iron grade function developed from analyses of Columbia's drilling.
Drilling techniques	• Columbia's drilling employed NX casing bits through unconsolidated material, with wire-line core-drilling for deeper drilling at generally NX diameter and less commonly BX (approximately 76 mm and 60mm hole diameter respectively). Available information indicates the core was not oriented. • Richmond's and Nevada Iron's diamond drilling employed HQ diameter bits (96mm hole diameter). Available information indicates the core was not oriented. Nevada Iron's RC drilling utilized 5 ¾ inch (146mm) bits.
Drill sample recovery	• Core recoveries were measured for all diamond drilling phases by recording recovered core lengths for core runs. Recovery measurements are available for around 85% of Columbia's drilling and average around 86% recovery for mineralised intervals. Core recoveries are available for all of Richmond's and Nevada Iron's diamond drilling and average around 98% and 96% recovery for mineralised intervals respectively. • No sample recovery measurements are available for Nevada Iron's RC drilling. 10-foot (3.05) m down-hole composited iron grades from Nevada Iron's RC drilling were compared with the nearest composite from Nevada Iron diamond holes within a maximum separation distance of 30 m. The comparison included 101 pairs of composites with an average separation distance of 13m and showed very similar average iron grades. This comparison supports the general reliability of the RC sampling. • There is no notable relationship between sample recovery and grade for any of the phases of diamond drilling.

	• Available information indicates that samples have not been biased due to preferential loss/gain of fine/coarse material.
Logging	• All drill holes were geologically logged by industry standard methods. The logging is qualitative in nature and of sufficient detail to support the resource estimates.
Sub- sampling techniques and sample preparation	• Whole core samples were collected from Columbia's drilling over intervals ranging from 0.3 to 35.4 foot (0.1 to 10.8 m) and averaging around 2.7m. These samples were composited over generally 35.4 ft Bench Composite intervals for additional analyses. • Comparison of iron assay grades for primary samples and bench composites supports the general repeatability of the sampling. 10-foot (3.05) m down-hole composited iron grades from Columbia's diamond drilling were compared with the nearest composite from Richmond and Nevada drilling utilising a maximum separation distance of 10m which yielded 259 pairs of composites with an average separation distance of 6.7 m. Iron grades from these pairs, including intervals from Columbia's drilling with iron grades from chemical assays (87) or assigned from DTR values (172) showed very similar average iron grades. • Richmond's diamond core was quarter-core sampled over generally 7 foot (2.1 m) down-hole intervals with a masonry saw. After oven drying, samples were crushed to 90% passing 6mm, with 0.3 Kg riffle split sub-samples pulverised to 85% passing 100 microns. • Nevada Iron's diamond core was quarter-core sampled over generally 5 foot (1.5 m) down-hole intervals with a masonry saw. Nevada Iron's RC holes were sampled over 5 foot (1.5 m) down-hole intervals and sub-sampled by riffle splitting. Sample preparation comprised crushing and pulverizing of riffle split sub-samples to 85% passing 75 microns. Assay results for duplicate core samples and RC samples collected at average frequencies of around 1 duplicate per 30 primary samples reasonably match original assays supporting the reliability of field sub-sampling. • The available information demonstrates that the sub-sampling methods and sub-sample sizes are appropriate for the grain size of the material being sampled and provide sufficiently representative sub-samples for resource estimation.
Quality of assay data and laboratory tests	• No geophysical measurements were used in the resource estimates. • No information such has standards or blanks is available to indicate the reliability of assaying for Columbia's drilling. Comparison of composited iron grades from this drilling with the nearest composite from Richmond and Nevada Iron drilling within a maximum separation and their derivation, etc. distance of 10 m yielding 87 and 172 pairs of composites for which the Columbia interval has iron grades from chemical analyses assigned from DTR values respectively. Both sets of pairs show similar average iron grades between sampling phases supporting the reliability of Columbia's data.

	• Information available to demonstrate the reliability of SGS assays from Richmond's drilling includes interlaboratory repeats by AAL, and Amtek. • Assay quality control procedures adopted by Nevada Iron included submission of certified reference standards and interlaboratory repeats by SGS, which reasonably support the reliability of ALS iron analyses. • Acceptable levels of accuracy and precision have been established for the resource estimates.
Verification of sampling and assaying	• No drill hole results are reported in this announcement. • Several sets of twinned and nearby holes have been drilled at Buena Vista. These include: • Richmond diamond vs Richmond RC: Two twin holes (avg separation 2.9m), and two nearby holes (avg separation 19.8m) • Nevada Iron and Richmond vs Columbia: Four twin holes (3 RC, one diamond) with an average separation of 7.1 m and 15 pairs of holes for which portions are nearby (average separation 12m). • Information from these holes help support the reliability of iron grades from Richmond RC drilling and Columbia's drilling including holes with iron grades derived from DTR analyses. • Few details of data entry procedures are available for the Buena Vista drilling. The available information indicates that this drilling employed industry standard methods that at the time of each drilling phase. • Assay values were not adjusted for resource estimation. Primary samples from Columbia's drilling that were not assayed for iron were assigned iron grades from DTR recoveries. These samples represent around 46% of the combined estimation dataset and 65% of data from the eastern portion of the West domain. • DTR values were assigned to sample intervals from Richmond and Nevada Iron drilling from iron assay grades. These data represent around 41% of the combined estimation dataset including around 15% of data from the eastern portion of the West domain.
Location of data points	• Richmond commissioned a contract surveyor to accurately survey collar locations of their drill holes and accessible collars from Columbia's drilling. The same surveying company was employed to accurately survey the collar locations of Nevada Iron drill holes. • Columbia's drill holes were generally down-hole surveyed using a Tropari instrument which provides inclinations at generally comparatively long intervals. Azimuths for these holes were assumed to be constant at the collar orientation. • No down-hole surveys are available for Richmond's holes and 33 of Nevada Iron's drill holes and these holes were not down-hole surveyed and are assumed to run straight at designed orientations. The remaining 65 of Nevada Iron's drill holes were surveyed at intervals of generally around 15 m by an unknown method. • The estimates are reported below a DTM generated from a topographic survey compiled by Richmond for the West Deposit and drill-hole collars for other areas. Details of the method used to

	generate the supplied topographic survey are unknown. The resultant DTM is consistent with drill hole collar surveys. • Resource modelling utilized metric USG grid co-ordinates. • The locations of drill hole traces and surface topography been defined with sufficient accuracy for the resource estimates. Topographic control is adequate for the resource estimates.
Data spacing and distribution	• No drill results are included in this announcement. Hole spacing spacing and Results. varies with deposit area: • West Deposit: The eastern portion which hosts the majority of resources is tested by generally 200 foot (61m) spaced traverses of Columbia drill holes, and rare Richmond and Nevada Iron holes. Columbia's holes are generally inclined to the south (188) at around 45o at spacings of around 40 to 140m, averaging around 70m along traverses. • East Deposit is tested by 61m spaced traverses of southeast-northwest traverses of Columbia diamond drill holes which are inclined to the southeast (162) at around 45o at spacings along traverses of around generally 60 to 120m, and locally closer. • Section 5 and the western portion of the West Deposit have been tested by 50 by 50 m spaced drilling by Nevada Iron drill holes inclined to the south (188) at 60o. • The data spacing has established geological and grade continuity sufficiently for the Mineral Resource Estimates. • Drill hole samples were composited to 10 feet (3.05m) m down-hole intervals for resource modelling.
Orientation of data in relation to geological structure	• The moderately northerly and northwest dipping mineralisation trends approximately perpendicular to the southerly and south easterly inclined drill holes. The drilling orientations achieve un-biased sampling of the mineralisation.
Sample security	• Sampling of Richmond's and Nevada Iron's drill holes was supervised by field geologists and a chain of custody maintained for the samples. Details of sample security for Columbia's drilling are uncertain. • Buena Vista is in a remote area with limited access by the general public. The general consistency of results between sampling phases and twin hole comparisons provide confidence in the general reliability of the resource data.
Audits or reviews	• In addition to reviewing QAQC information, verification checks • undertaken by the Competent Person included checking for internal • consistency between, and within database tables, comparison of • database assay entries for Richmond and Nevada Iron drilling with laboratory source files and spot check comparisons of database sample intervals, iron grades and DTR recoveries with scanned copies of original CSMRF assay reports for around 10% of Columbia samples. These checks showed no significant issues. • The Competent Person considers that the sample preparation, security, and analytical procedures adopted for the Buena Vista resource drilling provide an adequate basis for the Mineral Resource estimates.

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. • No metal equivalent values are reported in this announcement.

Relation between mineralisation widths and intercept lengths	• The mineralisation dips to the north or northeast at around 35o, approximately perpendicular to the generally 45o to 60o south to south-easterly 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	• Additional drilling around the edges of the resource will be undertaken to increase resources and elevated Inferred Resources to Indicated Resources.

Section 3 Estimation and Reporting of Mineral Resources

Criteria listed in the preceding sections also apply to this section

Criteria	Commentary
Database integrity	• The drill hole database utilised for resource modelling was compiled by MPR from numerous digital files available from datasets compiled during previous evaluations of the project. • Mr Abbott review's review of database validity included consistency checks within and between database tables, spot check comparison of scanned hard-copies of assay reports for around 10% of Columbia's samples with database entries (sample intervals, head iron and DTR recovery) and comparison of database assay entries with laboratory source files for Richmond and Nevada Iron drilling. These checks showed no significant discrepancies and Mr Abbott considers that the resource data has been sufficiently verified to provide an adequate basis for Mineral Resource estimation. • An independent resource geologist is being used to digitise historic data and audit and verify the existing data.
Site visits	• Mr Abbott has not visited the Buena Vista Project due to current travel restrictions. Mr Abbott worked closely with Magnum geologists and the mineralisation interpretation underlying the estimates is consistent with Magnum's geological understanding of the deposit and informing data. Although detailed planning is not yet possible, it is anticipated that a site visit will be undertaken after current government travel restrictions are eased.
Geological interpretation	• Geological setting and mineralisation controls of the Buena Vista mineralisation have been confidently established from drill hole logging and field mapping. Due to the confidence in understanding of mineralisation controls and the robustness of the mineralisation

	model, investigations of alternative interpretations are considered unnecessary. • Buena Vista magnetite iron mineralisation occurs within a scapolite-hornblende-clinopyroxene-calcite-magnetite altered gabbro. The magnetite mineralisation varies from disseminations to massive pods locally 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-west for most of the property area, and trending southwest-northeast in the East deposit area. • Mineralised domain wire-fames used for resource modelling were interpreted from 10 ft (3.05m) down-hole composited iron grades from RC and diamond drilling. The domains capture zones of continuous iron grades of greater than approximately 10% and for the West Deposit and are trimmed by several steeply dipping dykes wire- frames interpreted from drill hole logging and iron grades. • The mineralised domains are subdivided by Deposit area, comprising the Section 5, West and East Deposits. The West Deposit domain is subdivided into a main eastern zone capturing the area tested Columbia's drilling and a smaller western zone tested by Nevada Iron drilling.
Dimensions	• The combined mineralised domains lie with a corridor around 3.3 km by 500 m. The combined resource estimates extend from surface to around 240 m depth with around 90% from less than 140 m. • The Section 5 estimates extend over a strike length of around 470 m with domain widths of generally around 85 to 350m averaging around 250 m. Resource estimates extend from the base of surficial gravels to around 220 m depth, with around 90% from depths of less than 160m. • The combined West Deposit estimates extend over a strike of around 1.4 km with domain widths of generally around 100 to 480 m averaging around 330 m. Mineral Resource estimates extend from surface to around 240 m depth, with around 90% from depths of less than 130 m. • Modelled East Deposit mineralisation extends over approximately 600 m of strike with domain widths generally ranging from around 130 m to 260 m and averaging around 160 m. Resource estimates extend from surface to around 180 m depth, with around 90% from depths of less than 115 m.
Estimation and modelling technique	• Iron, DTR mass recovery and density were estimated by Ordinary Kriging of 10 foot (3.05 m) down-hole composited grades from diamond and RC drilling within the mineralised domains. Densities were assigned to drill hole intervals of from an iron vs density function. • Iron and DTR mass recovery values were estimated by Kriging of grade x density reflecting these value's correlation with density block values back-calculated from Kriged densities. • The Kriging utilised 30.5 by 15 by 5 m (strike, cross strike, parent) parent blocks aligned with the 188 trending drill traverses for main

	deposit areas. Parent blocks were sub-blocked to minimum dimensions of 15.25 by 7.5 by 2.5 m for assignment of modelling domains. • The modelling did not include upper cuts reflecting the low to moderate variability of the attributes and lack of extreme values. • Indicated and Inferred Mineral Resource estimates are extrapolated to a maximum of generally around 40 m and 60 m from drill intercepts respectively. • Micromine software was used for initial data compilation, domain wire-framing calculating and coding of composite values. GS3M was used for Kriging, and the estimates were imported into a Micromine block model for reporting. The estimation technique is appropriate for the mineralisation style. • The estimation technique for the Exploration Target is described in the announcement. • Comparatively limited open pit mining prior to 1960 predates the resource drilling and meaningful comparison of model estimates with production records is impossible. • Model estimates are compatible with previous resource estimates, with differences reflecting increased drilling information availability and somewhat greater extrapolation of Inferred resources consistent with geological and mineralisation continuity. • Estimated resources make no assumptions about recovery of by-products. Analyses for secondary attributes (Al2O3, CaO, K2O, MgO, MnO, Na2O, P2O5, S, SiO2, TiO2, V2O5 and LOI) are available only for Richmond and Nevada Iron grades which cover only a small proportion of the resource area. These attributes were estimated for the Section 5 and western portion of the West Deposit and are not included in Mineral Resource Estimates. • Kriging employed 30.5 by 15 by 5 m (strike, cross strike, vertical) parent blocks aligned with the 188 trending drill traverses for main deposit areas. Parent blocks were sub-blocked to minimum dimensions of 15.25 by 7.5 by 2.5 m for assignment of modelling domains. • The eastern portion of West deposit is tested by generally 200 foot (61m) spaced traverses of Columbia diamond drill holes with an average spacing along the traverses of 70m, and rare Richmond and Nevada Iron holes. The East Deposit is tested by generally 61 m by 60 to 120 m spaced drill holes. Drilling at the Section 5 and western portions of the West Deposit averages around 50 by 50 m spacing. • Estimation of iron, DTR and density values included a five pass, octant search strategy with search ellipsoids, and variogram orientations aligned with local mineralisation orientations. Search radii (strike, dip, cross strike) and data requirements were: o Search 1: 45, 45,12m, min. 8 data/2 octants, max. 6 data o Search 2: 90, 90, 24m, min. 8 data/2 octants, max. 6 data o Search 3: 90,90, 24m, min. 4 data/1 octants, max. 6 data o Search 4: 120,120,24m, min. 4 data/1 octant, max. 6 data o Search 5: 180,180,36m, min. 4 data/1 octant, max. 6 data

	• Most Indicated resources (99%) are informed by Search passes 1 and 2. Search passes 4 and 5 inform around 1.2% and 0.2% of Inferred resources respectively. • Around 82% of Columbia's drill intervals for which primary sample chemical assays are not available, were assigned iron grades from DTR values. Samples from Richmond's and Nevada Iron's drilling which represent around 41% of the combined estimation dataset were assigned DTR values from iron grades. The function used for this assignment reflects the strong and consistent correlation between iron grades and magnetite content was derived from DTR and iron analyses available for 1,038 samples from Columbia's drilling as follows: Fe % = 0.67 x DTR Recovery (%) +3.40. • Densities were assigned to all samples included in the estimation dataset from iron grades utilising an iron grade versus density function derived from bulk density measurements of Richmond and Nevada Iron diamond core. • A density of 3.0g/cc was applied in the Exploration Target estimation. • Mineralised domain wire-fames used for resource modelling were interpreted from 10 ft (3.05m) down-hole composited iron grades from RC and diamond drilling and drill hole logs. The domains capture zones of continuous iron grades of greater than 10% and for the west and are trimmed by several steeply dipping interpreted dykes. Magnum geologists have reviewed the mineralised domains, and confirmed they are consistent with their understanding of the deposit and are appropriate for resource estimation. • Estimation did not include cutting or capping of high grades. This reflects the low variability shown by drill hole composite iron, DTR recovery and density values which show no extreme or outlier values. This approach is consistent with the Competent Person's general experience of resource modelling for iron ore projects. • Model validation included visual comparison of model estimates and composite grades, and trend (swath) plots.
Moisture	• Tonnages are estimated on a dry basis.
Cut-off parameters	• The selected cut-off grades reflect Magnum's interpretation of potential project economics for potential mining operations
Mining factors or assumptions	• The estimates reflect medium scale open pit mining. • The Mineral Resource estimates extend from surface to a maximum depth of around 240 m with around 90% from less than 140 m depth. The mineralization is broad, and continuous in nature, with strong visual controls, and the estimates are considered to have reasonable prospects of extraction by open pit mining.
Metallurgical factors or assumptions	• 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.
Environmental factors or assumptions	• Whilst Magnum's economic evaluation of the deposit is at an early stage, historical work including environmental considerations for potential mining have been evaluated in detail. Information available

	to Magnum indicates that there are unlikely to be any specific environmental issues that would preclude potential economic extraction.
Bulk density	• The mineralisation shows no significant oxidation, with fresh material occurring at shallow depths. Density is strongly correlated with increasing iron grade reflecting increasing magnetite content. • Bulk densities were estimated for model blocks by Ordinary Kriging of 10 foot (3.05 m) down-hole composited densities values assigned to drill hole intervals of from an iron-density function derived from 84 bulk density measurements performed on diamond core samples from Nevada Iron drilling.
Classification	• Due to uncertainty over the reliability of the composite information available for the East Deposit all resources estimated for this deposit are classified as Inferred. Estimates for the other areas were classified as Indicated and Inferred on the basis of a set of cross-sectional polygons outlining areas of approximately 61 m and closer spaced drilling and maximum extrapolation of distances of around 60 m respectively. • The classification approach assigns mineralisation tested by relatively consistently 61 m and closer spaced drilling to the Indicated category and estimates for mineralisation tested by more broadly spaced drilling generally extrapolated to a maximum of around 60 m from drill holes to the Inferred category. • The resource classification accounts for all relevant factors. • The resource classifications reflect the Competent Person's views of the deposit.
Audits or reviews	• The resource estimates have been reviewed by Magnum technical consultants and geologists and are considered to appropriately reflect the mineralisation and drilling data.
Discussion of relative accuracy/ confidence	• Confidence in the relative accuracy of the estimates is reflected by the classification of estimates as Indicated and Inferred.