ASX ANNOUNCEMENT

22 July 2024

‘GREEN IRON’ GRADE CONCENTRATES PRODUCED USING SALINE WATER

HIGHLIGHTS

BACKDROP

- **Magnetite Mines’ Razorback Iron Ore Project is being developed to produce rare, premium-grade concentrates suitable for ‘Green Iron’ production, a major new emerging industry associated with the global decarbonisation of steelmaking.**
- **Water supply is a key technical and economic driver for the Project; the mine will require large volumes to process magnetite iron ore at the mine site.**
- **Studies to date have relied on conventional processing using fresh or desalinated water, however sourcing water of this quality has economic and permitting implications.**

BREAKTHROUGH

- **Magnetite Mines has achieved pioneering laboratory test results demonstrating the potential to produce ‘Green Iron’ feed grade magnetite concentrates largely using saline water (seawater) from a composite sample of Iron Peak deposit ore.**
- **Concentrate grades of 69.9% Fe and less than 2.0% silica + alumina have been attained; similar to test results using fresh water and meeting the current specification needed for ‘DRI’ (Green Iron) production.**
- **Potential to significantly improve Razorback Project economics; reducing the need for fresh water and capital & operating costs associated with a large desalination plant.**
- **Minimal changes required to accommodate saline water into existing process flowsheet.**
- **Further metallurgical test programs are planned to prove the validity of this finding across the Razorback deposits.**

INTELLECTUAL PROPERTY

- **Breakthrough has potential implications for other Braemar Iron Formation deposits, and other magnetite projects generally, particularly where access to fresh water is difficult.**
- **Magnetite Mines is seeking legal advice to protect the intellectual property relating to this breakthrough processing technique via patent.**

Magnetite Mines Limited (ASX: MGT) is pleased to announce the results of a bench-scale metallurgical testwork program assessing the potential to use saline water, instead of fresh or desalinated water, for processing ores from its 100% owned Razorback Iron Ore Project.

Using a trial-and-error approach, the laboratory testwork program identified a method that, largely using saline water (seawater), produced premium-grade concentrates suitable for Green Iron production, with results similar to those achieved using fresh water. The method uses a modified chemical reagent regime with minimal impact on the Razorback Project process flowsheet and proposed equipment.[1]

The testwork produced results from a composite Iron Peak sample prepared from existing drill core:[2]

Concentrate grade produced using saline water:	69.9% Fe*
Major Impurities:	1.28% SiO_2 (silica) + 0.15% Al_2O_3 (alumina)

**See Table 1 – Flotation test result 19*

Magnetite Mines Chief Executive Officer, Tim Dobson said:

"The team at Magnetite Mines has made exciting progress in its metallurgical evaluation of saline water processing, consistently achieving DR-grade in our most recent testwork. This pioneering technical innovation creates optionality for MGT in providing the best water solution for the Razorback Project and is a powerful differentiator. With a technical solution now defined, we will move to evaluate other considerations for saline water processing including permitting and supply options."

Potential for Razorback Project water supply simplification

The use of saline water, meaning salty water and including seawater, in iron ore processing has been historically challenging due to its impact on the 'flotation' processing stage, which is sensitive to water chemistry. Replacing fresh water with saline water interferes with the reagents (process chemicals) used in flotation, significantly reducing performance. This typically results in lower grade concentrates being produced.

As the flotation stage is the only process flowsheet stage that is sensitive to water quality, it dictates the water quality requirements for the entire process flowsheet. Up to now, the Razorback Project's configuration has always included provision for fresh (desalinated) water use in all processing stages to accommodate the fresh water needs of the final flotation stage. This has resulted in the need to provide a significant volume (around 10GL/yr) of desalinated water for the Stage 1, 5Mtpa project configuration.[1]

To achieve premium DRPF-grade concentrates suitable for green iron production using saline water, the Company's internal technical team has conducted extensive laboratory investigations with the aim of optimising the flotation stage of the process.[3,4] By modifying the reagent recipe using a trial-and-error technique, the team have successfully defined a reagent recipe for producing DRPF-grade concentrates using saline water.

Consequently, these findings offer the potential for a simplified water supply solution for the Razorback Project by eliminating the need for a large desalination plant, significantly reducing capital and operating costs. In the scenario where saline water is used for ore processing, seawater could be pumped from the Upper Spencer Gulf to the Razorback mine site, bypassing the requirement for a desalination facility.

The testwork program utilised a composite bulk sample from the Iron Peak deposit, representing a limited portion of the planned mining inventory.[1,2] Accordingly, additional testwork is required to confirm the efficacy of saline water across all parts of the Razorback and Iron Peak deposits, which may exhibit different processing characteristics.

Figure 1 - Bench scale flotation testwork at Bureau Veritas laboratories, Adelaide

Froth Flotation – a processing step used to produce near-pure magnetite

The image in Figure 1 shows a laboratory bench-scale flotation cell containing finely ground Razorback magnetite ore and saline water mixed with reagents. Air is pumped into the cell creating froth on which silica and waste material adheres. This waste is removed from the surface, concentrating magnetite at the bottom of the cell.

Intellectual Property

These breakthrough testwork results provide a promising pathway for a considerably lower-cost water solution for the Razorback Iron Ore Project, which may have implications for other Braemar Iron Formation hosted iron ore deposits.

The results were achieved via modification of the flotation reagent recipe at Bureau Veritas Laboratories in consultation with reagent suppliers and include novel methodologies to increase silica (waste) rejection at the flotation stage.

Full details of the flotation methodology and recipe are considered commercially sensitive and represent potentially valuable intellectual property (IP) for the Company. Accordingly, further details of the testwork program are not disclosed here pending legal advice on potential patent lodgement or other IP protection mechanisms.

Background

The Razorback Iron Ore Project process plant flowsheet has been designed to achieve targeted 67.5% to 68.5% Fe concentrate grades using a conventional wet beneficiation process in fresh water.[1] This specification is required to achieve DRPF classification and to attract the premium pricing associated with DRPF, the feed required to produced green iron.[5,6] Previously reported metallurgical testwork results have demonstrated the ability for the Razorback Iron Ore Project to meet these specifications throughout the mine's life and exceed these specifications in particular circumstances.[5,6]

To achieve these concentrate specifications, the Razorback process flowsheet features a Rougher Flotation stage (Figure 2).[1,5,6]

Magnetic separation, used extensively in the flowsheet, is a physical separation process and is not affected by water quality. The flotation process however, being a chemical process, is affected by water quality. As a result, the flotation process determines the water quality required for the entire process flowsheet.

In pursuit of enhanced project economics and decreased project risk, MGT have prioritised investigating the use of saline water, instead of fresh water, for ore processing. Key potential benefits of saline water processing include:

- avoiding the need for a fresh (desalinated) water supply to the Razorback mine site;[1]
- materially decreasing project capital and operating costs associated with a large desalination plant; and
- potentially reducing project permitting requirements and timeframes.

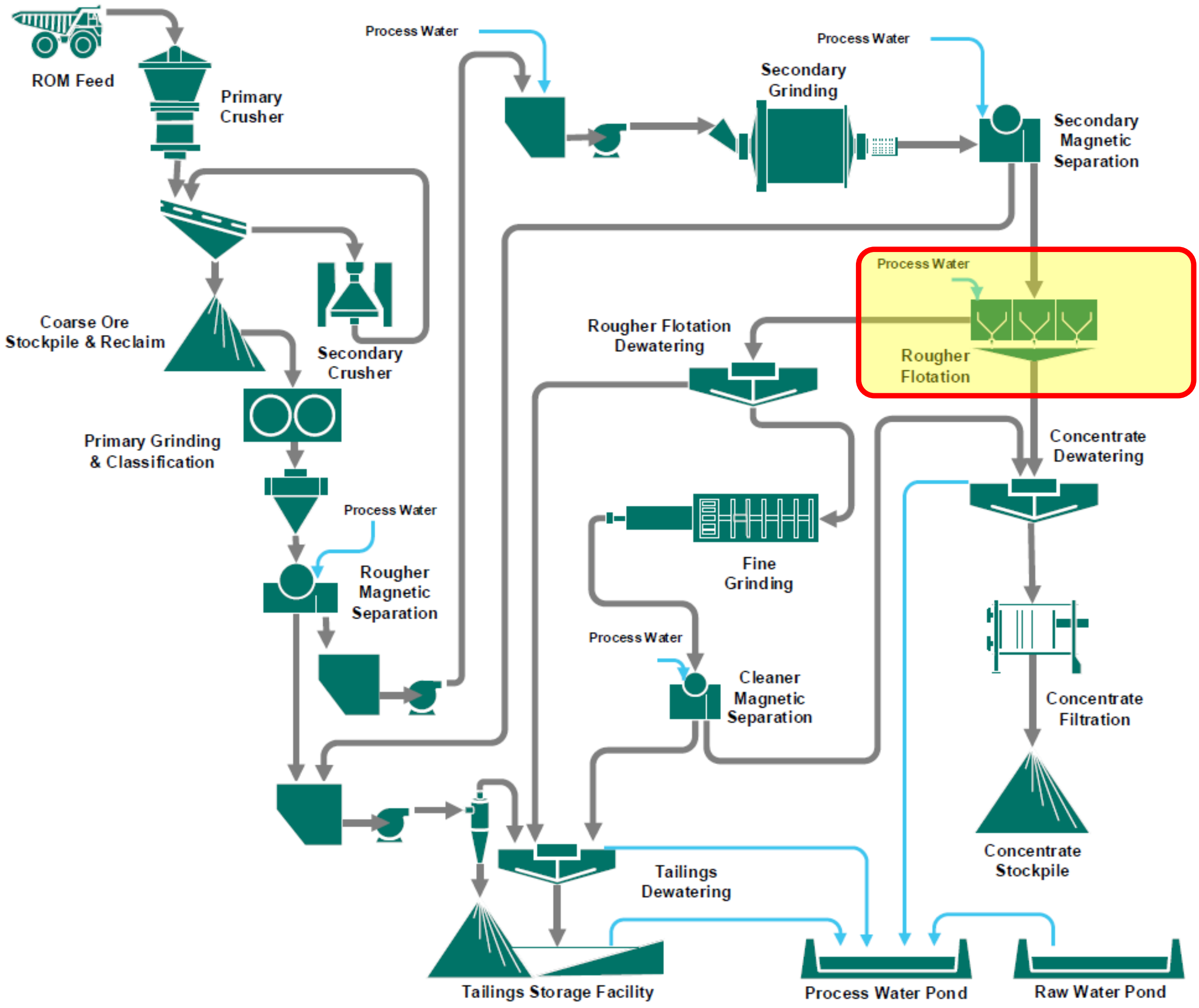

Figure 2 - Razorback Process Flowsheet schematic, highlighting flotation stage

Metallurgical Testwork Program

A representative bulk composite sample was generated from existing Iron Peak drill core material and processed in the laboratory using the proposed process flowsheet, generating a sample for flotation testwork.[2] No additional drilling was required to generate new samples, resulting in a low-cost, high-value testwork program.

The saline water sourced for the testwork program was seawater from the Upper Spencer Gulf near to Port Pirie. This water has a quality specification of 50,000 mg/L Total Dissolved Solids (TDS) and 35 g/L Sodium Chloride, both being measures of salinity.

The testwork program comprised three stages:

1. Sample preparation for flotation testwork including crushing, grinding, magnetic separation, fine grinding and mineralogical studies.
2. Flotation testwork with varying chemical reagents and conditions testing saline flotation efficiency in comparison to freshwater flotation. Up to 20 flotation tests were completed using various chemistry regimes.
3. Amenability to concentrate filter cake washing (using fresh water) to removal residual salts that would otherwise create a product pricing penalty.

Results

Standard freshwater flotation tests returned excellent results with the flotation concentrate (70.2% Fe, 0.8% silica+alumina) easily bettering DRPF-grade specification requirements.

However, the same flotation reagent regime in saline water produced poor results (64.6% Fe, 8& silica+alumina), well below those required to meet DRPF-grade specifications.

Trial-and-error flotation testing, with varying reagents, modifiers and pH adjustment, led to significant advancement in the understanding of saline water flotation chemistry and provided insight into the mechanisms by which saline flotation performance could be enhanced. As a result, Magnetite Mines was able to identify a new flotation chemistry regime that significantly improved performance.

The final results from the trial-and-error program returned a flotation concentrate grade (69.9% Fe, 1.4% silica+alumina) that comfortably met DRPF-grade specifications. Several additional tests were completed with minor alterations to optimise the altered chemistry regime with each one producing DRPF-grade for a total of 5 successful tests.

The achieved grade and recovery in saline water flotation is shown to be similar to the grade and recovery produced in fresh water flotation (Table 1).

Concentrate washing tests were equally successful, reducing residual chloride levels to 0.005% with minimal wash water required. This result is an order of magnitude below normal penalty levels of 0.05%.

Table 1 - Saline and Fresh Water Flotation Results

Flotation Test	Water	Chemistry Regime	Fe Grade (%)	$SiO_2 + Al_2O_3$ Grade (%)	Overall Mass Recovery (%)
3	Freshwater	Standard	70.2	0.8	17.7
11	Seawater	Standard	64.6	8.0	
15	Seawater	Altered for Seawater (1)	69.4	2.1	17.6
16	Seawater	Altered for Seawater (2)	69.5	1.7	16.9
17	Seawater	Altered for Seawater (3)	70.0	1.6	17.1
18	Seawater	Altered for Seawater (4)	69.9	1.9	16.8
19	Seawater	Altered for Seawater (5)	**69.9**	**1.4**	**17.4**

Specifics relating to the process flowsheet changes required to accommodate saline water processing are commercially sensitive, however it is evident that equipment and process flowsheet modifications are minor in nature and are not expected to have a significant impact on operability or costs.

Next Steps

The results have demonstrated the ability to achieve DRPF-grade concentrate grades in for a single Iron Peak deposit composite sample. While it is anticipated that similar results will be achieved across the Razorback Iron Ore deposits (Razorback and Iron Peak), this is yet to be demonstrated. To further prove flotation performance in saline water across the deposits, an additional metallurgical variability program is being planned as a future work program.

The Company will also continue to explore the potential benefits, cost implications, environmental risks and other considerations for substituting fresh water processing with saline water processing. It is noted that the Project approvals scope and delivery program remain unchanged as a result of these preliminary outcomes.

COMPETENT PERSONS STATEMENT

The information in this report that relates to Exploration Results is based on information originally compiled by Mr. Trevor Thomas, who is a Member of the Australian Institute of Mining and Metallurgy (AUSIMM) and Member of the Australian Institute of Geoscientists (AIG). Mr. Thomas is a full-time employee of Magnetite Mines Limited as Study Director. Mr. Thomas has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' ("JORC Code 2012"). Mr. Thomas consents to the disclosure of this information in this report in the form and context in which it appears.

DISCLOSURE

Where the Company references previously disclosed exploration results, Mineral Resource and Ore Reserve estimates and ASX announcements made previously, it confirms that the relevant JORC Table 1 disclosures are included with them and that it is not aware of any new information or data that materially affects the information included in those ASX announcements and in the case of Mineral Resources and Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the announcements continue to apply and have not materially changed.

This announcement has been authorised for release to the market by the Board.

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ABOUT MAGNETITE MINES

Magnetite Mines Ltd is an ASX-listed iron ore company focused on the development of magnetite iron ore resources in the highly-prospective Braemar iron region of South Australia. The Company has a 100% owned Mineral Resource of 6 billion tonnes of iron ore and is developing the Razorback Iron Ore Project, located 240km from Adelaide, to meet accelerating market demand for premium iron ore products created by iron & steel sector decarbonisation, with the potential to produce high-value Direct Reduction (DR) grade concentrates. Razorback is set to become a very long-life iron ore project with expansion optionality in a tier 1 jurisdiction that will produce a superior iron ore product sought by steelmakers globally. For more information visit magnetitemines.com.

References:

1. ASX Release – 09/07/2023 - Iron Peak Strengthens Razorback Project Economics
2. ASX Release – 25/10/2021 - Razorback Iron Ore Project Drilling Commences
3. ASX Release – 30/10/2023 – First Quarter Activities
4. ASX Release – 31/12/2023 - Second Quarter Activities
5. ASX Release – 28/02/2023 – Metallurgy Confirms Flowsheet and DR Pellet Feed Potential
6. ASX Release – 21/07/2022 - Positive Interim Metallurgical Test Results

Appendix 1 – JORC Table 1

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• Drilling Method: Drilling programs related to this announcement of metallurgical results were completed by Diamond Core Drilling of PQ and HQ diameter drill core. These program were previously announced via the ASX on 25/10/21 with drilling material (core sample) forming the basis for metallurgical studies announced via the ASX on 21/07/22 and 28/02/23 • Diamond Core Sampling: As above, sample was sourced from existing drill core material, no new drilling activities occurred to provide sample for this testwork program. Diamond drill core samples of varying diameter (HQ and PQ) were submitted for laboratory analysis. Core was cut using an automatic core saw in-house and at external geological consultancy. ½ core was sampled from each sampling interval. • Metallurgical sampling: Metallurgical bulk samples typically require high mass and spatial sample representivity, the sample submitted for this testwork was composed of Iron Peak core material from 13 drill holes to form a composite sample. Core samples were submitted for the bulk sampling testwork to a given net mass. As related to metallurgical testwork, the following analyses have been undertaken for various characterisation studies in order to characterize flowsheet performance. Head grade analysis (XRF multi element), QXRD, QEMSCAN, Magnetic separation - LIMS, Flotation and Davis Tube Recovery. • Head and concentrate grade analysis at the various flowsheet stages was undertaken. • Full details of the sample preparation in particular for the flotation stage methodology are not provided owing to the commercial sensitivity and intellectual property regarding the methods used.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Iron Peak samples were sourced from existing core reserves obtained in 2021 and 2022 see ASX release 25/10/21, no new drilling occurred to inform this testwork program. • Drilling method: Drilling programs related to this announcement of metallurgical results were completed by Diamond Core Drilling of PQ and HQ diameter drill core. • Drilling Contractor – Foraco contract drilling services.

Criteria	JORC Code explanation	Commentary
		• PQ standard tube – vertical drilling to intersect greatest mass/volume of given domain. PQ diamond vertical drill holes underwent RQD by trained field staff and geologists, geological lithology logging by qualified geologists. • HQ triple tube – inclined drilling to 60 deg, azimuth oriented perpendicular to strike. Gyroscopic surveys undertaken where possible (open holes). HQ diamond inclined drill holes underwent core orientation by trained geologists and field staff, RQD by trained geologists and field staff, geological lithology logging by trained geologists. • Core/field logging included, core loss and recovery, core orientation for HQ drill core (orientation for vertical PQ drill holes was not applicable). • Hole locations surveyed by handheld GPS (+-3m) • For metallurgical drilling, laboratory QAQC was relied upon.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Recording of sample recoveries undertaken via core-loss logging comparing measured intervals to drill run length and determining location and amount of core loss. • Sample recovery maximized by use of qualified drilling contractors and best industry practice drilling procedures, sample handing and preparation. • Drilling condition typically very good with excellent core recovery due to competent ground conditions. Core loss typically associated with near surface, unconsolidated ground conditions and some infrequent geological faulted/brecciated zones. No correlation of core loss with mineralisation
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Geological logging for all core samples completed to 0.2m resolution appropriate for bulk commodity resolution. Additional down-hole geophysical logging as well as handheld magnetic susceptibility logging undertaken to validate mineralisation zones for sampling purposes. As no new drilling occurred, there is insufficient new nor material datasets to inform a Mineral Resource Estimate update. • Geological logging attempts to describe hand samples in sufficient accuracy to determine the lithology, colour, veining, alteration, stratigraphy and mineralogy where possible. Handheld descriptions were validated by assay analyses that follow. The fine-grained nature of the lithologies results in qualitative estimation of mineralisation and rock descriptions. Downhole

Criteria	JORC Code explanation	Commentary
		geophysical logging measured long spaced density (LSD), short spaced density (SSD), gamma, hole diameter (Caliper), magnetic susceptibility (magsus), hole inclination and azimuth (gyroscope) measurements. These parameters are quantitative measurements and are used in tandem with geological logging to deduce lithology and degree of mineralisation outside of laboratory measurements. • All drilling samples have been reviewed and logged. All core has been logged inclusive of Iron Peak core utilised for this testwork program. Details of samples and locations are provided below.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• For the purposes of metallurgical sampling PQ and HQ core was utilized. Half core samples were taken from each selected sample interval and combined to make a single bulk composite. • No non-core samples were utilized for the testwork. • For the bulk sample, sufficient representivity of mineralisation lithology and mass were achieved for the metallurgical testwork program as determined by the following process: An internal mining block model for Iron Peak mine pit design was used to determine the volume of each lithological unit. The volume based proportions were then weighted by cut-off grade of >8% DTR mass recovery to indicate proportion of plant feed from each lithological unit for the Iron Peak mine pit design. Sample intervals were randomly selected from available core for each lithological unit as proportioned within plant feed. ½ core was taken from each selected 1m sampling interval and combined to generate the bulk composite sample. • Quality control included spatial distribution of samples per geological domains randomly selected. • To ensure ore body representivity, samples were selected based on the representative geological domains related to the ore body, degree of mineralisation, weathering and depth constraints as related to the mining pit shell optimization. • Samples selected are bulk samples – insitu samples encompassing the full range of grain sizes expected in a processing scenario and therefore appropriate to the nature of testwork. • Full details of the sample preparation in particular for the flotation stage methodology are not provided owing to the commercial

Criteria	JORC Code explanation	Commentary
		sensitivity and intellectual property regarding the methods used.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• A broad range of testwork and analyses were undertaken for this metallurgical testwork program. Each testwork suite was selected to measure a given set of parameters towards sample characterisation for a particular stage of the processing flowsheet. Analyses were undertaken by certified laboratories (Bureau Veritas). • Analyses included, XRF (multi element) qXRD (quantitative mineralogy determination), QEMScan, LOI (loss on ignition), Magnetic separation (Low intensity magnetic separation), Rod Mill (sample preparation), DTR (David Tube Recovery – magnetics), PSD (Particle size distribution wet sieve and laser), Flotation, Filtration washing. • No geophysical tools were used for this testwork program. • Laboratory checks and observations were undertaken as part of the testwork program. Given the bulk nature of samples repeat/duplicate analysis was not possible. Laboratory standards, blanks and duplicates of XRF assays were inserted where relevant to ensure repeatability and accuracy of XRF data.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Verification of testwork results occurred via the MGT owners team for all results. • No sample from twin holes were included in the metallurgical testwork program. • All primary data was entered into customized excel spreadsheets by the certified laboratory used. Where available, results were correlated against calculated values. • No adjustments to assay data was made nor considered necessary.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• The coordinates of each drill hole collar were surveyed using GPS with an accuracy of 3-5 meters sufficient for spatial location in a bulk commodity. • GDA94 / MGA Zone 54 – Datum used • Topography is determined from high resolution LIDAR surveys completed over the project area to an accuracy of 10cm.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Data spacing variable, determined by targeting of specific geological domains for metallurgical testwork, not resource drilling controls. This is considered appropriate for the nature of testwork.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Drilling for metallurgical purposes targeted maximum mass for a given interval or geological sub domain. For this reason, the greatest practical mineralisation intersections occurred via vertical drilling, required to achieve mass constrains for samples.
Sample security	• *The measures taken to ensure sample security.*	• The chain of custody was controlled by Magnetite Mines. Samples were transported to and from laboratories by MGT staff and consultants
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No independent audits or reviews of sampling have been carried out.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• Magnetite Mines Limited, through its 100% owned subsidiary Razorback Iron Pty Ltd, has secured the EL6353 lease over the Iron Peak iron deposits. • Resource payments calculated at $0.01 per DTR tonne of measured resources (resource payment = tonne of measured resource x $0.01 x DTR%). • A 1% royalty on the value of the product produced from the tenement measured at the 'mine gate'. • All tenements are in good standing and no known impediments exist

Criteria	JORC Code explanation	Commentary
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Whitten, on behalf of the Geological Survey of South Australia, carried out a detailed study at the Razorback Ridge area during the 1950's and 60's • This work was structured to assess the iron content, possible metallurgical processing and costs of mining the iron at the prospect. Detailed geological mapping, 3 diamond drill holes and an adit reaching 134.1 metres were carried out on the ridge itself
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The magnetite host rock at Razorback and Iron Peak occurs as either tillitic or bedded siltstone. The bedded or laminated ore is dense dark blue and can show sedimentary features such as cross bedding and slumping. The Geology of the Iron Peak Prospect is an extension of the geology at Razorback as following the consistent lateral continuity of the Braemar Iron Formation. For this reason there are no deviations to the methodologies/procedures utilised towards drilling and sampling between the two prospects. • The magnetite occurs as 10 to 150 micron euhedra in layers up to 500 micron thick, and can form up to 80% of the rock. Hematite can occur associated with crosscutting right angle cleavage, related to later deformation. • The tillitic ore is medium to dark grey, massive and contains erratics from 10mm to 1m in diameter. The fragments are typically metasediments, metavolcanics and granites. • The magnetite is similar to that seen in the bedded ore type. Hematite occurs but is irregularly distributed through the rock.

Criteria	JORC Code explanation	Commentary
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	See drill hole table and sample interval table below.

Hole_ID	Easting	Northing	Elevation	Max Depth	Dip	Azimuth	Hole Type	Grid ID
IPDD0001	385003	6353974	313.08	81	-60	190	DD	MGA94_54
IPDD0003	385025	6354161	279.63	51.1	-60	165	DD	MGA94_54
IPDD0004	384804	6354137	291.67	48.1	-60	225	DD	MGA94_54
IPDD0006	384239	6353919	299.36	147.1	-60	180	DD	MGA94_54
IPMT0001	384510	6353987	281.59	133.7	-90	0	DD	MGA94_54
IPMT0002	384510	6353987	281.61	133.6	-90	0	DD	MGA94_54
IPMT0003	384885	6354084	299.28	169.7	-90	0	DD	MGA94_54
IPMT0004	384513	6354164	288.64	112.6	-90	0	DD	MGA94_54
IPMT0006	385246	6354075	267.43	132	-90	0	DD	MGA94_54
IPMT0007	385170	6354149	272.96	115.7	-90	0	DD	MGA94_54
IPMT0009	385573	6354061	278.42	100.6	-90	0	DD	MGA94_54
IPMT0010	384858	6353989	310.17	109.6	-90	0	DD	MGA94_54
IPMT0011	384754	6353969	297.62	109.6	-90	0	DD	MGA94_54

Sample Intervals used for Bulk Composite:

Hole_ID	Depth_From	Depth_To
IPMT0002	8	9
IPMT0002	27	28
IPMT0002	38	39
IPMT0002	83	84
IPMT0002	84	85
IPDD0001	10.42	12
IPDD0001	28	29
IPDD0003	21	22
IPDD0003	27.15	29
IPDD0003	33	34
IPDD0003	34	35
IPDD0003	36	37
IPDD0003	37	37.1
IPDD0003	45	46
IPDD0004	28	28.6
IPDD0006	16	17
IPDD0006	84	85
IPDD0006	106	107
IPDD0006	114	115
IPDD0006	117	118
IPMT0001	36	37
IPMT0001	114	115
IPMT0001	117	118
IPMT0001	131	132
IPMT0003	30	31
IPMT0003	42	43
IPMT0003	74	75
IPMT0003	97	98
IPMT0003	101	102
IPMT0003	119	120
IPMT0003	129	130
IPMT0003	163	164
IPMT0004	1	2
IPMT0004	5	6
IPMT0006	124	125
IPMT0007	22	23
IPMT0007	27	28
IPMT0007	30	31
IPMT0007	81	82
IPMT0009	9	10
IPMT0009	11	12
IPMT0009	23	24
IPMT0009	28	29
IPMT0009	31	32
IPMT0009	33	33.15
IPMT0009	80	81
IPMT0010	32.3	34

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<tr><td>IPMT0010</td><td>50</td><td>51</td></tr>
<tr><td>IPMT0010</td><td>88</td><td>88.83</td></tr>
<tr><td>IPMT0011</td><td>32</td><td>33</td></tr>
<tr><td>IPMT0011</td><td>81</td><td>82</td></tr>
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<tr><td>Data aggregation methods</td><td>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.
Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.
The assumptions used for any reporting of metal equivalent values should be clearly stated.</td><td>Metallurgical results are reported herein, data aggregation methods are not applicable to this testwork.</td></tr>
<tr><td>Relationship between mineralisation widths and intercept lengths</td><td>These relationships are particularly important in the reporting of Exploration Results.
If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.
If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</td><td>Exploration intercepts are not being reported due to the metallurgical testwork nature of the data herein.
Details on the intersections of drill material utilised in testwork are provided above.</td></tr>
<tr><td>Diagrams</td><td>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</td><td>Significant discoveries are not reported. The results describe metallurgical performance of the Project ores based on previous drilling and available core samples. A plan map displaying the location of drill collar from which samples were derived is appended at end of JORC Table 1 document.</td></tr>
<tr><td>Balanced reporting</td><td>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</td><td>Reporting of results in this report is considered balanced.
Full details of the sample preparation in particular for the flotation stage methodology are not provided owing to the commercial sensitivity and intellectual property regarding the methods used.</td></tr>
<tr><td>Other substantive</td><td>Other exploration data, if meaningful and material, should</td><td>Exploration results are not being reported. Metallurgical results are reported in the above</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
exploration data	*be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	ASX release section.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• As described above in ASX release section further work includes: Variable flotation to test metallurgical performance with spatial variations in ore body and optimisation of reagent recipe for the salt water flotation across variable samples.

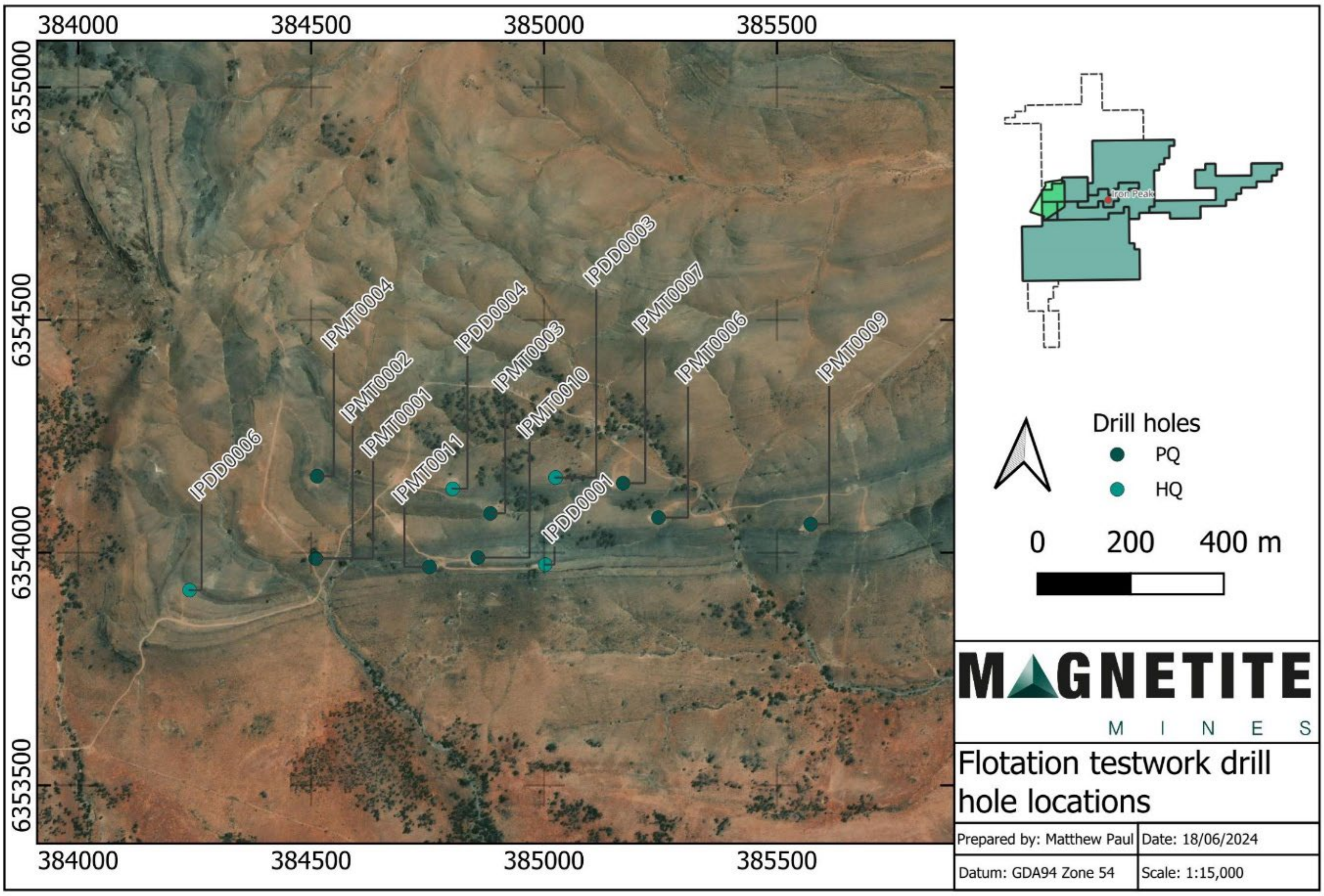

Figure 1 - Plan map of flotation testwork drill hole locations