ASX Announcement
14 December 2023

Project Block 103 / Iron Bear metallurgical test work produces DR grade magnetite concentrate with 70.6% Fe

Cyclone Metals Limited (ASX: **CLE**) (**Cyclone** or **the Company**) is pleased to report the latest results of the first phase of metallurgical test work performed on its flagship Block 103 / Iron Bear Magnetite Iron Ore Project (**Block 103 / Iron Bear**) in Canada.

- **Direct Reduction (DR) magnetite concentrate** produced grading **70.6% Fe** with very low deleterious elements and **silica below 1.2 %** which is world class
- **High recovery rate of over 80%** for total Fe
- The current estimated market price this DR magnetite concentrate **is USD 167/t CFR China**[1] which represents a **premium of 30 USD/t** above the 62% Fe benchmark
- DR concentrate was achieved simply by adding **a reverse flotation step to the Iron Bear Blast Furnace (BF) concentrate** (as outlined in the ASX release dated 28/11/23)
- The **optimum process flow sheet** and associated mass and energy balances have been defined and calibrated. This will flow into the pilot plant design and scoping study – both of which are underway
- The production of **bulk samples** of BF and DR magnetite concentrates using an **industrial grade pilot plant** is planned to commence next week

Cyclone CEO, Paul Berend, commented: *"We have achieved another very exciting milestone in the development of our flagship Iron Bear Project by demonstrating that we can easily produce a world class magnetite DR concentrate grading 70.6% Fe, with ultra-low silica and no deleterious elements. If we can demonstrate that our DR concentrate is a good source material to produce DR grade pellets, then we will be able to provide European steel producers with a realistic solution to reduce the carbon footprint of their existing blast furnace-based steel mills. We still have months of test work ahead of us to conclusively demonstrate this – but we will be able to provide steel mills with large bulk samples of both products as early as Q1 next year. This should enable us to start meaningful JV discussions."*

[1] Based on Fastmarkets 67.5% Fe blast furnace pellet feed concentrate index, 12 Dec 2023 adjusted with the Fe premium

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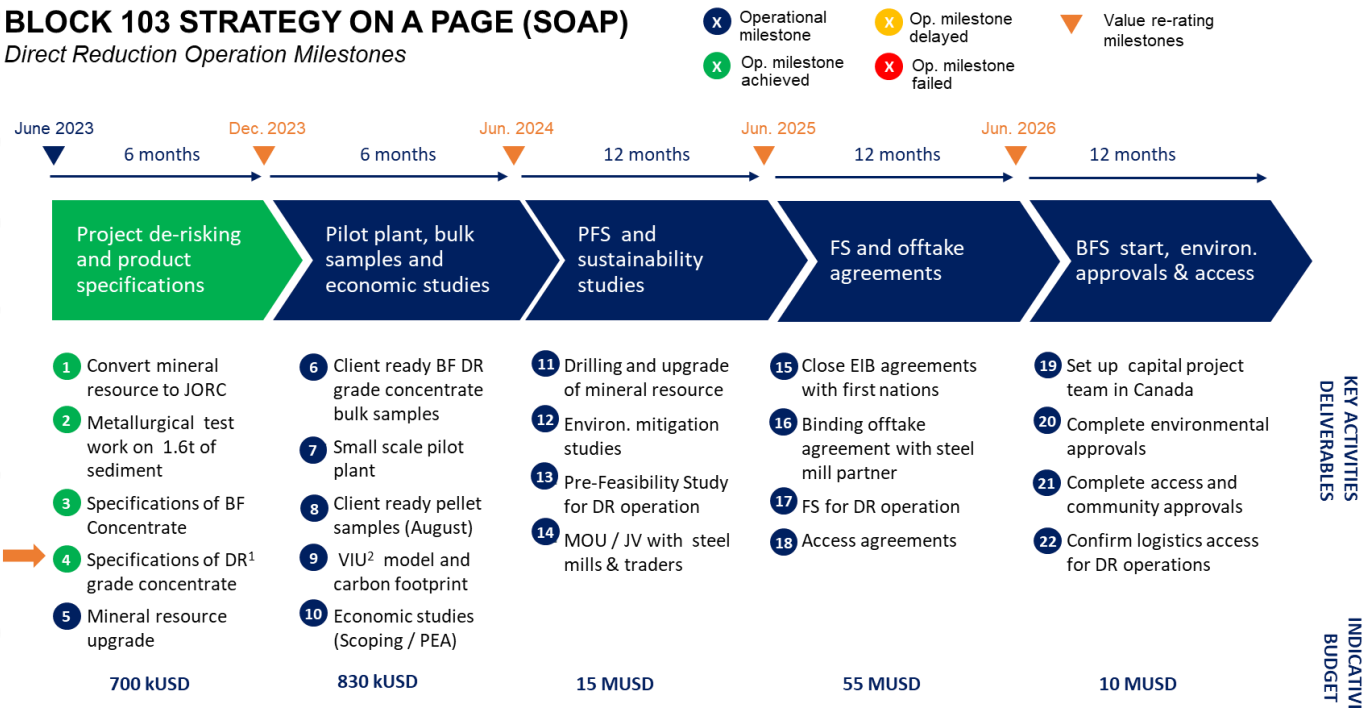
Flash Operational Update

Cyclone is pleased to report that it remains on track to achieve its key Strategy on a Page (SOAP) operational milestones planned in calendar year 2023. Some elements of milestone 5 (mineral resource upgrade) might be delayed until February 2024, but the design of the pilot plant (milestone 7) and delivery of bulk samples (milestone 6) are running ahead of schedule.



The achievement of milestone 4 is significant as it demonstrates that Iron Bear / Block 103 could potentially be one of a handful of iron ore producers with the capability to produce premium DR grade concentrates. These high-quality magnetite concentrates are critical for the steel industry to reduce their carbon footprint and are expected to replace less fuel-efficient Direct Shipping Ores currently produced mainly in Australia and Brazil. Access to a large and low-cost source of DR grade magnetite concentrate could provide a very substantial structural competitive advantage to a steel mill producing in Europe, or exporting to Europe.

Concurrently, the Company is working on upgrading the mineral resource (milestone 5), in terms of size, and more importantly quality. Specifically, we are aiming to upgrade a portion of the mineral resource to JORC indicated status and also increase the size of the JORC inferred status by correlating the high-definition magnetite survey with the drilling results and applying the appropriate geological constraints. It is important to note that the outcome of this geological work is uncertain, and it is possible that no mineral resource upgrade will be achieved.

Cyclone is committed to being transparent with stakeholders and investors and will update progress on the SOAP on a regular basis.

Direct Reduction Concentrate Specifications

Cyclone has engaged Corem based in Quebec City, Canada to complete the metallurgical test work for Block 103 / Iron Bear. Corem established that the following DR magnetite concentrate can be achieved:

% by weight	Fe	SiO_2	Al_2O_3	CaO	MgO	MnO	P_2O_5	S_{total}	TiO_2
DR conc.	**70.6**	**1.2**	***< 0.1***	0.08	0.09	0.06	*< 0.01*	0.005	< 0.01
BF conc.	**68.7**	**3.4**	***< 0.1***	0.15	0.18	0.08	*< 0.01*	0.005	0.01

BF Conc.	K_2O	Na_2O	V_2O_5	ZrO_2	ZnO	FeO	LOI	Other	Sum
DR conc.	*<0.01*	*<0.1*	*<0.01*	*<0.02*	*<0.01*	33.4	-3.23	0.28	99.8
BF conc.	*<0.01*	*<0.1*	*<0.01*	*<0.02*	*<0.01*	31.6	-3.11	0.32	99.5

< = below detection limit.

This DR concentrate is achieved at P80 @ 32 microns with an 80% recovery of total Fe.

Based on a benchmark 62% Fe iron price of USD 137 / t as of 12/12/23, and the applicable blast furnace premiums, the estimated price of the Iron Bear DR Magnetite Concentrate **is USD 167 /t CIF China** which is a 30+ USD/t premium over the benchmark**.** However, ***it is important to note that the value of the DR concentrate is much higher if it is integrated into the production of DR pellets*.**

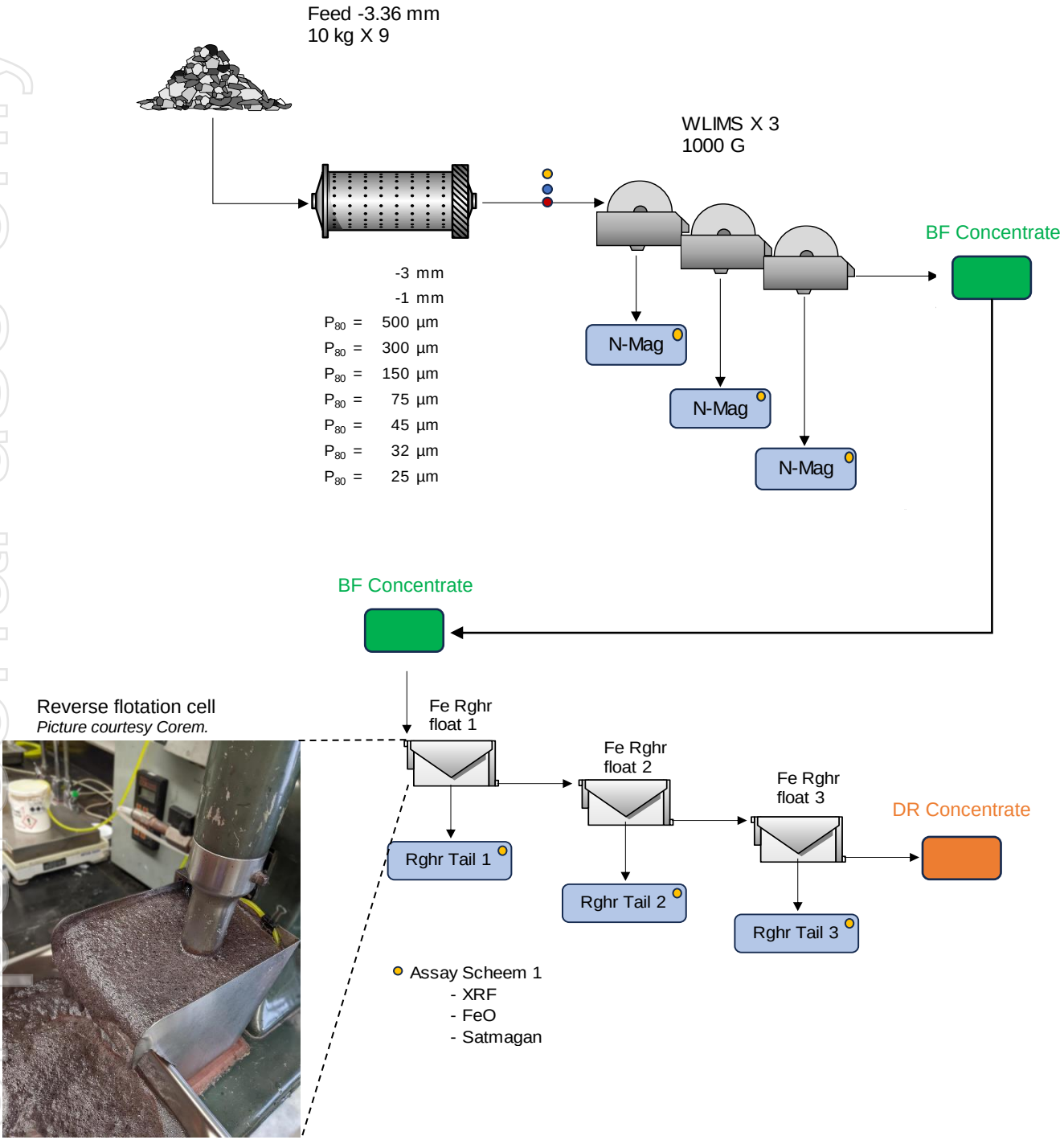
Direct Reduction Production

The DR magnetite concentrate will be our premium magnetite ultra-low silica product which will be used as a feed to produce high value DR pellets. The DR magnetite concentrate will be produced by simply adding a reverse flotation stage to our 'base' BF concentrate and as such can be activated or de-activated based on market conditions and customer requirements.

Corem performed seven reverse flotation test runs to reduce the silica at different grind sizes using two different reagents and various flotation times between 6 and 16 minutes.

The optimum results were achieved at a P80 of 32 microns and 45 microns which delivered the best combination of silica grade reduction and Fe recovery (above 80%). The feed material was the standard Iron Bear BF concentrate which grades 3.4% silica. For information on the details on how the BF concentrate was generated from bulk sediment samples, please refer to ASX release dated 28th of November 2023.

Overview of industrial test work to produce DR concentrate



Announcement authorised for release by the board of Cyclone.

Competent Person Statement

The information in this report that relates to the Block 103 Project has been reviewed and compiled by Jeremy Peters FAusIMM CP (Mining, Geology), a Director of Burnt Shirt Pty Ltd, who has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration 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". Mr Jeremy Peters consents to the inclusion of this information in the form and context in which it appears in this report.

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JORC Code 2012 Table 1

Section 1 Sampling techniques and data.
(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	*Nature and quality of sampling (e.g. 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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.*	For the 2011 drilling, sampling was done on a geological basis, with mostly 3 m samples split coaxially using a mechanical core splitter. Neither field standards or blanks were inserted into the sample stream, but core duplicates were collected. Samples were marked in the core trays using aluminium tags etched with the sample numbers and stapled to the core tray at the end of each sample interval. Neither hand-held measurements of core magnetic susceptibility nor core photography were completed. Core for the 2012 programme was taken to a dedicated core yard where it was similarly split, sampled and photographed.
Drilling techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. 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.).*	The 2011 diamond core drilling programme comprised 42 BTW (42.0 mm Ø) drill holes for 5,662.3 m The 2012 programme consisted of 72 drillholes for 22,359 m at mostly BTW and then NQ (47.6 mm Ø)
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.*	Drill sample recovery was recorded for all drillholes, measuring block to block core recovery against stated depth. The Competent Person considers that due to the nature of the drilling and geology, sample bias is unlikely to result from poor recovery.

Criteria	JORC Code explanation	Commentary
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.*	All core was logged qualitatively and quantitatively for the 2012 downhole geophysics exercise. For the 2011 drilling, logging recorded drillhole azimuth and dip, rock code, rock description, foliation/banding angle with respect to core axis and estimate of magnetite by unit. The above was undertaken with the 2012 drilling in addition to geotechnical logging, core photography and downhole geophysics (refer Section 4.3 of this Report) The Competent Person considers that the logging protocols are sufficient to support estimation of a Mineral Resource.
Subsampling 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 subsampling 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 2011 programme, core was split in the field with a mechanical splitter. For the 2012 programme, core was sawn in half at a dedicated core yard with a diamond saw. Half core was submitted for assay, with some whole core being submitted for both assay, density determination and metallurgical testing. In all cases, appropriate blanks, standards and duplicates were taken or added to demonstrate sample representativity and identify any sampling bias (refer Section 4.4 of this Report). The Competent Person considers to be appropriate the measures taken to demonstrate that sample protocols were appropriate and unbiased.
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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	Samples were sent to one of three laboratories, with standards, blanks, duplicates and cross-laboratory checks undertaken to an appropriate standard (refer Section 4.4 of this Report). Geophysical tools were calibrated at site with the exception of density, where a relative measurement was made (refer Section 4.3 of this Report). The Competent Person considers the measures taken to be appropriate to support estimation of a Mineral Resource.

Criteria	*JORC Code explanation*	Commentary
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.*	Samples were verified with random duplicate samples taken by an independent Mineral Resource estimation consultant (refer Section 6.1.2 of this Report) and cross-check laboratory assaying. The Competent Person considers the measures taken to be appropriate to support estimation of a Mineral Resource
Location of data points	*Accuracy and quality of surveys used to locate drillholes (collar and downhole 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 2012 drilling campaign was surveyed by handheld GPS, with resurveying of collars being undertaken by professional surveyor in 2012. The licences are defined by NAD27 UTM datum and various working grids are NAD83 or NAD84 datum and the relationship between NAD27 and the later systems is not completely defined for the region. Burnt Shirt understands that there are no material errors in location
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.*	Most cross sections contained at least three holes and many had more than ten holes passing through the mineralised zones. Sampling was undertaken on lithological boundaries, composited to 3m intervals in all cases
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 was oriented in the field according to field observations of the strike of the mineralisation, in order to intersect it perpendicularly. The Competent Person considers this to be appropriate and does not consider that this approach will introduce material bias.
Sample security	*The measures taken to ensure sample security.*	Samples were transported from the field to a secure yard in Schefferville where they variously processed and stored. All work was undertaken under a Supervising Geologist.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	The Cap-Ex drilling, sampling and assaying protocols were independently checked by the Mineral Resource estimation consultant in 2013. No material discrepancies or biases were identified.

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.*	Block 103 comprises ten graticular licenses totalling 7,275 ha under applicable Labrador and Newfoundland mining law. Six of the ten licenses were staked by prior owner, Cap-Ex and the other four Licenses were acquired through purchase and sale agreements and remnant royalties remain. Four Aboriginal parties claim Native Title over various parts of Block 103. Refer to Section 2.2 of this Report for details.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	Block 103 was originally explored by IOCC and the Canadian Government. Most of the exploration was undertaken by Cap-Ex Iron Ore, of Vancouver, the predecessor company to M3 Metals Inc, vendor of the project. Refer to Section 4 of this Report for details.
Geology	*Deposit type, geological setting, and style of mineralisation.*	The deposit is a taconite banded ion formation of the Lake Superior type, partially metamorphosed to greenschist facies and subject to thrust faulting that has resulted in tectonic repetition and thickening of mineralisation.
Drillhole information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:* • *easting and northing of the drillhole collar* • *elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole 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.*	Drillhole information is presented in Sections 4.3 and 6.1 of this Report. Mineralised intersections have not been reported in detail because the Competent Person advises that reporting of magnetite mineralisation at Block 103 is complicated by the complex structural geology of the deposit and the nature of reporting mineralisation based on both grade and metallurgical recovery. The Competent Person observes consistent broad intersections of recoverable magnetite, associated with haematite and is satisfied that the drilling information supports this interpretation.
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. 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.*	Drillholes were sampled according to geology and the resultant information composited into 3m composites for modelling, inclusive of internal waste. Magnetite grades were determined by Davis Tube or proprietary Satmagan analysis and compared to the results of downhole magnetic susceptibility measurements. This results in formation of a regression that estimated magnetite grade from total iron grade. The Mineral Resource estimate was based on assay results.

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