



## **ASX Announcement**

10th of October 2024

# Iron Bear completes pilot pellet production run and produces world class direct reduction pellets

#### **HIGHLIGHTS**

- Iron Bear Direct Reduction (DR) pellets achieve world class specifications, grading 67.5% Fe, 1.6% SiO<sub>2</sub>, 0.12% MgO, 0.65% CaO and ultra-low deleterious elements
- Iron Bear DR Pellets have excellent physical properties (CCS 438-486 kg/pellet)
- Iron Bear DR Pellets demonstrated world class reduction and metallisation properties (Linder 1.0, R180 metallisation 99.1%)
- Pelletising pilot test work successfully completed, and the company is now starting small scale industrial production:
  - 18 tons of run of mine sediment collected and ready for processing in the Iron
     Bear pilot plant located at COREM in Quebec City
  - Iron Bear DR concentrate grading 71% Fe and 1.1% silica
  - Iron Bear DR pellets and Iron Bear BF<sup>1</sup> pellets
- Iron Bear plans to start shipping bulk samples of DR pellets and other products to potential off take clients in the Middle East and Europe by Q3 2025 with the objective of establishing commercial off take agreements<sup>4</sup>

Paul Berend, CEO of Cyclone Metals, commented:

"We have successfully produced Direct Reduction Pellets. This is a major milestone for the Iron Bear project. Our DR pellets demonstrated excellent physical and metallisation properties, and we are on track to start shipping bulk samples to potential off take Clients as early as Q2 2025. Direct Reduction pellets are a key enabler to low carbon steel production and sell at a high premium to the 62% Fe benchmark. This premium is currently  $\sim 63.5$  USD/ $t^2$ . The industry standard pelletising conversion cost is  $\sim 15$  USD/t which implies a typical additional cash profit of  $\sim 48.5$  USD/ $t^3$  for DR pellets versus benchmark 62% Fe iron ore"

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<sup>1:</sup> BF Pellet = Blast Furnace pellet – typically with  $SiO_2$  between 3.5% to 5.0%

<sup>2:</sup> Source Fastmarkets as of 30/09/2024: Global DR pellets 67.5% - 62%Fe benchmark

<sup>3.</sup> Depreciation costs for the pellet plant and yield losses need also to be factored in for a complete economic analysis

<sup>4:</sup> No offtake agreements have been established by Iron Bear as of 08/10/2024 and establishing binding offtake agreements in the future is uncertain and should be viewed as an objective which may or may not be achieved





## About The Iron Bear Project

The Iron Bear Project consists of ten licenses totalling 7,275 ha on 291 graticular Mineral Claims which are 100% owned by Cyclone Metals Ltd.

#### **IRON BEAR PROJECT HIGHLIGHTS**

- Asset located in Canada, less than 25km from an open access heavy haul railway connected to an open access iron ore export port
- World class 100% owned Iron ore Mineral Resource of 16.6 billion tonnes @ 29.3 Fe% (Inferred 14.51 billion tonnes and Indicated 2.15 billion tonnes, reported in accordance with the guidelines of the 2012 JORC code) (refer to ASX announcement 11th April 2024)
- Pilot Plant production of high-quality DR grade concentrate<sup>1</sup> grading 71.3% Fe and 1.1% SiO<sub>2</sub> with high yields due to an exceptional low impurity ore body (refer to ASX announcement 23<sup>rd</sup> April 2024)
- Rapid project development plan with **bulk samples of DR and BF concentrates** available for steel mill clients in Q1 2025 and **DR and BF pellets** in Q2 2025
- 5 Cyclone's development plan is focused on establishing an asset-based JV with a Tier 1 miner or steel producer, in order to bring the Iron Bear project to Decision to Mine and provide the CAPEX

#### IRON BEAR ACCESS AND INFRASTRUCTURE

Schefferville is located 25km away from Iron Bear with good infrastructure including direct flights to Sept Isles and is connected by road to Iron Bear.

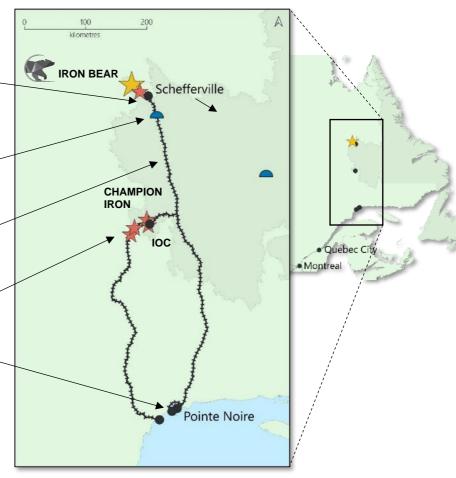
Menihek has the potential to provide low-cost hydropower and is located 70km from Iron Bear

Open access heavy haul rail is available 25km from Iron Bear and is connected directly to Pointe Noire

Champion Iron, IOC (Rio Tinto) Arcelor Mittal and Tata Steel are the regional iron ore producers

Pointe Noire Port is open access with extensive Iron Ore Export Facilities for Capsize vessels





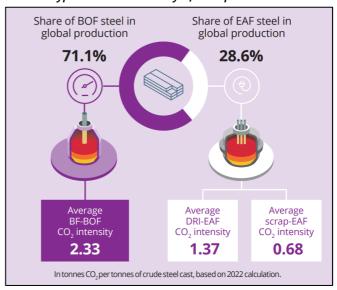




## Introduction to Direct Reduction Pellets

DR pellets are the necessary feed for direct reduction-based steel production (DRI-EAF¹ route), which is a technology to produce steel using natural gas or hydrogen as a reductant, instead of coal. Coal is used in traditional blast furnace steel production (referred to as the BF-BOF² route). The main advantage of DRI-EAF steel making over BF-BOF steel making is the much lower carbon footprint (see chart 1). The carbon footprint of the DRI-EAF route is close to zero when using hydrogen instead of natural gas. Hydrogen based DR steel making is often referred as 'green steel' if the hydrogen is sourced from a renewable source of energy.

Chart 1: Typical carbon intensity of steel production routes<sup>3</sup>



Most DR steel making today is located in the Middle East and to a lesser extent, India and the Americas. The relative proportion of DRI-EAF versus traditional BF-BOF steel mills is increasing due the implementation of various policies and regulations to reduce the carbon footprint of steel production. The most impactful of these regulations is the CBAM (Carbon Border Adjustment Mechanism) which is being rolled out in Europe between 2026 and 2035. CBAM will impose taxes on steel produced, or imported, into Europe based on the carbon footprint. CBAM is expected to increase the costs of steel produced via the BF-BOF route. For this reason, the shift to low carbon steel making is driving a large increase in the production of steel through the direct reduction route (DRI-EAF) in the Middle East, and a large increase in the associated demand for direct reduction pellets which are indispensable for this technology. The world production of DRI-EAF steel was 136 Mt in 2023³, but there is over 100 Mta of additional Direct Reduction Steel capacity announced and planned to start by 2030. This will require an additional 148 Mta of direct reduction pellets by 2030 which is a huge opportunity for Iron Bear.

DR pellets have very specific and hard to replicate metallisation or reduction properties. Subsequently there are only three substantial producers of DR pellets on the seaborne market today: Vale, IOC, and Samarco.

DR pellets command a premium of USD  $63.5/t^4$  versus the 62% Fe reference index. The typical associated pelletising conversion costs are ~ USD 15/t. Therefore, a typical DR pellet producer can expect to achieve an additional net cash profit of approximately USD 48.5/t compared to a 62% Fe concentrate.

It should be noted that the depreciation costs associated with the pelletising plant and yields loss associated with the reverse flotation need also to be factored in a rigorous economic analysis, but this remains very positive changer for profitability in any reasonable scenario.

<sup>1:</sup> DRI – EAF: Direct Reduction Iron – Electric Arc Furnace

<sup>2:</sup> BF – BOF: Blast Furnace – Basic Oxygen Furnace

<sup>3:</sup> Source: World Steel Dynamics – "World Steel in Figures 2024"

<sup>4:</sup> Source Fastmarkets as of 30/09/2024: Global DR pellets 67.5% - 62%Fe benchmark





## Iron Bear Pellet Pilot Test Work

Cyclone has commissioned COREM, a reputable metallurgical laboratory-based Quebec City, to manufacture and test BF and DR pellets based on Iron Bear BF and DR concentrates produced from Iron Bear sediment.

The manufacturing of pellets required two main steps: (1) the production of green balls in a rotating cylinder or disk (see figure 1 below) and (2) the green balls are then fired in a pot grate furnace (see figure 2 below) with a controlled flow of heated air to produce pellets.

Figure 2: Photo of green balls being produced from iron bear concentrate

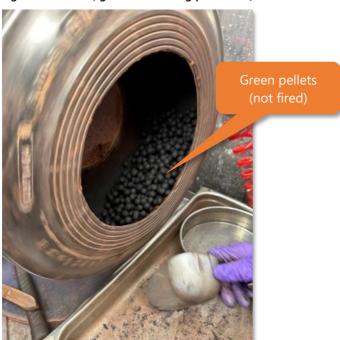


Figure 3: COREM pelletising pot grate furnace and control console

Inside of pelletising pot grate furnace which reaches 1300 C



COREM deep bed pelletising furnace and ancillaries





Figure 4: First Iron Bear pellets produced 28th of August 2024



Fired DR pellets with four different chemistries

Figure 4: Iron Bear technical team; Raymond Martin, Paul Vermeulen, Levi McDonald, Paul Berend, Jeremy Peters



Happy and proud pellet parents

## DR Pellet Pilot Test Work

Cyclone has designed four different chemical compositions for the DR pellets, which have been tested for physical and direct reduction metallisation properties. The chemistry of the tested DR pellets is based on the Iron Bear DR concentrate combined with bentonite and limestone in varying proportions. The resulting chemistry of the four types fired pellets is summarised in the section titled 'Iron Bear DR Pellet Pilot Test Work Results'.





Figure 5: CCS test work (compression) on DR pellets



Numerous tests were conducted on the fired pellets which fall broadly into two categories: physical properties tests and reduction / metallisation tests.

Physical properties tests focus on ensuring that the DR pellets have the required strength to withstand the rough handling in a direct reduction unit and also have the appropriate size and porosity so the reactive gases can permeate the pellet. The most important test referred to in the industry is a CCS¹ test which is a compression test whereby pressure is applied to a pellet until it is crushed. The test is repeated multiple times to determine a statically relevant distribution curve. Figure 5, above, shows the compression test rig used at COREM. CCS test results are expressed in kg/pellet with DR pellets typically requiring a minimum CCS of ~ 230 kg/pellet. The Iron Bear DR pellets demonstrated a CCS of 486-438 kg/pellet which is class leading.

Reduction / metallisation tests focus on ensuring that the fired pellets will convert to Fe in the direct reduction unit with a high metallisation conversion ratio. The reduction tests are specific to the type of direct reduction unit which have different reduction gases and operating conditions. The two main types of reduction units are Midrex and Energiron. COREM has their own direct reduction test protocol which is covers most types of DR units. One of the most popular metallisation test protocols is the Linder test which relates to both the Midrex and Energiron processes (see figure 6). The Linder test results achieved were excellent with a Linder %-3.15mm of 1.0 (lower than the target of <2.0%) and a metallisation ratio of 96.6%. The COREM r180 test delivered a metallisation ratio of 99.1% - which is ... a great result.

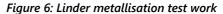






Figure 7: Pellets after Linder metallisation / reduction



1: CCS - Cold Compression Strength

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Iron Bear DR Pellet Pilot Test Work Results (1/2)

## T3432 - Process Design and Characterization of Iron Bear Deposit -Phase 3: assessment of fired pellet quality - Fired pellet chemistry

Elem	ent	B1/B5	B2/B6	B3/B7	B4/B8	B9/B13	B10/B14	B11/B15	B12/B16
SiO <sub>2</sub>	%	1.60	1.59	1.57	1.61	3.52	3.50	3.44	3.46
Al <sub>2</sub> O <sub>3</sub>	%	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1
Fe <sub>Total</sub> (XRF)	%	68.1	67.5	67.4	67.1	65.9	66.3	63.9	63.4
FeO	%	<0.3	0.3	<0.3	<0.3	<0.3	<0.3	1.7	0.6
MgO	%	0.1	0.12	0.12	0.12	0.21	0.21	0.23	0.7
CaO	%	0.18	0.65	1.01	1.33	0.95	0.58	3.76	4.08
Na₂O	%	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.1
K <sub>2</sub> O	%	0.014	0.011	<0.01	<0.01	0.012	0.012	0.016	0.017
TiO <sub>2</sub>	%	0.022	0.017	0.02	0.026	0.028	0.022	0.022	0.028
MnO	%	0.05	0.04	0.03	0.04	0.05	0.05	0.06	0.06
P <sub>2</sub> O <sub>5</sub>	%	<0.010	<0.010	<0.010	<0.010	<0.010	0.011	<0.010	0.013
V <sub>2</sub> O <sub>5</sub>	%	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
ZrO <sub>2</sub>	%	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ZnO	%	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
LOI	%	<0.10	<0.10	<0.10	<0.10	0.11	0.10	<0.10	<0.10
S <sub>Total</sub>	%	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01

Iron Bear DR pellet (selected)





## Iron Bear DR Pellet Pilot Test Work Results (2/2)

## T3432 - Process Design and Characterization of Iron Bear Deposit - Phase 3: assessment of fired pellet quality - Basket tests

Firing #			P-1A and P-3A (DR)			
Balling #			B1/B5	B2/B6	B3/B7	B4/B8
		Concentrate	Iron Bear DR concentrate @ 71%Fe			
		% Bentonite	0.9	0.9	0.9	0.9
Pellet Feed	Dhysical and Chemistry	% Flux (Limestone)	0	0.92	1.58	2.20
Pellet Feed	Physical and Chemistry	% Flux (Dolomite)	-	-	-	-
		%-45 microns**	97.7	97.4	97.2	97.1
		Blaine**	1925	1940	1950	1960
	Moisture	%	10.1/10.0	10.4/10.4	10.3/10.2	10.1/10.3
Green balls	Drop	-	9/10	13/14	11/13	11/10
Green bans	Wet strength	kg/pel.	1.7/1.7	1.8/1.9	1.9/1.9	2.0/1.8
	Dry strength	kg/pel.	7.5/8.7	8.3/8.3	7.9/8.2	8.6/9.0
Firing	Strategy				orem	
ı ıı ıııy	T° peak firing	(°C)		1	260	
	Chemistry	% Fe <sub>tot</sub>	68.1	67.5	67.4	67.1
		% FeO	<0.3	0.3	<0.3	<0.3
		%SiO <sub>2</sub>	1.6	1.6	1.6	1.6
		%Al <sub>2</sub> O <sub>3</sub>	<0.1	<0.1	<0.1	<0.1
		%CaO / %SiO <sub>2</sub>	0.11	0.41	0.64	0.82
		%MgO	0.1	0.1	0.1	0.1
		Avg	397/363	486/438	460/447	445/454
	Compression (kg/pel.)	Std	71/72	86/84	77/72	78/71
		<b>% -140</b>	0/0	0/0	0/0	0/0
Fired Pellets		<b>%</b> -90	0/0	0/0	0/0	0/0
	Mini-Tumble	% -0.5 mm	2.5	1.5	1.2	1.6
	Porosity	%	25.7	25.4	25.7	26.6
	Satmagan	%	<0.2	<0.2	<0.2	<0.2
	DR90	% red.	88.7	89.6	91.5	94.3
		% met.	83.8	85.1	87.8	91.8
	COREM R180	% red.	98.8	99.1	98.3	98.0
		CSAR (kg/pel.)	-	151	-	-
	Linder	%-3.15mm	10.2	1.0	1.6	2.7
		CSAR (kg/pel.)	23	41	47	50
		% Met. <sup>+</sup>	95.0	96.6	94.5	94.7

Iron Bear DR pellet (selected)





## Small Scale Production of Direct Pellets and Off Take Agreements

Expanding on the successful pilot production of DR pellets, Iron Bear's next key milestone is to establish off take agreements with steel mills and/or trading houses, who require a reliable supply of DR pellets for their existing or future direct reduction units. As mentioned previously, we believe that there will be a shortage of DR pellets – approximately 148 Mta by 2030 - based on an analysis of the DR steel production units coming online. These offtake agreements may provide cash for the development of the Iron Bear project and facilitate raising the CAPEX after Decision to Mine.

It is important to note that Iron Bear has not established any offtake agreements as of 08/1/2024 and that achieving an offtake agreement in the future is uncertain.

To achieve this, Iron Bear has collected 18t of representative life of mine sediment which has been delivered to COREM and is currently being processed (see figure 8).

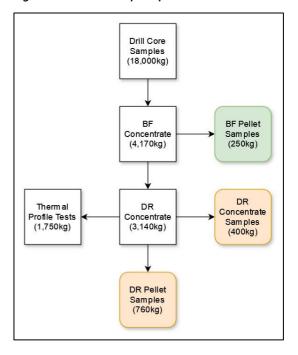




Iron Bear is planning to produce DR pellets which will be shipped to target Clients so they can perform their own metallurgical test work to validate the quality of the Iron Bear pellets for their specific application. These applications will likely include low carbon steel production applications for European steels to mitigate the effects of the roll out of the CBAM carbon taxes. This may form the basis for off take agreements which could be concluded as early as Q3 2025<sup>1</sup>.

Figure 9 (to the right) summarises the mass balance of the small-scale pilot run which has been started at COREM. Part of the program such as the thermal profile tests are pre-cursors to the Pre-Feasibility Study / FEL2 for the pellet plant.

Figure 9: Small scale pilot plant run mass balance







Cyclone is not aware of any new information or data that materially affects the information included in the announcement "Significant Mineral Resource Upgrade for Project Iron Bear" announced on the 11<sup>th</sup> of April 2024 and, all material assumptions and technical parameters underpinning the Mineral Resource estimate continue to apply and have not materially changed.

This announcement has been approved by the Company's board of directors.

## **Compliance Statements**

#### Forward-Looking Statements

This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning the Company's planned exploration program and other statements that are not historical facts. When used in this document, the words such as "could," "plan," "expect," "intend," "may", "potential," "should,", "further" and similar expressions are forward-looking statements. Although the Company believes that its expectations reflected in these forward- looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that further exploration will result in additional Mineral Resources.

#### **Competent Persons**

Metallurgy and processing information has been reviewed and compiled by Paul Vermeulen MAusIMM, MAIST, a Director of Vulcan Technologies Pty Ltd, who has sufficient experience which is relevant to the method of processing 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 Vermeulen consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

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## JORC Code 2012 Appendix Table 1

## Section 1 Sampling techniques and data.

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	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	Samples for the metallurgical programme were selected from the blast furnace and direct reduction concentrates produced by COREM, undertaken by Cyclone Metals Limited.
		Samples were selected whole core and cut core stored on site at Schefferville. Cyclone supervising geologist selected random interval of core considered to be representative of the mineralisation as a whole.
	calibration of any measurement tools or systems used.  Aspects of the determination of mineralisation that are Material to the Public Report.	Core was emptied from trays into bulka bags which were sealed and labelled for transport to COREM.
	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	All assumptions/data relating to the blast furnace and direct reduction concentrates were released on 23 April 2024 and continue to apply.
	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.	The metallurgical test work program was completed by COREM, comprising the small-scale production of pellets from blast furnace and direct reduction concentrate.
Drilling	Drill type (e.g. core, reverse circulation, open-hole	No new exploration drilling was undertaken.
techniques	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.).	All core is diamond drill core.
		All assumptions/data related to the MRE dated 11 April 2024 continue to apply.
Drill	Method of recording and assessing core and chip	No new exploration drilling was undertaken.
sample recovery	sample recoveries and results assessed.  Measures taken to maximise sample recovery and ensure representative nature of the samples.	Whole trays were selected each tray containing around 6m of diamond drill core.
	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.	





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.	No new exploration drilling or logging was undertaken.  Metallurgical samples had their downhole interval, drillhole number, and core tray number recorded.
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.	All assumptions/data related to the MRE dated 11 April 2024 continue to apply.  Whole core was selected and compared to the original drill logs.  All assumptions/data relating to the blast furnace and direct reduction concentrates were released on 23 April 2024 and continue to apply.  After homogenisation of concentrates, mixing with pre-defined recipes of bentonite and limestone were performed. Post-production analysis of produced pellets verify the calculated results and thus the mixing percentages.  ISO tests of produced pellet qualities were performed to ISO standards.





Criteria	JORC Code explanation	Commentary
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.	The metallurgical test work was undertaken in an accredited laboratory with formalised standards and checks and the Competent Person observed these procedures being enacted.
	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.	The Competent Person considers the measures taken to be appropriate to support the reported pellet metallurgical results.  The Competent Person witnessed firing of pellets in the COREM pot-grate facility, and Cold Compressive Strength (CCS) and Linder tests on selected pellet quality samples.  The Competent Person considers the measures taken to be appropriate to support reporting of metallurgical results.
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.	No new exploration drilling or sampling was undertaken.  The purpose of this exercise was to determine metallurgical characteristics of the Iron Bear concentrates.  The Competent Person personally supervised COREM's work, and samples were collected under the supervision of Cyclone's geological Competent Person.  All assumptions/data related to the MRE dated 11 April 2024 continue to apply.
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.	No new exploration or drilling was undertaken.  Cyclone has verified the location of Iron Bear drill collars in NAD 27.  All assumptions/data related to the MRE dated 11 April 2024 continue to apply.
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	No new exploration drilling was undertaken.  Drilling was predominantly orthogonal to the dip of the mineralisation and is not considered to introduce material bias.  All assumptions/data related to the MRE dated 11 April 2024 continue to apply.

assessed and reported if material.





Criteria	JORC Code explanation	Commentary
Sample security	The measures taken to ensure sample security.	For the 2023/2024 metallurgical programs, palleted samples were stored at COREM, in Quebec City, in a locked storage unit, with chain of custody procedures.  The Competent Person does not consider that sample security has been compromised in any meaningful manner.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No external audits have been completed.  Cyclone uses external consultants to verify it's processes.

#### **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.	Iron Bear 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
	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.	through purchase and sale agreements and remnant royalties remain. Four Aboriginal parties claim Native Title over various parts of Iron Bear.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Iron Bear 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.
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	No new exploration or drilling was undertaken.  All assumptions/data related to the MRE dated 11 April 2024 continue to apply.
	<ul> <li>down hole length and interception depth</li> <li>hole length.</li> <li>If the exclusion of this information is justified on</li> </ul>	





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.	

Criteria	JORC Code explanation	Commentary
Data aggregation methods  Relationship between mineralisation widths and intercept lengths	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.  These relationships are particularly important in the reporting of Exploration Results.  If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.  If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not	No new exploration or drilling was undertaken.  All assumptions/data related to the MRE dated 11 April 2024 continue to apply.  For the 2023/2024 metallurgical programs, drill core was selected in such a manner that it is considered to be representative of the average properties of the entire orebody.  No new exploration or drilling was undertaken.  All assumptions/data related to the MRE dated 11 April 2024 continue to apply.
Diagrams	known').  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 drillhole collar locations and appropriate sectional views.	No new exploration or drilling was undertaken.  All assumptions/data related to the MRE dated 11 April 2024 continue to apply.
Balanced reporting	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.	No new exploration or drilling was undertaken.  All assumptions/data related to the MRE dated 11 April 2024 continue to apply.





Other
substantive
exploration
data

Other exploration data, if meaningful and material, should 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.

No new exploration or drilling was undertaken.

All assumptions/data related to the MRE dated 11 April 2024 continue to apply.

	samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
Criteria	JORC Code explanation	Commentary
Further work	The nature and scale of planned further work (e.g. 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.	Mineralisation is open along strike in both directions and at depth, albeit truncated by basement at around 480m beneath the surface topography.  The Competent Person recommends that the Indicated Mineral Resource be used to underpin an economic Scoping Study (as defined by the JORC Code) of the mineralisation.