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The Company Announcements Office, ASX Limited

26 June, 2023

Robe Mesa Iron Ore Project, Pilbara

Robe Mesa iron ore confirmed as suitable substitute for established iron ore brands

Highly successful tests show CZR's ore can readily replace Rio's Robe River and FMG's blended fines in Chinese steel mills, paving the way for CZR to source project funding

CZR Resources Ltd (ASX: CZR) refers to its announcement today titled "Robe Mesa iron ore confirmed as suitable substitute for established iron ore brands." Inadvertently JORC Table 1 sections 1 and 2 were not included with the announcement.

As such please see attached the unchanged full announcement, now with the inclusion of JORC Table 1 sections 1 and 2 and drill collar location table.

This announcement is authorised for release to the market by Stefan Murphy, Managing Director of CZR Resources Ltd.

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Highlights

- **Samples of the Robe Mesa Fines were assessed using laboratory scale sinter pot tests; Each sample replaced well-established Rio Tinto Robe River fines and FMG blended fines in standard Chinese steel mill sinter plant blends**
- **The sinter test work represented a range of product options from startup, potential low grade and life of mine Robe Mesa products; All showed excellent sinter characteristics**
- **The tests showed Robe Mesa iron ore can confidently be used in place of Robe River fines and FMG blended fines with little impact on overall sinter performance and metallurgical outcomes**
- **The results also highlight the potential to increase Ore Reserves with low-grade iron ore, stockpiled but not processed in the current mine plan**
- **The successful test work paves the way for CZR to source funding from strategic investors and iron ore market participants, with Robe Mesa iron ore in high demand**
- **Robe Mesa is strategically located immediately north of Rio's Mesa F iron ore project; CZR also owns the Robe Mesa South project immediately south of Mesa F**

CZR Resources Ltd (ASX: CZR) is pleased to announce another key milestone in the development of its Robe Mesa iron ore project, with pivotal tests showing iron ore produced from Robe Mesa can be used as a substitute for Rio Tinto and FMG iron ore in Chinese steel mills.

The results are considered extremely successful because they show that Robe Mesa iron ore is commercially valuable and therefore pave the way for CZR to source project funding to develop Robe Mesa.

Three composite samples were tested by the research and engineering division of the Shougang Group, China, representing the staged development at Robe Mesa. They also tested a lower-grade specification iron ore that is mined (as waste) but not currently included in the Robe Mesa Ore Reserve estimate.

The results demonstrate that Robe Mesa iron ore can replace well-established and sought-after Robe River Fines (Rio Tinto) and FMG Blended Fines and contribute up to 20% of a standard Chinese sinter blend.

CZR Managing Director Stefan Murphy said: "This is a hugely important outcome for CZR because it shows our ore can readily replace ore from FMG and Rio Tinto in standard Chinese steel mills.

"This means it is strategically and commercially valuable and will be highly sought after by steel mills and commodity traders.

"This strong demand outlook gives us a number of potential project funding options, including strategic investors and iron ore market participants.

"The results also show that our low-grade iron ore is a desirable product and we will now look to bring it into the Robe Mesa production plan and Ore Reserve estimate".

CZR recently announced a substantial increase in the Robe Mesa Ore Reserves to 27.3Mt, with an additional 3.4Mt of low-grade material (see ASX Announcement 8 May 2023). CZR will now optimise its Robe Mesa product offering based on the results of the sinter test work, to produce a long-term and viable substitute for well-known iron ore brands in the marketplace.

Test work Summary

CZR engaged the research and engineering division of the Shougang Group to perform a sinter testwork program for the Robe Mesa DFS and provide supporting product information to off-take partners, steel mills and financiers.

Rio Tinto's Robe River Fines and FMG Blended Fines were selected to be substituted on the basis of their chemistry and, in the case of the Robe River ores, mineralogical similarity to the Robe Mesa product. The Robe Mesa fines was added to the blend replacing the Robe River or FMG Blended ores in 5% increments until the Robe Mesa ore made up 20% of the total blend.

To ensure a thorough evaluation of the Robe Mesa product, three blended samples were produced. The basis and chemistry of these is shown in Table 1 and also shown for reference is the target grade for the Robe Mesa project and the chemistry of the two substitute ores.

Table 1: Robe Mesa sinter samples & Substitute Ores

Sample ID	Represents	Fe (%)	SiO2 (%)	Al2O3 (%)	P (%)	LOI (%)
ORE SPEC	Project product typical specification	55.5	6.4	2.9	0.038	10.9
SINT_01	Upper zone startup ore	55.9	5.9	2.7	0.037	11.4
SINT_02	Upper zone low grade option	54.0	7.9	3.2	0.039	11.3
SINT_03	LOM Upper and Lower blended ore	55.7	6.2	2.9	0.045	11.1
Robe River[1]	Rio Tinto Robe River Fines product	55.4	5.1	3.0	0.037	11.4
FMG Blend[1]	FMG Blended fines product	58.2	6.5	2.2	0.090	6.9

1. Product specifications of branded materials provided and tested by Shougang

All three Robe Mesa ("SINT") samples were found to sinter well in the selected blend with minimal impacts on sinter metallurgical properties at a wide range of substitution levels.

The sinter test work of the three composites, which represent a range of product options from startup, potential low grade and life of mine products all showed excellent sinter characteristics given their relatively high gangue content.

In summary, the Robe Mesa ores can confidently be used in place of the higher grade FMG blended fines with little impact on overall sinter performance and metallurgical outcomes and substitution of the Robe River fines can also be confidently achieved.

The test work also highlighted the relatively coarse nature of the Robe Mesa ores. This aspect is recommended for further work to investigate and optimise size distribution of the Robe Mesa fines product.

Sinter Tests

Shougang executed a number of benchmark tests to set the baseline in terms of sinter performance, fuel loading and feed moisture content. These baseline tests become the reference point for comparison when the blend substitution tests with the Robe Mesa ores are completed.

The benchmark conditions were selected for each replacement test and then each of the Robe Mesa samples was substituted into the blend by replacing a corresponding quantity of Robe River and FMG Blended fines. The Robe Mesa samples were stepped up from 5% to 20% in 5% increments.

SINT_01 Test Sample (startup specification)

SINT_01 was developed to assess the likely startup ore to be shipped from the project for the first 18 months when production is entirely from the upper zone.

The test work shows that a direct replacement of up to 10% Robe River fines or FMG Blended fines will be acceptable with minimal impact on the overall rates of production and sinter outputs. Substitution of Robe River fines or FMG Blended fines with the Robe Mesa fines (SINT_01 startup specification) at all levels has very little effect on the metallurgical properties of the resulting sinter.

SINT_02 Test Sample (low-grade specification)

SINT_02 was a dedicated low grade option to assess the sinter performance of this material in the event the mine plan and economic conditions allow for the processing of large stockpiles of this low-grade iron ore.

Whilst the SINT_02 low grade composite is not currently a planned product of the Robe Mesa project, the test work shows that this material could replace Robe River Fines at levels up to 10% in the blend tested with minimal impact on the sinter performance. The impacts on sinter metallurgical properties is marginal with a slight improvement seen in the sinter reduction degradation index (RDI).

The test work also shows that the SINT_02 could replace FMG Blended fines at levels up to 20% in the total blend (i.e. totally replace the FMG Blended fines) with only a small decrease in sinter productivity and little other impact on the overall performance of the sinter process, inclusive of resulting sinter metallurgical properties.

This is an excellent outcome for this low grade material and offers some potential to be explored with offtakers and steel mills.

SINT_03 Test Sample (standard specification)

SINT_03 was developed to represent the bulk of production from the Robe Mesa project. It is a blend of the upper and lower zones at target chemistry.

SINT_03 substitution of Robe River Fines up to 10% has very little impact on the overall performance of the sinter process and shows an improvement in the resulting sinter RDI with a small negative impact on the sinter reducibility index (RI) at high blend substitution rates.

SINT_03 can be used to replace FMG Blended fines at levels of 20% in the tested blend scenario (i.e. totally replace the FMG Blended fines) with little to no effect on the overall sintering process and resultant sinter metallurgical properties.

Differential Thermal Analysis

The analysis of the crystal water of the five iron ore fines shows that the decomposition temperature range of the crystal water of those iron ore fines is similar. This is as expected with ores containing a large amount of goethite. All five products can complete the decomposition of crystal water in the preheating section during sintering, so the crystal water decomposition process should not increase solid fuel consumption.

Particle Size Distribution

The three Robe Mesa samples were prepared in the laboratory using drill core as the sample source to produce a nominal 12mm iron ore fines product with around 5% +12mm. The resulting Robe Mesa blends had generally coarser particle size distributions than the substitute ores of Robe River and FMG blended fines.

Table 2: Particle Size Comparisons

Sample ID	>8mm	8 - 5mm	5 - 3mm	3 - 1mm	1 - 0.5mm	<0.5mm
	%	%	%	%	%	%
SINT_01	40.9	16.5	12.5	16.5	3.3	10.2
SINT_02	55.7	12.2	10.8	11.6	1.1	8.6
SINT_03	38.4	12.6	15.6	19.0	1.5	12.9
Robe River Fines	15.7	23.1	19.1	25.0	6.9	10.3
FMG Blended Fines	12.0	20.3	22.2	34.8	7.6	3.2

As a result of the sinter test work program, the target top size for Robe Mesa has now been amended to P85 8mm, reflecting the particle size distribution of the proposed substitute products of Robe River fines and FMG Blended fines. The top size of the Robe Mesa fines ores can be reduced with little to no impact on the broader project in the areas of process design and equipment selection. A reduction to a nominal 8mm top size is a relatively small change within the configuration of a Pilbara style iron ore direct shipping ore crushing and screening plant.

High Temperature Sintering Characteristics

The findings from the test work show there to be no concerns or adverse impacts attributable to the assimilation temperatures for the Robe Mesa samples, with Shougang noting “the minimum assimilation temperature of three iron ore fines from (Robe Mesa) is 1205℃, which is the same with Robe River fines and similar to FMG Blended fines (1215℃). Generally, all the five iron ore fines have excellent assimilation performance. The liquid phase fluidity for the three Robe Mesa samples shows relatively normal results according to Shougang.

This announcement is authorised for release to the market by the Board of Directors of CZR Resources Ltd.

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Forward Looking Statements

This announcement contains "forward-looking information" that is based on CZR's expectations, estimates and projections as of the date on which the statements were made. This forward-looking information includes, among other things, statements with respect to the pre-feasibility study, CZR's business strategy, plan, development, objectives, performance, outlook, growth, cashflow, projections, targets and expectations, mineral resources, ore reserves, results of exploration and related expenses. Generally, this forward looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'likely', 'believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. Persons reading this announcement are cautioned that such statements are only predictions, and that CZR's actual future results or performance may be materially different. Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause CZR's actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking information.

Forward-looking information is developed based on assumptions about such risks, uncertainties and other factors set out herein, including but not limited to general business, economic, competitive, political and social uncertainties; the actual results of current exploration activities; conclusions of economic evaluations; changes in project parameters as plans continue to be refined; future prices and demand of iron and other metals; possible variations of ore grade or recovery rates; failure of plant, equipment or processes to operate as anticipated; accident, labour disputes and other risks of the mining industry; and delays in obtaining governmental approvals or financing or in the completion of development or construction activities. This list and the further risk factors detailed in the remainder of this announcement are not exhaustive of the factors that may affect or impact forward-looking information. These and other factors should be considered carefully, and readers should not place undue reliance on such forward-looking information. CZR disclaims any intent or obligations to revise any forward-looking statements whether as a result of new information, estimates, or options, future events or results or otherwise, unless required to do so by law.

Statements regarding plans with respect to CZR's mineral properties may contain forward-looking statements in relation to future matters that can only be made where CZR has a reasonable basis for making those statements. Competent Person Statements regarding plans with respect to CZR's mineral properties are forward looking statements. There can be no assurance that CZR's plans for development of its mineral properties will proceed as expected. There can be no assurance that CZR will be able to confirm the presence of mineral deposits, that any mineralisation will prove to be economic or that a mine will successfully be developed on any of CZR's mineral properties.

Competent Persons Statements

The information in this announcement that relates to exploration activities and exploration results is based on information compiled by Stefan Murphy (BSc), a Competent Person who is a Member of the Australian Institute of Geoscientists. Stefan Murphy is Managing Director of CZR Resources, holds options in the Company and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a 'Competent Person' as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC Code). Stefan Murphy has given his consent to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

The scientific and technical information in this report that relates to process plant, metallurgy and metallurgical factors and assumptions is based on information reviewed by Aaron Debono of NeoMet Engineering who is a Fellow of the AusIMM. Mr Debono 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). Mr Debono has given his consent to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

Appendix A– Robe Mesa Mineral Resource and Ore Reserves

Table A1. Robe Mesa Mineral Resource Estimate (CZR release to ASX; 12 December 2022)

Cut-Off Grade	Category	Tonnes Mt	Fe %	SiO2 %	Al2O3 %	P %	S %	LOI %	Fe_{ca} %
55% Fe	Indicated	36.0	56.0	5.9	2.8	0.04	0.02	10.6	62.7
	Inferred	9.2	56.1	5.6	2.7	0.04	0.02	10.8	62.9
	Total	**45.2**	**56.0**	**5.8**	**2.8**	**0.04**	**0.02**	**10.7**	**62.7**
50% Fe	Indicated	71.8	54.4	7.5	3.3	0.04	0.02	10.7	61.0
	Inferred	17.8	54.3	7.6	3.3	0.04	0.02	10.8	60.8
	Total	**89.6**	**54.4**	**7.5**	**3.3**	**0.04**	**0.02**	**10.8**	**61.0**

Table A2. Robe Mesa JORC 2012 Ore Reserve (CZR release to ASX; 8 May 2023).

Ore Reserve	Tonnes	Fe	SiO_2	Al_2O_3	P	S	LOI	Fe_{ca}
	Mt	%	%	%	%	%	%	%
Probable	27.3	55.5	6.4	2.9	0.038	0.02	10.9	62.2

Table A3. P529 (Robe Mesa South) JORC 2012 Inferred Mineral Resource reported above a 50% Fe cut-off grade (9 May 2017 ASX Announcement).

Category	Tonnes	Fe	SiO_2	Al_2O_3	P	S	LOI	Fe_{ca}
	Mt	%	%	%	%	%	%	%
Inferred	4.2	53.0	9.1	3.9	0.04	0.01	10.4	59.2

Table A4. Robe East JORC 2012 Inferred Mineral Resource estimate reported above a 50% Fe cut-off grade (CZR release to ASX; 26 April 2017).

Category	Tonnes	Fe	SiO_2	Al_2O_3	P	S	LOI	Fe_{ca}
	Mt	%	%	%	%	%	%	%
Inferred	4.6	51.8	9.7	3.8	0.1	0.02	10.9	58.2

Fe_{ca} is the calcined iron-content calculated as (Fe%/(100-LOI%))*100 *and represents the amount iron after the volatiles (mainly held as weakly bound water in the structure of the hydrous iron-rich minerals) is excluded from the analysis.*

Note: *CZR confirms that it is not aware of any new information or data that materially affects the information included in the CZR announcements to the ASX on 26 April 2017, 9 May 2017, 12 December 2022 and 8 May 2023 and, in the case of estimates of the Mineral Resources in Tables A1, A3, A4, and Ore Reserves in Table A2, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed*.

Appendix B– Location of Robe Mesa Metallurgical Diamond Drill Holes

YAR_DDH_2022_Collar File							
Hole ID	**Tenement**	**Collar Y**	**Collar X**	**Collar Z**	**Azimuth**	**Dip**	**Depth**
YAR_DDH_001	E08/1060	7593925	397907	149	0	-90	61.9
YAR_DDH_002	E08/1060	7593926	398243	149	0	-90	60.9
YAR_DDH_003	E08/1060	7593716	397725	149	0	-90	62.5
YAR_DDH_004	E08/1060	7593732	397952	146	0	-90	69.7
YAR_DDH_005	E08/1060	7593788	398176	147	0	-90	54.2
YAR_DDH_006	E08/1060	7593573	397725	144	0	-90	56.7
YAR_DDH_007	E08/1060	7593578	397969	144	0	-90	54
YAR_DDH_008	E08/1060	7593226	397390	147	0	-90	65.2
YAR_DDH_009	E08/1060	7593317	397792	144	0	-90	53.2
YAR_DDH_010	E08/1060	7593027	397451	148	0	-90	63.7
YAR_DDH_012	E08/1060	7592935	397634	142	0	-90	54.4

Appendix C – 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.*	Samples for the DFS metallurgical program were recovered from the deposit area by use of PQ sized diamond drilling. Samples used in this testwork were selected by a Mr Aaron Debono, consulting Metallurgist from NeoMet Engineering.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	The diamond drilling program was specifically planned with the objective of providing core for metallurgical testwork. The program included 11 holes spaced laterally across the deposit and all drilled to geological basement, to ensure the core represented the entire extents of the orebody. PQ core diameter was elected to ensure large representative samples were attained, and all core was collected, stored and transported for inspection and sample selection by a metallurgist.
	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.	The diamond holes were specifically designed for metallurgical testwork. Each of the holes were designed as twins to existing RC holes in the deposit, which all have downhole assays at a 1m composite intervals. The grades from the RC twins were used to validate and guide sample selection for the metallurgical testwork.
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).*	All drilling was conducted using diamond core method with PQ core diameter to attain large core samples and triple-tube technique was employed to preserve core quality. The holes were all drilled vertically, negating the requirement for core to be orientated.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	The diamond drillers were required to record core recovery for each 'run'. 1.5m runs were elected as the preferred method, to again ensure core recovery. The core recovery records were validated by the onsite geologist during logging and input into the geological database as a recovery field.

Criteria	JORC Code explanation	Commentary
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Triple tubing technique and reduced 1.5m core runs were employed to ensure that core quality was best preserved.
	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.	Due to the strong controls put in place to preserve core quality, all geological domains were well preserved by the drilling and there is no bias existing between sample recovery and grade.
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.*	All the diamond core was photographed, described geologically for colour, texture and have an estimate of mineralogical abundance.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Logging of diamond core is qualitative.
	The total length and percentage of the relevant intersections logged.	Entire drill-holes are logged.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	Whole core samples were taken for the metallurgical testwork.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	No non-core samples used
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	As whole core was recovered, the material sampled is considered representative of the in-situ geology. QAQC techniques are employed on the drill rig to ensure maximum core recovery and that core depth is consistent with progressive drill depth.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	As above
	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.	As above All diamond drill holes were twinned with existing RC drill holes
	Whether sample sizes are appropriate to the grain size of the material being sampled.	As above
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.*	All chemical analysis was completed by Ultratrace (Bureau Veritas) commercial laboratories. Chemical analysis was completed using industry standard XRF analysis. Loss on ignition was completed using TGA.
	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.	No hand-held geophysical tools or hand-held analytical tools were used for the reported results.

Criteria	JORC Code explanation	Commentary
	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.	Bureau Veritas standard procedures were employed for standards and blanks. No additional standards, blanks or external laboratory checks were completed
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Significant intersections were determined using geologist logs from site logging, RC twin hole assays and independent metallurgical logging at the time of sample selection.
	The use of twinned holes.	The diamond holes used to produce the metallurgical samples being reported have twinned RC holes, so that grade and geological domains can be interpreted for the metallurgical testwork.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	As per Bureau Veritas standard procedures
	Discuss any adjustment to assay data.	No adjustments made to assay data
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.*	All diamond drillholes used to collect samples for the reported metallurgical results were picked up by DGPS with an accuracy of 0.1m by a licenced survey company.
	Specification of the grid system used.	The grid system is MGA GDA94, zone 50, all Easting's and Northing's are reported in MGA co-ordinates.
	Quality and adequacy of topographic control.	All diamond drillholes used to collect samples for the reported metallurgical results were picked up by DGPS with an accuracy of 0.1m by a licenced survey company and high resolution LIDAR survey has been completed over the deposit
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	11 diamond holes were evenly spaced out laterally across the entire of the deposit, to ensure that the entire area was appropriately represented by the metallurgical results. All diamond drill holes were drilled into geological basement, ensuring all downhole units were also represented.
	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.	The data spacing is sufficient to represent the entirety of the mesa deposit.
	Whether sample compositing has been applied.	No sample compositing used

Criteria	JORC Code explanation	Commentary
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.*	Mineralisation is contained within a sub-horizontal sheet and the vertical drill-holes and associated sampling collects representative material through the mineralised zone.
	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.	The drill orientation was selected to minimise any sampling bias. Diamond holes were drilled vertically, which is most appropriate orientation to sample the stratified deposit.
Sample security	*The measures taken to ensure sample security.*	Core samples were stacked on pallets and strapped down. The core was picked up by a private courier from drill site and dropped directly to the analytical facility.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	No audits or reviews of the sampling techniques and data have been obtained.
Bulk Density	*Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*	A total of 75 samples were selected from 11 diamond drill core holes. Samples were selected where whole, intact pieces of stable core were available. Core was selected to provide several samples across each logged domain/lithology. Sample bulk density was measured by a wax coated water immersion method. Density measurements ranged from 1.4 to 3.3 t/m3 and these were analysed to identify outliers for removal prior to calculating average values for each domain. Density data within the lower channel ranged from 2.62 to 2.85 t/m3, with an average of 2.72 t/m3 applied to the lower channel. The upper channel ranged from 2.71 to 3.35 t/m3 with an average of 3.12 t/m3 applied. The upper waste unit ranged from 1.80 to 3.13 t/m3 with an average of 2.44 t/m3 applied to all waste material.
	The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit,	Density was measured using a standard well-documented water immersion procedure. Density has been calculated for both the channels and the gangue material.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	Samples taken were coded by the lithology and channel location (upper or lower). Averages were derived within each lithology and this value then used to code the block model.

Section 2: Reporting of Exploration Results

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.*	All mining, exploration and miscellaneous licenses owned 85% by Zanthus Resources Ltd and 15% by ZanF Pty Ltd. The tenements are covered by the Kuruma Marthudunera Native Title Claim and relevant heritage agreements are in place.
	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.	The tenements are in good standing and no known impediments exist.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	In 1990-1991, Aberfoyle Resources held tenements covering the Ashburton Trough which partially overlapped Yarraloola. They collected 26 rock-chip and 73 stream sediment samples for gold and base-metal exploration but encountered no significant results and surrendered the ground.
		In 1991-1992, Poseidon Exploration Ltd held exploration tenements covering the Ashburton Trough which partially overlapped Yarraloola for base-metals, gold and iron-ore. They collected 54 rock-chips, 236 soil samples, 492 stream sediment samples and completed 159 RAB holes for 2410m but encountered no significant mineralisation and surrendered the tenements.
		In 1997-1998, Sipa Resources NL held tenements over the Ashburton Trough that partially covered Yarraloola for gold and base-metals. A field trip after the interpretation of LANDSAT and air-photos collected six rock-chip samples which failed to detect mineralisation and the tenements were surrendered.
		In 2005-2009, Red Hill Iron Ltd held a tenement 15km northwest of Pannawonica which partially overlapped Yarraloola for gold and base-metal prospectivity. Following an aeromagnetic survey and air-photo interpretation, 16 rock-chips and 207 soil samples were collected but no targets were generated and the ground was surrendered.

Criteria	JORC Code explanation	Commentary
Geology	*Deposit type, geological setting and style of mineralisation.*	The Robe Mesa is a fluvial deposit of goethite-rich fragments of wood and pisolites supported by a fine grained goethitic matrix. The deposit outlines the trace of a Tertiary-aged channel from the Robe River into older rocks of the Ashburton Formation that have since eroded. Deposits of the channelized-style of goethitic ironstone are represented and mined in other parts of the Pilbara region of Western Australia and the material is commonly referred to a "CID" for marketing purposes. The Mesa contains two cycles of deposition, and each has a sharp basal contact that shows an upwards increase in the number of iron-rich fragments.
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:*	
	o *easting and northing of the drill hole collar*	All drill holes have been picked up by a certified Survey Company with Differential GPS with an accuracy of 0.1m. Drill-hole collar Eastings and Northings are reported using map projection GDA Zone50, entered into an Access database and the map locations are checked by the competent person.
	o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*	All drill holes have been picked up by a certified Survey Company with Differential GPS with a RL accuracy of 0.1m.
	o *dip and azimuth of the hole*	All holes are vertical.
	o *down hole length and interception depth*	No intercept and grade is reported in these results.
	o *hole length.*	Hole lengths are reported both on the geological and drillers logs, entered into the access database and have been checked by a competent person.
Data aggregation methods	*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.*	No intercept and grade is reported in these results.
	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.	No intercept and grade is reported in these results.

Criteria	JORC Code explanation	Commentary
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents are presented.
Relationship between mineralisation widths and intercept lengths	*If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*	Vertical drill-holes are designed to intercept the true widths of the horizontally-oriented sheets of pisolitic iron-stone mineralisation.
	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').	Down-hole widths are regarded as true widths of mineralisation.
	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.	Not required – no significant discovery being reported and drill hole location table provided in Appendix B
Diagrams	*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.*	Not required – no exploration results provided and drill hole location table provided in Appendix B
Balanced reporting	*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.*	The report is believed to include all representative and relevant information and is believed to be comprehensive. Exploration results are not being reported for the first time.
Other substantive exploration data	*The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*	The deposit has been drilled out extensively by RC grade drilling to a spacing of 50 x 50m. The diamond drilling has been completed and results included in this report. Due to the extensive dataset provided by this drilling, there is no immediate exploration work required on the mesa deposit.

Metallurgical factors and assumptions	*The metallurgical process proposed and the appropriateness of that process to the style of factors or mineralisation.* *Whether the metallurgical process is well-tested technology or novel in nature.* *The nature, amount and representativeness of metallurgical testwork undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* *Any assumptions or allowances made for deleterious elements.* *The existence of any bulk sample or pilot-scale testwork and the degree to which such samples are considered representative of the orebody as a whole.* *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications.*	During 2022 and 2023 metallurgical test work was completed as part of the project DFS. The project will be operated as a direct shipping ore process whereby there is no metallurgical upgrade by processing. DSO operations are well established in the Pilbara iron ore industry and as such operations and equipment aspects are well understood: Product grade is determined by the mine schedule and marginally impacted by post crushing stockpile blending The process plant is 100% mass yield The 2022 diamond drilling program produced 656 m of PQ core which was analysed at BV in Q4 2022, extended metallurgical knowledge of the upper and lower zones of the ore body. Results are similar to those achieved from earlier metallurgical testing with grade by size analysis, bulk density determinations undertaken as well as 43 CWi samples (ranging from 1-3.8kWhr/t), 10 Abrasion Index analysis (0.006-0.028) and 37 UCS tests (20 samples from Upper Zone 23-50MPa, 13 samples from Lower Zone 12-42 MPa and 4 samples from Gangue zone 4-44MPa). The consistency of the Robe Mesa geology, and similarity of metallurgical properties with surrounding well-established operations, supports the simple standard dry crush and screen processing plant to produce a direct shipped ore (DSO) of a single grade fine product. No bulk test sample is planned, no tailings facilities are required and a 100% product recovery expected. In April 2023 J&J completed material handleability tests of two composite samples. One sample represents Upper Zone material only that will present in initial mining and the second sample is a blend of upper and lower zone material. Additionally, a Safety Data Specification will be produced on the Robe Mesa fine product by Microanalysis. In H1 2023 three sinter composite samples were analysed at Beijing Shougang Huaxia Engineering Technology in China and represent: Upper zone material only targeting the “Standard Fines” grade (55.75% Fe 5.91% SiO2 2.66% Al2O3 and 0.036% P) Upper zone material only targeting the “Low Grade Fines” grade (53.60% Fe 7.93% SiO2 3.41% Al2O3 and 0.037% P)

Criteria	JORC Code explanation	Commentary
		Upper and Lower domain blended samples to meet the Total Grade (55.37% Fe 6.53% SiO2 2.98% Al2O3 and 0.041% P)
Further work	*Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	Areas of outcropping mineralisation that have yet to be drilled are identified on the relevant maps.