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The Company Announcements Office, ASX Limited

12 December, 2022

Robe Mesa Iron Ore Project, Pilbara

Mineral Resource increases a further 20% to 45Mt

Outstanding result includes Indicated Resource of 36Mt, underpinning strategy to grow mine life and production rate, adjacent to Rio Tinto's Robe Valley Operations

Highlights

- **Robe Mesa JORC Mineral Resource increases from 37.5Mt to 45.2Mt at 56% Fe (62.7% Fe calcined) (55% Fe cut-off grade)**
- **Indicated Resources now accounting for 36Mt, or 80%, of the total Mineral Resource, up from 25.2Mt in the May 2022 Mineral Resource update**
- **Direct shipping iron ore (DSO) grades have improved slightly, with the inclusion of higher-grade iron ore from the northern extension**
- **CZR has grown the Mineral Resource at Robe Mesa from 24.7Mt to 45.2Mt in the past 12 months, representing an 83% increase in tonnes**
- **This new Mineral Resource is consistent with CZR's objective to increase mine life and production rates in the Robe Mesa Definitive Feasibility Study (DFS)**
- **Updated Ore Reserve estimate underway; Revised mine plan set for completion in the coming quarter**

CZR Resources Limited (ASX: CZR) is pleased to announce significant progress in its strategy to grow the target production rate and mine life at its Robe Mesa deposit in WA's Pilbara, with a further 20 per cent increase in the JORC Resource to 45.2Mt at 56% Fe (62.7% Fe.ca).

The increased tonnes were primarily from drilling of the northern extension, an area not previously drilled and outside of the Mineral Resource and 2020 Pre-Feasibility Study (PFS) pit designs. Drilling of the lower Channel Iron Deposit (CID) in the south of the Robe Mesa deposit also intersected thick mineralisation which contributed to the overall increase in tonnes.

This updated Mineral Resource estimate represents the completion of drilling within the proposed mining footprint at Robe Mesa (Figure 1), a key milestone for the projects DFS. In addition, over 80% of the Mineral Resource estimate is categorised as Indicated (Figure 3), an important step in maximising the Resource to Reserve conversion in the Ore Reserve and mine plan update, now underway.

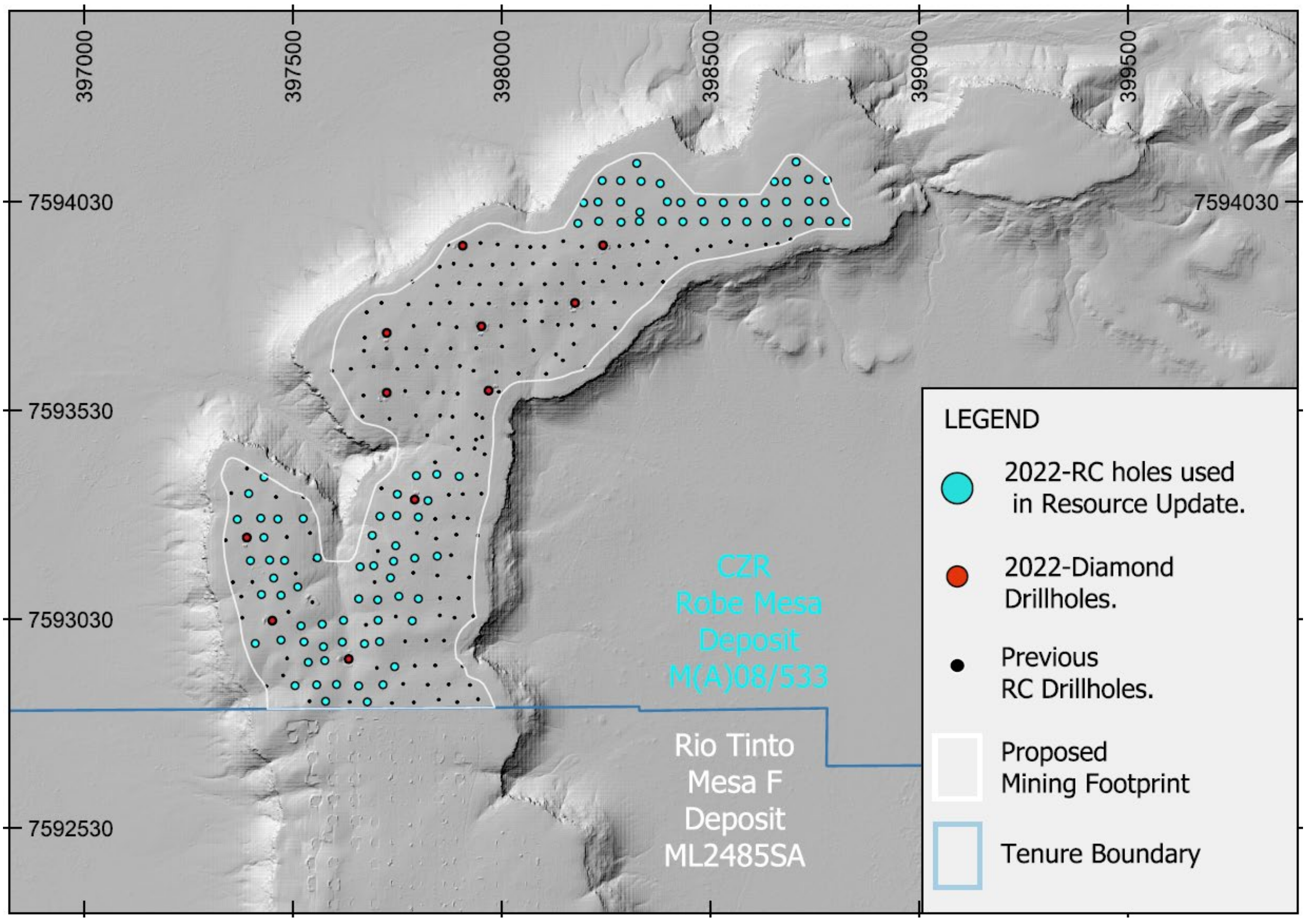


Fig 1. Robe Mesa Resource area with drill hole collars

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

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.*

Table 1. December 2022 updated Robe Mesa Mineral Resource

Cut-Off Grade	Category	Tonnes Mt	Fe %	SiO2 %	Al2O3 %	LOI %	P %	S %	Fe_{ca} %
55% Fe	Indicated	25.2	55.9	6.0	2.8	10.6	0.04	0.02	62.6
	Inferred	12.3	56.0	5.9	2.8	10.6	0.04	0.02	62.7
	Total	**37.5**	**56.0**	**6.0**	**2.8**	**10.6**	**0.04**	**0.02**	**62.6**
50% Fe	Indicated	47.4	54.5	7.4	3.2	10.7	0.04	0.02	61.1
	Inferred	22.2	54.5	7.5	3.2	10.6	0.04	0.02	60.9
	Total	**69.6**	**54.5**	**7.5**	**3.2**	**10.7**	**0.04**	**0.02**	**61.0**

Table 2. May 2022 Robe Mesa Mineral Resource

CZR Managing Director Stefan Murphy said the updated Mineral Resource reinforced the Company's growth strategy at Robe Mesa.

"Extending the Mineral Resource to the north and maximising tonnes from the lower CID have been key objectives of the DFS, to grow the mine life and production rates for Robe Mesa and these have now been achieved," Mr Murphy said.

"The Mineral Resource is now at a size where we can start unlocking savings through greater economies of scale.

"Increasing the Resource confidence, with more than 80% now in the Indicated category, will also improve the Resource-to-Reserve conversion in the next study phase, with the Ore Reserve and mine plan update currently underway."

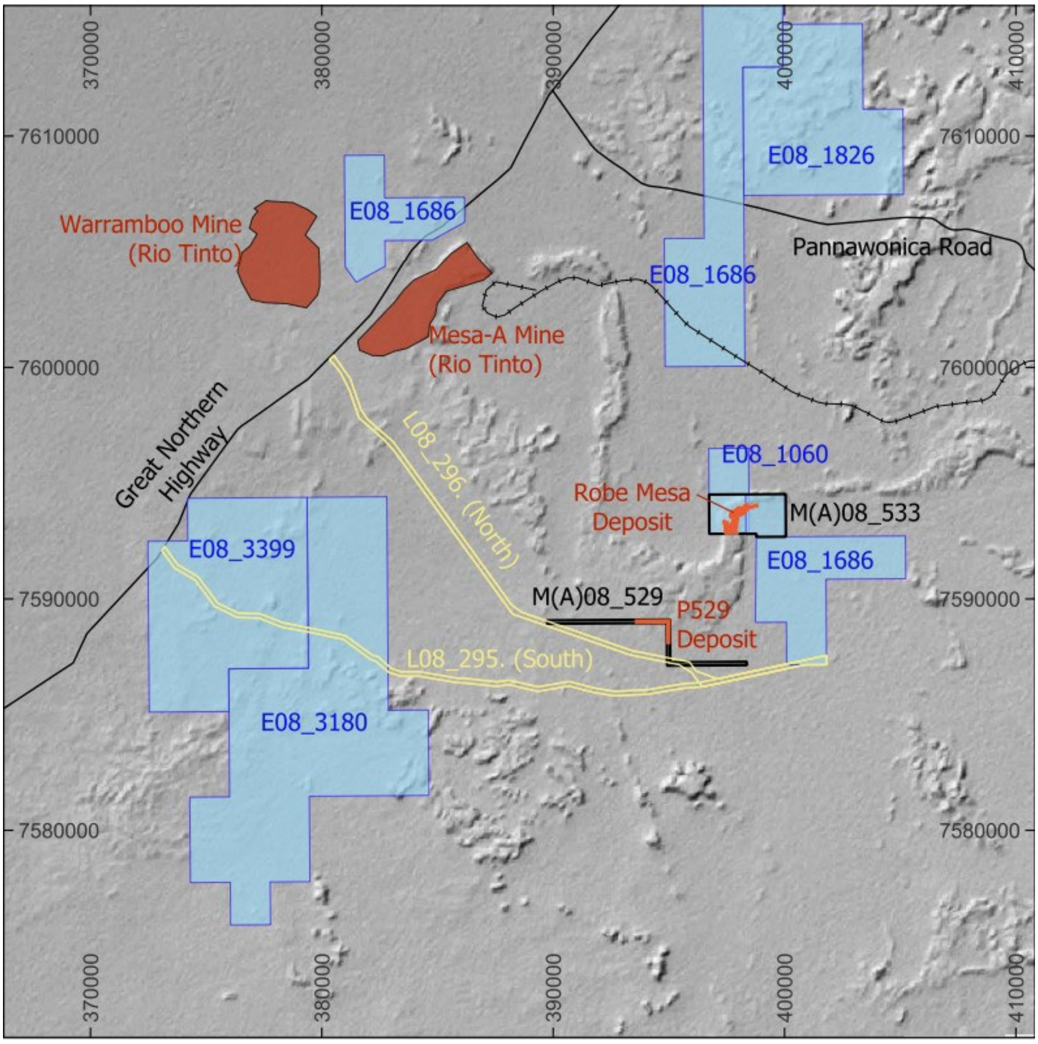
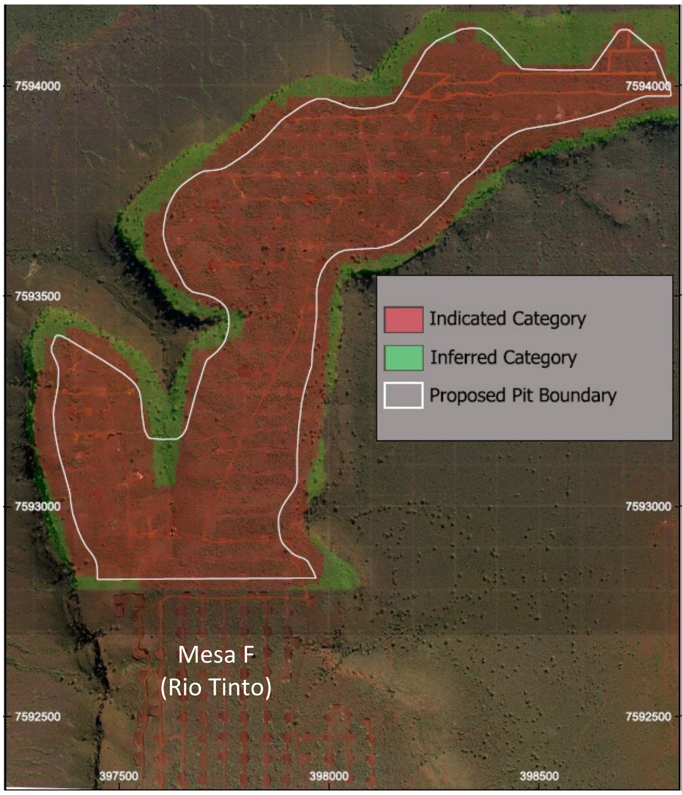


Fig 2. CZR's Yarraloola tenements and Robe Mesa deposit showing planned infrastructure and proximal iron ore mines.



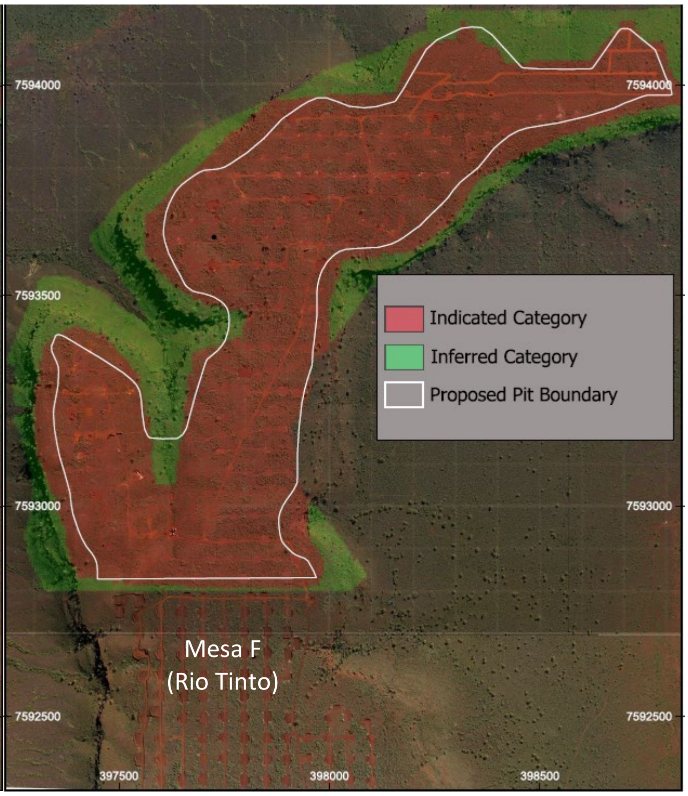


Fig 3. Plan view showing the classification of the mineralisation. Upper channel – left and lower channel – right (Indicated Resource – red, Inferred Resource - green).

The Robe Mesa deposit sits within CZR's Yarraloola Iron Ore Project (Figure 2), located 120km southwest of Karratha. The deposit strike length is 1.8km and is bounded to the south by the tenement boundary with Rio Tinto's Mesa F deposit and to the north with heritage restricted work areas.

The deposit represents the track of a Tertiary-aged channel from the Robe River into older rocks of the Ashburton formation that have since eroded.

A total of 94 reverse circulation (RC) drill holes were completed to a nominal 50m x 50m drill pattern. All RC drill-holes used a 5.5" (140mm) face-sampling percussion hammer, with 2-3kg of RC drill cuttings split over a static cone splitter during drilling and collected at 1 metre down hole intervals.

All RC holes were drilled vertically, and downhole intervals are considered true width. Each metre of RC chips was described geologically for colour, texture and estimated mineralogical abundance. The volume of sample derived from each metre drilled was approximately equal and sample recovery was considered representative. Drilling has identified two intervals of flat-lying pisolitic iron-stone sediments that are each up to 25m thick and separated by up to 20m of shaley material.

CZR geologists provided mineralisation and geological wireframes to Snowden Optiro, with separate high- and low-grade mineralisation domains. The lower-grade domain was defined by iron grades exceeding approximately 50% Fe and the higher-grade domain captures iron grades that largely exceed 53% Fe and are associated with silica (SiO_2) grades less than 10%. The parent block dimensions are 25m x 25m x 4m, with sub-blocking to 6.25m x 6.25m x 1.0m at domain boundaries.

No downhole compositing process was required as all samples were collected at 1m increments and this length was considered appropriate for the modelling process. Iron (Fe), silica (SiO_2), alumina (Al_2O_3), loss on ignition (LOI), phosphorous (P), sulphur (S) and titanium oxide (TiO_2) grade estimation into parent blocks was carried out using ordinary kriging with hard boundaries between mineralised domains and against waste/background domains.

Three sample search passes, with increasing search distances, and two search areas were employed to estimate grades in a block model representing the geometry of the deposit. Snowden Optiro validated the grade estimates by statistical analysis and visual comparison to the informing samples. All elements compared extremely well for all the mineralised domains.

The Robe Mesa Mineral Resource estimate has been classified as a combination of Indicated and Inferred Mineral Resources in accordance with the JORC code (2012) reporting guidelines (Figure 3). The Mineral Resource has been classified based on confidence in the geological and grade continuity, and the quality of survey control. No Measured Mineral Resource has been defined.

Table 1 presents the updated Mineral Resource (December 2022) and Table 2 the Mineral Resource reported in May 2022.

An additional 94 holes have been drilled into Robe Mesa since the May 2022 Mineral Resource estimate. The same modified approach has been applied to define the mineralisation domains for the December 2022 estimate that was used for the May 2022 estimation.

The methodology was aimed at improving the delineation of the higher-grade mineralisation. The new sample data and modified domain methodology has resulted in a 21% increase in the tonnage above a 55% Fe cut-off while the reported Fe grade has remained the same. Reporting above a 50% Fe cut-off resulted in a 29% increase in the tonnage at a similar Fe grade of 54.4% Fe.

Indicated Mineral Resources are defined by contiguous zones where the nominal drillhole density is 50m by 50m. In order to improve the potential Ore Reserve tonnes, the previously Inferred Resource within the conceptual pit shell, in particular the south of the deposit, was drilled on a 50m x 50m grid to improve confidence levels to the Indicated Resource category.

CZR also completed diamond drilling with representative samples collected from the upper and lower CID units for density measurements. 11 vertical PQ (85mm) diamond drill holes were drilled, with 75 samples selected for bulk density determination. Samples were selected where whole, intact pieces of stable core were available as the test work requires stable core that isn't going to break down part way through the measurement process. Samples were generally selected to provide several samples across each logged domain / lithology. The average of the density measurements collected within each CID unit was applied for tonnage calculation within each unit.

Next Steps

Snowden Optiro has commenced updating the Ore Reserve and mine planning/scheduling work phase, with economic inputs provided by CZR for the DFS process. Specialist consultants are providing geotechnical and drill and blast parameters for the revised pit designs. It is anticipated that the updated mine plan will be complete early in the March 2023 quarter.

DFS activities continue to progress with heritage and environmental surveys completed and more planned early in 2023 to support the engineering and logistics studies that are currently underway.

Project Background

CZR's 85%-owned Robe Mesa deposit sits within the Robe Valley Channel Iron Deposits (Robe Valley CID). The Robe River JV (Rio Tinto 53%, Mitsui 33%, Nippon Steel 14%) has mined the Robe Valley CID since the 1970s and has current mining operations at Mesa A, Warramboo and Mesa J, with rail linking to export facilities at Cape Lambert.

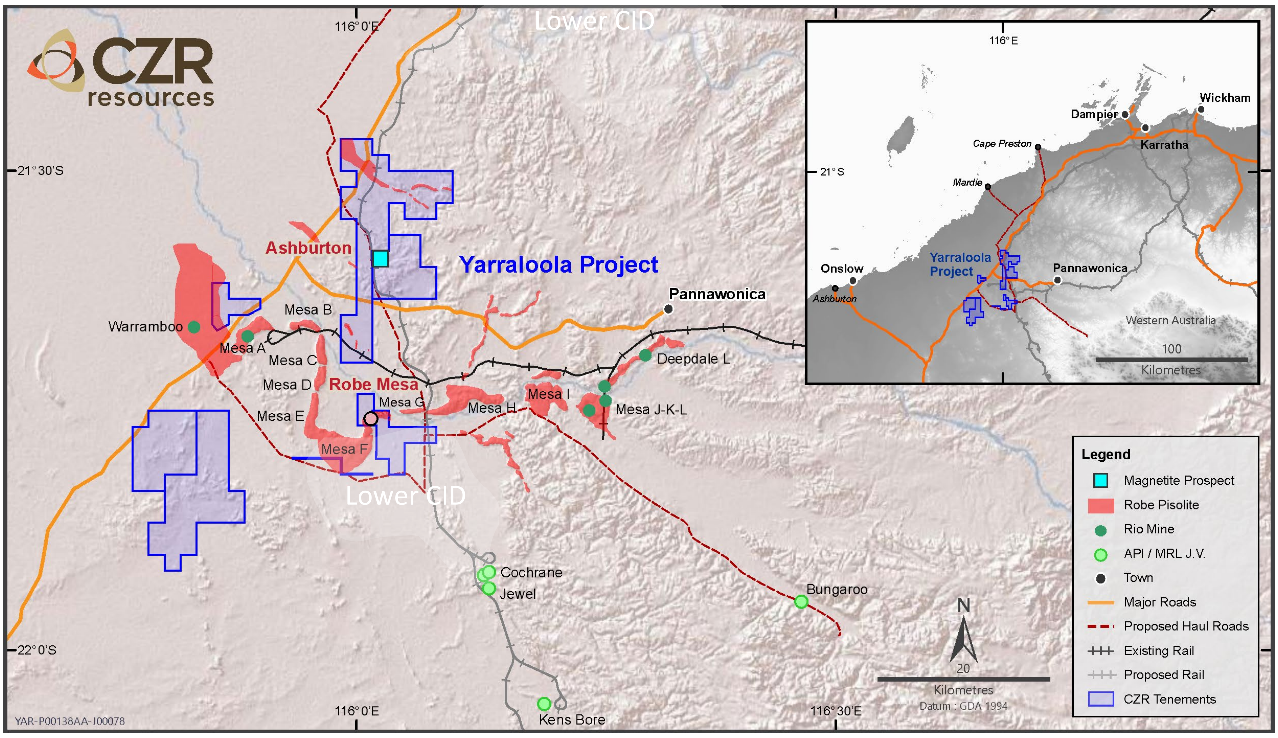


Fig 4. CZR's Yarraloola project and Robe Mesa deposit showing local infrastructure and iron ore deposits. Insert map showing regional infrastructure of the West Pilbara, relative to the Robe Mesa deposit

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

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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.

CZR believes it has a reasonable basis for making the forward looking statements in this Announcement, including with respect to any production targets and economic evaluation, based on the information contained in CZR's ASX announcement entitled "Pre-Feasibility Study finds Robe Mesa iron ore project is technically robust with potential to generate strong financial returns" dated 10 December 2020. CZR confirms that it is not aware of any new information or data that materially affects the production targets contained in the previous announcement of the PFS and all material assumptions underpinning the production targets and economic valuation in the previous market announcement continue to apply and have not materially changed.

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 and holds options in the Company. The information that relates to the Mineral Resource Estimate has been compiled under the supervision of Paul Blackney of Snowden Optiro Pty Ltd. who is a Member of the Australasian Institute of Mining and Metallurgy.

Both Mr Murphy and Mr Blackney have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activities which they have undertaken to qualify as a Competent Persons as defined in the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Murphy and Mr Blackney have given their consent to the inclusion in this announcement of the matters based on the information in the form and context in which it appears.

Appendix A – 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 were all collected from 5.5" (140mm) reverse circulation drilling with continuous down-hole sampling.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	2-3kg of RC drill cuttings are spilt continuously during drilling and collected at 1 metre intervals in a pre-labelled calico sample bag. Samples passed over a static cone splitter attached to the drill-rig.
	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 entire 2-3kg RC drill-chip sample was crushed (if required), dried and pulverized at ALS Laboratories in Perth. Western Australia. A sub sample was fused and the "extended iron-ore suite" of major oxide and selected trace-element analysis was obtained by XRF Spectrometry in 2014 and 2022 programs a basic iron-ore suite was reported from the 2015, 2016 and the 2021 programmes because most trace elements are below detection.
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 reverse circulation (RC) drill-holes used a 5.5" (140mm) face-sampling percussion hammer.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	RC sample size was monitored by Geologists during the drilling programme. The volume of sample derived from each metre drilled was approximately equal.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Standard RC sampling techniques were employed and deemed adequate for sample recovery. Some water was injected into the sample stream during drilling to minimise the loss of fine particles.

Criteria	JORC Code explanation	Commentary
	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.	Sample recovery is regarded as being representative.
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.*	Each metre of reverse circulation chips are 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 RC chips 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.*	No core was collected in the programme being reported.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	Reverse circulation drill chip samples were collected dry and split by a static-cone splitter during drilling.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Reverse circulation drilling is an appropriate method of recovering representative samples through the interval of mineralisation. The drilling contractor used suitable sample collection and handling procedures to maintain sample integrity.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Duplicate RC samples were simultaneously collected at a ratio of 1:20, using the splitters attached to the rig to ensure representative duplicate samples were achieved. Certified Reference Material (CRM) were also added as standards at a ratio of 1:25. Duplicates and standards were inserted across the entire drillhole, not just the mineralised interval.
	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.	The reverse circulation method samples continuously and the splitters attached to the rig selects a representative proportion of the sample, providing an indication of compositional variations associated with each lithology or mineralised interval.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The 2-3kg of homogenised drill chips that was recovered for each sample is sufficient to provide a representative indication of the material being sampled.
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.*	Samples included in this resource update were analysed by ALS at their laboratory facility in Wangara in Perth. An extended suite of major-element oxides and trace element oxides were determined by XRF analysis on fused disks. Loss on Ignition (LOI) was determined by thermogravimetric analysis at 1000° C.

Criteria	JORC Code explanation	Commentary
	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.
	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.	Certified Reference Material (CRM) were also added as standards at a ratio of 1:25. Laboratory QAQC involves the use of internal lab standards using certified reference material, blanks, splits and replicates as part of their in-house procedures. Results highlight that sample assay values are accurate and that contamination has been contained.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	No independent or alternative company personnel were used to verify the intersections.
	The use of twinned holes.	5-RC holes have been twinned and sampled across the upper and lower mineralisation horizons to determine short-range variations in geology and geochemistry. It was observed that on the 1-meter scale there was variations of Fe-grade consistency, but the broader mineralisation extents were consistent.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	All spatially located sample data is stored electronically in a Microsoft Access database. Assay data was received electronically and uploaded by CZR Geologists. Printed and laboratory-released PDF copies of analysis certificates are stored.
	Discuss any adjustment to assay data.	No adjustment or calibrations are made to any 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 drill holes within the Robe Mesa Mineral Resource, including holes drilled in 2022 and used for the Mineral Resource Update, have been picked-up by a licensed surveyor using a differential GPS with an accuracy of 0.1m
	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.	The full spatial extents of the Robe Mesa Mineral Resource was covered by a Lidar -Survey flight which was flown over the project area in July 2022. The digital outputs from this survey were

Criteria	JORC Code explanation	Commentary
		used to create a meshed surface of the topography above the Robe Mineral Resource to a certified accuracy of 0.1m.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	Drilling is located approximately on centres from a 50m grid over an area of outcropping mapped mineralisation.
	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.	200m spaced drilling allowed the generation of an Inferred Resource, reducing to 100m spacing was sufficient for the conversion of a high-proportion of the inferred to indicated and a maiden probable reserve. The 2021 and 2022 RC drill programs further closed the drill hole grid to an approximately 50m spacing.
	Whether sample compositing has been applied.	Sample results represent 1m interval reverse circulation drill-chips and samples have not been composited.
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.
Sample security	*The measures taken to ensure sample security.*	Individually numbered samples were double packed into labelled poly-weave and then labelled bulka-bags by CZR Geologists and stored on site. Independent logistic contractors were engaged to pick up the freight from site and deliver to analytical facility in Wangara, Perth.
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.

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 exploration licenses and prospecting 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.

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*	Down hole lengths and intercept depths from the RC drilling are calculated from 1m interval samples that are progressively collected as the holes are drilled.
	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.*	Minimum intercept widths are defined as drill intervals greater than 5m with samples reporting Fe>50% (calcined Fe>55%). Some intercepts include a maximum of 2m of samples with Fe<50%. Intercept values are numerical averages of the relevant 1m sample results. No cutting of high grades has been used.

	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.	All sample intervals used to calculate the intercepts are of equal length.
	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.	A map with the drill-hole locations are presented.
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.*	Relevant diagrams have been included within the report main body of text.
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).*	Diamond drilling for geotechnical and larger-scale metallurgical test-work is underway.
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.

Section 3: Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	*Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	Assay data has been supplied by the laboratory in both excel format and as printed certificates for verification. Data in digital format is electronically loaded directly into an Access database to prevent transcription errors. Validated data was provided to Snowden Optiro in a Microsoft Access database. The Competent Persons have checked the database validity and has found no material issues.
	Data validation procedures used.	Data tables were periodically compared to results published in the assay certificates to ensure data integrity. Sample outliers were routinely compared to assay certificates as well. The collar locations were check spatially against the digital terrain model (DTM) of the topography.
Site visits	*Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*	The Competent Persons colleague, Mrs Havlin (Snowden Optiro Principal Consultant) visited the site in July 2022 during a resource definition drilling program to review sampling procedures. Mrs Havlin confirmed site practices are appropriate and satisfactory for the drill sampling to support a Mineral Resource estimate.
	If no site visits have been undertaken indicate why this is the case.	

Geological interpretation	*Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	There is a reasonable level of confidence in the geological interpretation due to the consistent drilling results and the outcropping geology. Wireframes are used to constrain the estimation and are based on drill hole intercepts and geological logged boundaries. Two sets of wireframes were constructed: one above 53% Fe and another above 50% Fe for the upper and lower channels. These wireframes were constrained to the lateral footprint of the mesa. The interpretation process identifies larger internal waste zones within the channels and separately defines the waste between the channel horizons and below the footwall of the lower channel.
	Nature of the data used and of any assumptions made.	All available data has been used to help build the geological interpretation. This includes geological logging data, sample grade data and any available geological mapping.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	The controls on and interpretation of the mineralisation is relatively straightforward, and no alternative interpretations have been considered.
	The use of geology in guiding and controlling Mineral Resource estimation.	Wireframes are used to constrain the estimation and are based on drill hole intercepts and geological logged boundaries.
	The factors affecting continuity both of grade and geology.	The mesa represents a large-scale paleo river valley that has formed a deposit with considerable downstream continuity and lesser continuity across the river direction. The ironstone was deposited in two cycles of deposition, separated by variable thicknesses of sandy and silty material with the iron content of each cycle increasing towards its upper surface.
Dimensions	*The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource*	The Mesa Robe deposit has a total strike length of 1700 m (which is limited by the extent of the lease). The deposit extends to the south. It has an across strike width of 800 m and extend vertically for approximately 70 m below surface.

Estimation and modelling techniques	*The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*	Grade estimation using Ordinary Kriging (OK) was completed using Datamine Studio RM software for seven elements; Fe, SiO_2, Al_2O_3, LOI, P, S and TiO_2. Drill grid spacing is around 50 m by 50 m. No compositing was required as all samples were collected at one metre downhole intervals and this length was considered appropriate for the grade estimation process and general channel geometry. The data was divided into two regions of reasonably consistent strike. Grade continuity variograms were determined individually for each channel and each element within the two regions. To model the grade continuity within the plus 50% Fe domains, all data within the 50% and 53% domains was combined. This enhanced the robustness of the grade continuity models. Other estimation parameters, such as search distance, minimum and maximum sample numbers was derived from KNA.
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	Compared to the previous estimate, tonnage in the above 55% Fe cut-off has increased by 22% while the Fe grade remained the same. There has been an increase in tonnes above 50% Fe of 29% while the Fe grade remained the same compared to the previous (May 2022) estimate. No mining has occurred with the deposit area; thus, no production reconciliation data is available.
	The assumptions made regarding recovery of by-products.	No assumptions have been made regarding recovery of any by-products.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	Oxides and elements such as SiO_2, Al_2O_3, TiO_2, phosphorous and sulphur are potentially deleterious and have been included in the model estimation process for future analysis.

	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	The block model dimensions and parameters were based on the geological boundaries and average drill grid spacing. Sub-blocks were used to ensure that the block model honoured the domain geometries and volume. Block estimates were controlled by the original parent block dimensions. The parent block dimensions are 25 mE by 25 mN by 4 mRL, with sub-blocking to 6.25 mE by 6.25 mN by 1mRL at domain boundaries. Two regions were defined to represent the channel geometry. Dedicated search directions and variography were applied in each orientation domain and their shared boundaries were treated as soft grade transitions. Estimation into parent blocks used discretisation of 5 (X points) by 5 (Y points) by 3 (Z points) to better represent estimated block volumes. Three search passes, with increasing search distances and decreasing minimum sample numbers, were employed to inform the model. All the analytes within a domain were estimated using the same search ellipse and distances, which were based on the Fe variography. Any block that did not receive a grade estimation during this process were assigned grade values using a nearest neighbour approach. Domain grade averages were assigned to surrounding waste and the basement.
	Any assumptions behind modelling of selective mining units.	No selective mining units were modelled in this estimate. It is assumed that the SMU is equal to the block model parent cell size.
	Any assumptions about correlation between variables.	Multi-element analysis was conducted on the samples. There is a strong positive correlation between SiO_2 and Al_2O_3 and TiO_2. There is a strong negative correlation with Fe and SiO_2, Al_2O_3 and TiO_2. These relationships were managed by using a consistent search neighbourhood for the estimation of all analytes.

	Description of how the geological interpretation was used to control the resource estimates.	Drillhole sample data was flagged using domain codes generated from the interpreted three-dimensional mineralisation domains. Mineralisation domains were treated as hard boundaries in the estimation process.
	Discussion of basis for using or not using grade cutting or capping.	No top cuts or bottom cuts were required as all the elements exhibited low coefficients of variation and there were no extreme grade outliers.
	The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.	Model validation was carried out using visual comparisons between composites and estimated blocks, checks for negative or absent grades, and statistical comparison against the input drillhole data on both a whole-of-domain basis and via graphical profiling using swath plots.
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	Tonnages are estimated on a dry basis.
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied*	The model is optimised to report the Mineral Resource at either 50% or 55% Fe. Both reporting cut-off grades are considered to provide appropriate estimates of the size and quality of the deposit.
Mining factors or assumptions	*Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	It is assumed that open pit mining will occur on 4 m benches Minimum channel thickness allowed by the modelling method is no less than 1 m. Larger internal waste zones have been excluded from the mineralised domains, but smaller isolated waste intersections have not been resolved and are included within the mineralisation boundary on the assumption that mining will not selectively mine these zones.

Metallurgical factors or assumptions	*The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	No metallurgical factors or assumptions are made during the resource estimation process as this will be addressed during conversion to an Ore Reserve. The resource block model has been populated with multi-element data which is required for metallurgical analysis during the Ore Reserve process.
Environmental factors or assumptions	*Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made*	All mined waste will be backfilled in the mining void, reducing environmental impact. The iron ore produced will be a direct shipping iron ore fines, with simple crush and screen processing that generates no processing waste stream.

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/m^3 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/m^3, with an average of 2.72 t/m^3 applied to the lower channel. The upper channel ranged from 2.71 to 3.35 t/m^3 with an average of 3.12 t/m^3 applied. The upper waste unit ranged from 1.80 to 3.13 t/m^3 with an average of 2.44 t/m^3 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.
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories*	Classification of the resource model is based primarily on demonstrated assay data quality, drillhole spacing, and demonstrated geological and grade continuity. Indicated Mineral Resources are defined by contiguous zones where the nominal drillhole spacing is 50 m by 50 m.
	Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	The classification considers the relative contributions of geological and data quality and confidence, as well as grade confidence and continuity.

	Whether the result appropriately reflects the Competent Person's view of the deposit.	The classification reflects the view of the Competent Person.
Audits or reviews	*The results of any audits or reviews of Mineral Resource estimates.*	This an updated Mineral Resource estimate has not been subjected to any independent audits or reviews.
Discussion of relative accuracy/confidence	*Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate*	The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code. The statement relates to global estimates of tonnes and grade.
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used	The estimate is considered to be applicable to a global report of tonnage and grade.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available	No mining has been undertaken on any of the resource and therefore there is no production data is available.