

# CHANNEL IRON MINERALISATION EXTENDED AT WEELARRANA

### **HIGHLIGHTS**

- Assay results received from rock chip samples targeting recently identified Channel Iron mineralisation at Weelarrana
- Rock chip results confirm Channel Iron mineralisation at the Central CID potentially occurs over an area of 3500m x 500m
- Rock chip results confirm Channel Iron mineralisation extends semi continuously over 4500m x 450m at the Northern CID
- Best rock chip results of:
  - 58.6% Fe (64.5% Calcined Fe) and 56.1% Fe (60.5% Calcined Fe) at Central CID
  - 58.7% Fe (64.4% Calcined Fe) and 58.4% Fe (63.6% Calcined Fe) at Northern CID

Calcined iron-content calculated as (Fe%/(100-LOI%))\*100 and represents the amount of iron after the volatiles (mostly water represented by Loss on Ignition or LOI) is excluded from the analysis.

#### Pantera CEO, Matt Hansen, commented:

"We are pleased to announce that rock chip sampling at Weelarrana has extended with channel iron mineralisation identified at the Central and Northern CID. Our next program of works involves conducting heritage survey work and planning and permitting drill programs over both areas.

We'll now move to conduct heritage surveys before planning drill programs which are expected for the Q4 of 2023."

Pantera Minerals Limited (ASX:PFE) ("Pantera" or the "Company") is pleased to announce the receipt of iron assays from and 37 rock chip samples from the Central and Northern Channel Iron (CID) occurrences completed in late June 2023 at the Weelarrana Project ("Weelarrana" or "Project"), located 80km south of Newman in the Collier Basin of Western Australia (see Figure 2 and Tables 1 to to 2 for rock chip location details).



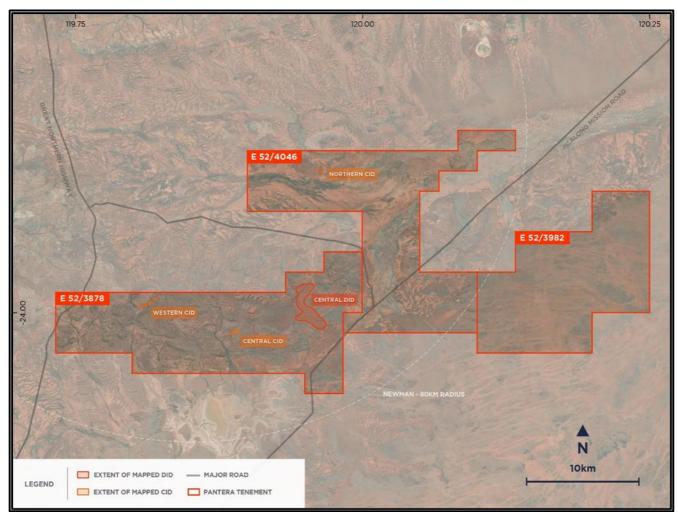


Figure 1 - Location plan of Channel Iron and Detrital Iron occurrences at Weelarrana

#### **Central CID Results**

Follow up field mapping and rock chip sampling of the Central CID on E 52/3878 in late June has extended the area of sub-cropping channel iron mineralisation a further 300m to the south-east and a further 100m to the east from the previously identified extent.<sup>1</sup> Eight rock chip samples taken from this extended area ranged from **45.8%** to **57.4% Fe**.

Significantly, a small  $250 \, \text{m} \times 300 \, \text{m}$  sub-crop of channel iron mineralisation was identified 2,500m to the north-west with the area with area between the two sub-cropping areas devoid of outcrop. Three rock chip samples taken from this area ranged from **52.7%** to **58.6% Fe**.

In both areas the channel iron mineralisation consists of well rounded, goethite dominant pisolites within a vitreous goethite matrix with minor silica infill with rare goethitic relict wood fragments.

<sup>&</sup>lt;sup>1</sup> See ASX PFE Announcement: Widespread Manganese Confirmed and Channel Iron Mineralisation Discovered at Weelarrana - 27 June 2023



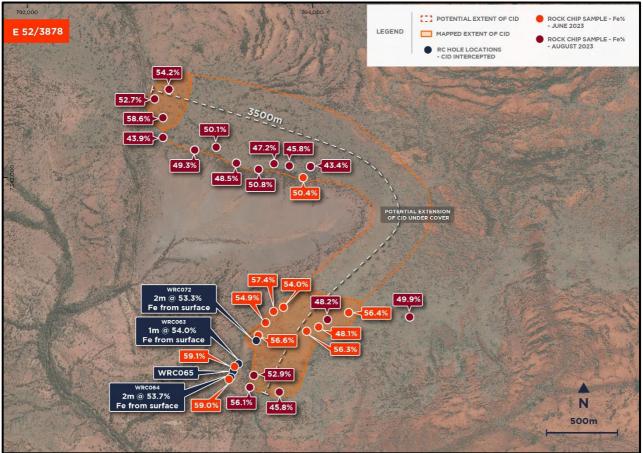


Figure 2 - Rock chip sample location and mapped CID extent at the Central CID

#### **Northern CID**

At the Northern CID on E 52/4046, five discrete outcrops of channel iron mineralisation have been identified over a strike length of 4,500m. The outcrops vary in dimensions from  $650m \times 450m$  to  $170m \times 140m$ , with the outcrops rising to approximately 5m above the surrounding sand plain.

A total of twenty-one rock chip samples were taken with grades ranging from **47.0% Fe** to **58.4% Fe**, and iron grades appears to increase towards the south-east. The channel iron mineralisation consists of fine-grained, well-rounded hematite pisolites within a vitreous goethite matrix with common hematitic relict wood fragments.



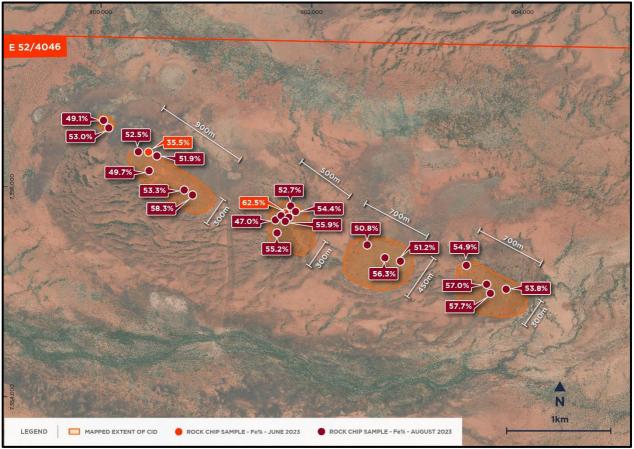


Figure 3 - Rock chip sample location and mapped CID extent at the Northern CID

## **NEXT STEPS**

Heritage surveys will be conducted, and drill programs will be planned and permitted over the Central and Northern CID's as well as the Central DID occurrences. Drilling is anticipated to occur in the 4th quarter of 2023.

Pantera will continue to assess all the Weelarrana tenements for further occurrences of channel iron mineralisation as well as manganese mineralisation.



# WEELARRANA PROJECT BACKGROUND

Located within the Proterozoic Collier Basin some 80 km south of Newman, Western Australia, the Weelarrana Project covers 958 km² of tenure considered prospective for manganese, iron and precious metal mineralisation. All tenements cover either Ilgarari Formation manganiferous shales or Backdoor and Balfour Formation manganiferous shales which are known to host economic manganese mineralisation at Element 25's Butcherbird Deposit (ASX:E25) and Firebird Metals Hill 616 Deposit (ASX:FRB).

Despite the presence of two significant manganese deposits along strike and within the same stratigraphy, the area covered by Pantera tenements has been under explored for manganese. Pantera aims to systematically explore for manganese within the known stratigraphic hosts as well as assess and explore the tenure for structural hosted precious metal mineralisation and Channel and Detrital Iron mineralisation.

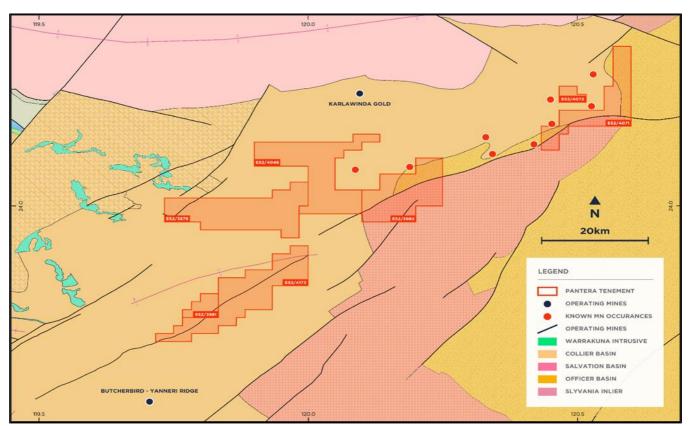


Figure 4 - Weelarrana Project - location plan

- END -

This release is authorised by the Board of Directors of Pantera Minerals Limited.

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#### **COMPETENT PERSON'S STATEMENT**

The information in this announcement that relates to geology and exploration results and planning was compiled by Mr. Nick Payne, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy and is Head of Exploration for Pantera. Mr Payne 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 "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Payne consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

All parties have consented to the inclusion of their work for the purposes of this announcement. The interpretations and conclusions reached in this announcement are based on current geological theory and the best evidence available to the author at the time of writing. It is the nature of all scientific conclusions that they are founded on an assessment of probabilities and, however might be, they make no claim for absolute certainty. Any economic decisions which might be taken on the basis of interpretations or conclusions contained in this presentation will therefore carry an element of risk.



Rock Chip ID	Easting	Northing	Fe %	Р%	SiO2 %	Al2O3 %	LOI	Calcined Fe%
WR021Fe	792948	7342283	43.9	0.07	10.8	12.4	11.3	49.5
WR022Fe	793978	7342073	43.4	0.08	12.6	12.0	10.3	48.4
WR023Fe	793836	7342082	45.8	0.06	11.5	10.7	10.9	51.4
WR024Fe	793732	7342092	47.2	0.08	8.2	10.7	10.9	53.0
WR025Fe	793620	7342055	50.8	0.06	6.8	7.9	10.6	56.8
WR026Fe	793470	7342094	48.5	0.08	7.3	9.3	11.8	54.9
WR027Fe	793320	7342209	50.1	0.24	8.2	7.9	10.6	56.0
WR028Fe	792896	7342546	52.7	0.02	7.1	4.2	8.3	57.4
WR029Fe	793170	7342197	49.3	0.27	8.3	7.5	12.0	56.0
WR040Fe	793002	7342610	54.2	0.02	5.4	6.7	9.6	59.9
WR041Fe	792944	7342421	58.6	0.03	3.1	3.6	9.1	64.5
WR042Fe	794104	7340994	48.2	0.04	7.4	10.3	11.0	54.2
WR043Fe	794683	7341006	49.9	0.09	8.4	8.0	11.1	56.1
WR044Fe	793577	7340604	52.9	0.03	9.9	5.3	7.1	56.9
WR045Fe	793771	7340492	45.8	0.02	15.4	7.5	10.1	51.0
WR046Fe	793580	7340534	56.1	0.04	5.6	4.7	7.2	60.5

Table 1 - Central CID Rock Chip Sample Locations and Grade

Rock Chip ID	Easting	Northing	Fe %	Р%	SiO2 %	Al2O3 %	LOI	Calcined Fe%
WR030Fe	801708	7355723	58.4	0.03	4.5	2.7	8.2	63.6
WR031Fe	801778	7355797	52.7	0.22	6.4	4.8	12.4	60.1
WR032Fe	801654	7355672	47.0	0.22	15.7	4.9	11.1	52.9
WR033Fe	800858	7355913	58.3	0.04	4.7	3.0	8.3	63.5
WR034Fe	800792	7355957	53.3	0.04	9.0	5.1	8.0	57.9
WR035Fe	800467	7356134	49.7	0.03	14.2	3.1	10.8	55.7
WR036Fe	800526	7356289	51.9	0.02	9.2	7.9	7.5	56.1
WR037Fe	800359	7356323	52.5	0.01	7.7	5.7	10.8	58.8
WR038Fe	800028	7356618	49.1	0.02	11.3	6.6	10.3	54.7
WR039Fe	800064	7356557	53.0	0.02	7.2	5.8	10.6	59.2
WR047Fe	801766	7355722	58.7	0.03	3.5	2.8	9.0	64.4
WR048Fe	801760	7355662	55.9	0.05	4.3	5.4	9.2	61.5
WR049Fe	801683	7355553	55.2	0.02	5.9	5.1	9.1	60.7
WR050Fe	801830	7355754	54.4	0.04	6.6	3.3	11.3	61.3
WR051Fe	802530	7355438	50.8	0.15	9.3	6.2	10.3	56.6
WR052Fe	802703	7355313	56.3	0.03	6.4	2.6	9.0	61.8
WR053Fe	802839	7355278	51.2	0.13	8.2	6.0	11.2	57.6
WR054Fe	803467	7355247	54.9	0.32	4.4	3.5	11.8	62.3
WR055Fe	803670	7355058	57.0	0.04	4.2	5.0	8.5	62.3
WR056Fe	803694	7354975	57.7	0.05	5.2	2.4	8.8	63.2
WR058Fe	803836	7355018	53.8	0.19	4.3	4.7	12.4	61.4

**Table 2 - Northern CID Rock Chip Sample Locations and Grade** 



# JORC Code Table 1 – Pantera Minerals Exploration Update

# Section 1 Sampling Techniques and Data

Criteria in this section apply to all succeeding sections

Criteria	JORC Code explanation		Commentary
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down-hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.	•	All rock chip samples were collected from insitu outcropping material.  Rock chip sample sizes varied from 0.5 kg and 2kg.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	•	The samples taken are considered to appropriately represent the surface channel iron mineralisation.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	•	The Fe rock chip samples were whole crushed and then pulped. The pulped samples were then submitted for standard 12 element XRF analysis for Mn at Intertek in Perth. Elements assayed for are: Al <sub>2</sub> O <sub>3</sub> , CaO, Cr <sub>2</sub> O <sub>3</sub> , Fe, K <sub>2</sub> O, MgO, MnO, Na <sub>2</sub> O, P, S, TiO <sub>2</sub> , V <sub>2</sub> O <sub>5</sub> and LOI.
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	•	No drilling was performed.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	•	No drilling was performed.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	•	No drilling was performed.
	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.	•	No drilling was performed.
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 rock chip sample was geologically described and recorded in a digital Rock Chip Register.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	•	Logging of rock chip samples is both qualitative and quantitative.
	The total length and percentage of the relevant intersections logged.	•	No drilling intersections are reported.
Sub-sampling techniques	If core, whether cut or sawn and whether quarter, half or all core taken.	•	No drill core was taken.
and sample preparation	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	•	Each sample was whole crushed and pulverised with approx. 100g submitted for standard XRF analysis.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	•	The sampling preparation technique of homogenising the entire rock chip sample is considered appropriate for the reporting of



Criteria	JORC Code explanation	Commentary
		exploration results.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	The entire rock chip sample was crushed, split then pulverised. The pulverised material was split and sub-sampled to produce a 100g sample for XRF assay.
	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.	Every 10 <sup>th</sup> sample was split twice to produce a duplicate for assay.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample size is considered appropriate to the grain size of the manganese mineralisation.
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.	<ul> <li>The assaying method and laboratory procedures are considered appropriate for the reporting of manganese rock chip results.</li> <li>The assay method is considered a total method given the sample was whole crushed and pulverised.</li> </ul>
	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 geophysical or handheld tools were used.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Suitable iron standards of a similar grade to the iron mineralisation encountered were inserted at a rate of 1 in 20 samples. The standard grades were compared to the expected grade to verify the precision of the assaying.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Senior Pantera personnel verified the visual manganese mineralisation intersections reported.
	The use of twinned holes.	No drilling was performed.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	All the assay data was electronically transferred to the companies database.
	Discuss any adjustment to assay data.	The assay data has not been adjusted.
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 rock chip samples were recorded by the field geologist using a Garmin 65s handheld GPS. Accuracy is assumed to be +/- 2m in x, y and z.
	Specification of the grid system used.	GDA94 MGA Zone 50 as the grid system.
	Quality and adequacy of topographic control.	No topographic control was used.
Data spacing and	Data spacing for reporting of Exploration Results.	The data spacing is appropriate for Exploration Results.
distribution	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	No Resource Estimation has been conducted.  No sample compositing has been applied.
Outoutetter	Whether sample compositing has been applied.	No sample compositing has been applied.
Orientation of data in relation to	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	<ul> <li>It is not known if the orientation of rock chip sampling at Weelarrana has created a sampling bias. The results of the rock chip sampling should be considered indicative of the surface iron mineralisation.</li> </ul>



Criteria	JORC Code explanation	Commentary		
geological structure	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.	No drilling was performed.		
Sample security	The measures taken to ensure sample security.	The samples were hand carried by contractors from Weelarrana to Perth and then hand carried and delivered to the Intertek in Maddington by Pantera staff		
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	The company has not performed an audit of sampling technique or data.		

# **Section 2 Reporting of Exploration Results**

Criteria in this section apply to all succeeding sections

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.  The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The Weelarrana tenements consist of five granted and two applications covering approximately 958 sq. km. All these tenements fall on pastoral stations and have native title agreements in place. Two tenement applications fall partially within the Jigalong Aboriginal Reserve for which a Mine Entry Permit will need to be issued to access the portions of the tenement within the reserve. Beau Resources retains a 2% Gross Value Royalty for all minerals, metals and products recovered and sold from within the tenement boundary of E 52/3878.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Most of the past exploration work within the Weelarrana Project area including soil and rock chip sampling, Auger drilling and RAB drilling has been conducted by Pilbara Manganese, Laconia Resources, Shaw River Resources, Warwick Resources and Sipa Resources.</li> <li>The reports are available on the West Australian Mines Department WAMEX open file library.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	The Weelarrana Project covers a portion of the Mesoproterozoic Bangemall Basin with the project sitting entirely within the Bangemall Group including sandstone/quartzite/conglomerate of the Calyie Sandstone and shale/argillite units of the Ilgarari, Backdoor Formation and Balfour Formations which are known Mn mineralisation hosts.  Manganese mineralisation within the area is strataform and primary in deposition with supergene enrichment and occurs within



Criteria	JORC Code explanation	Commentary
		bedded argillite of the Ilgarari Formation which outcrops through the centre of the project area. Manganese mineralisation appears to be preferentially developed at the contact between the Calyie Formation and Ilgagari Formation within the project area.  • Silver-gold mineralisation has previously been reported within the area as being fault hosted and associated with chalcedony veining however to date no deposits of economic significance have been recorded.
Drillhole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:         <ul> <li>easting and northing of the drillhole collar</li> <li>elevation or RL (elevation above sea level in metres) of the drillhole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth hole length.</li> </ul> </li> </ul>	All rock chip details are listed in Tables 1 and 2 and includes sample location, sample ID and grade.
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> </ul>	Rock chip samples are reported as whole rock percentages. No cut-off grades have been applied.
Relationship between mineralisation widths and intercept lengths	<ul> <li>If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	No drilling has been performed.
Diagrams	<ul> <li>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.</li> </ul>	Rock chip sample location maps showing the location of all rock chip samples along with returned iron grades are shown.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	The report has been prepared to highlight the main targets and positive rock chip results based on current exploration within the project areas. Not all exploration results are shown for practical purposes.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	Exploration work to date within the Weelarrana Project area has largely been of a preliminary or reconnaissance nature. The company is aware of regional scale aeromagnetic surveys and geological mapping program, soil sampling and wide spaced RAB drilling undertaken by past explorers and has access to versions of the data that is available in reports and has assessed most of this data.
Further work	The nature and scale of planned further work (e.g.	Near future exploration plans for Weelarrana



Criteria	JORC Code explanation	Commentary
	tests for lateral extensions or depth extensions or large-scale step-out drilling).	are discussed in the release.