PANTERA MINERALS
Level 2
10 Outram Street
West Perth WA 6005

14 November 2022

WEELARRANA DRILLING COMPLETED VISUAL MANGANESE

HIGHLIGHTS

- **Phase 1 drilling at the Weelarrana Project – Mn Area 1 is complete, with 30 RC holes drilled for a total of 965m**
- **Drilling has confirmed continuous visually identified manganese mineralisation over a strike of 800m, with manganese mineralisation open to the north, east and west**
- **Near surface manganese mineralisation identified in 25 holes – with true thicknesses ranging from 2 to 12m**
- **Assay results expected in December 2022**

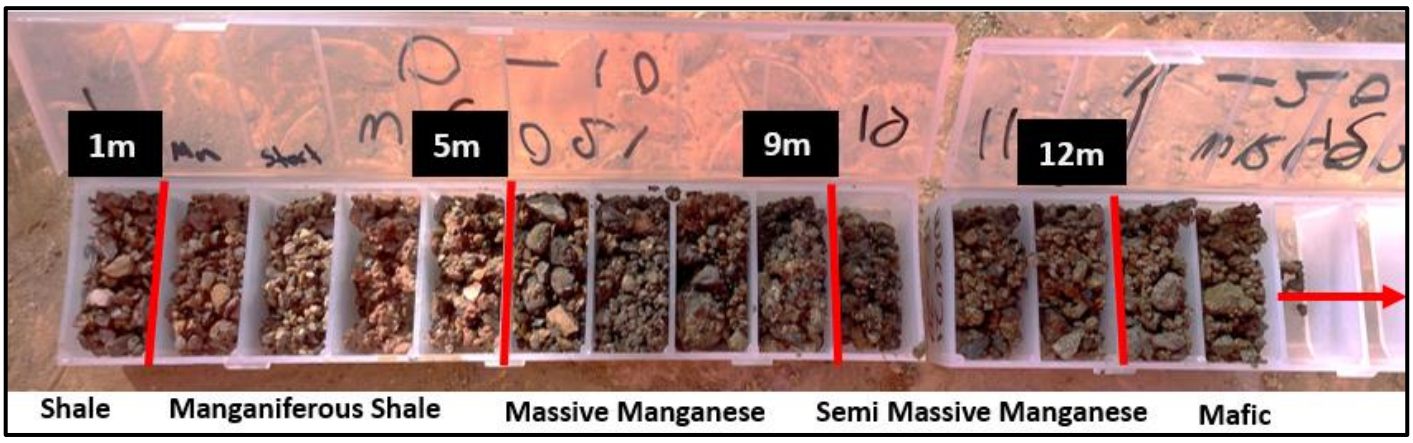

Figure 1 - WRC021 – Manganese Mineralisation from surface. 7m intercept of semi massive to massive manganese from 1m depth [1].

Pantera CEO, Matt Hansen commented:
"The recently completed drilling has been a positive first step in subsurface exploration within the Weelarrana Project area, and we eagerly await the assay results. We look forward to progressing the Project through further systematic exploration and further building on the geological model developed by our in-house geology team, and are also excited to explore the other nearby manganese prospects."

[1] *Refer to cautionary statement on page 6 for commentary on visual estimates of manganese mineralisation*

Pantera Minerals Limited (**ASX:PFE**) ("**Pantera**" or the "**Company**") is pleased to announce the completion of phase 1 Reverse Circulation ("**RC**") drilling at the Weelarrana Project ("**Weelarrana**" or "**Project**"), located in the Collier Basin of Western Australia, with a total of 30 RC holes were drilled for 965 metres (see **Error! Reference source not found.**).

Visually identified manganese mineralisation was intersected on each drill line – see Figure 1 showing RC drill chips from hole WRC021 and Figure 2 showing the location of drill holes with visually identified manganese mineralisation.

A total of 299 samples have been sent for laboratory analysis, with assay results expected during December 2022.

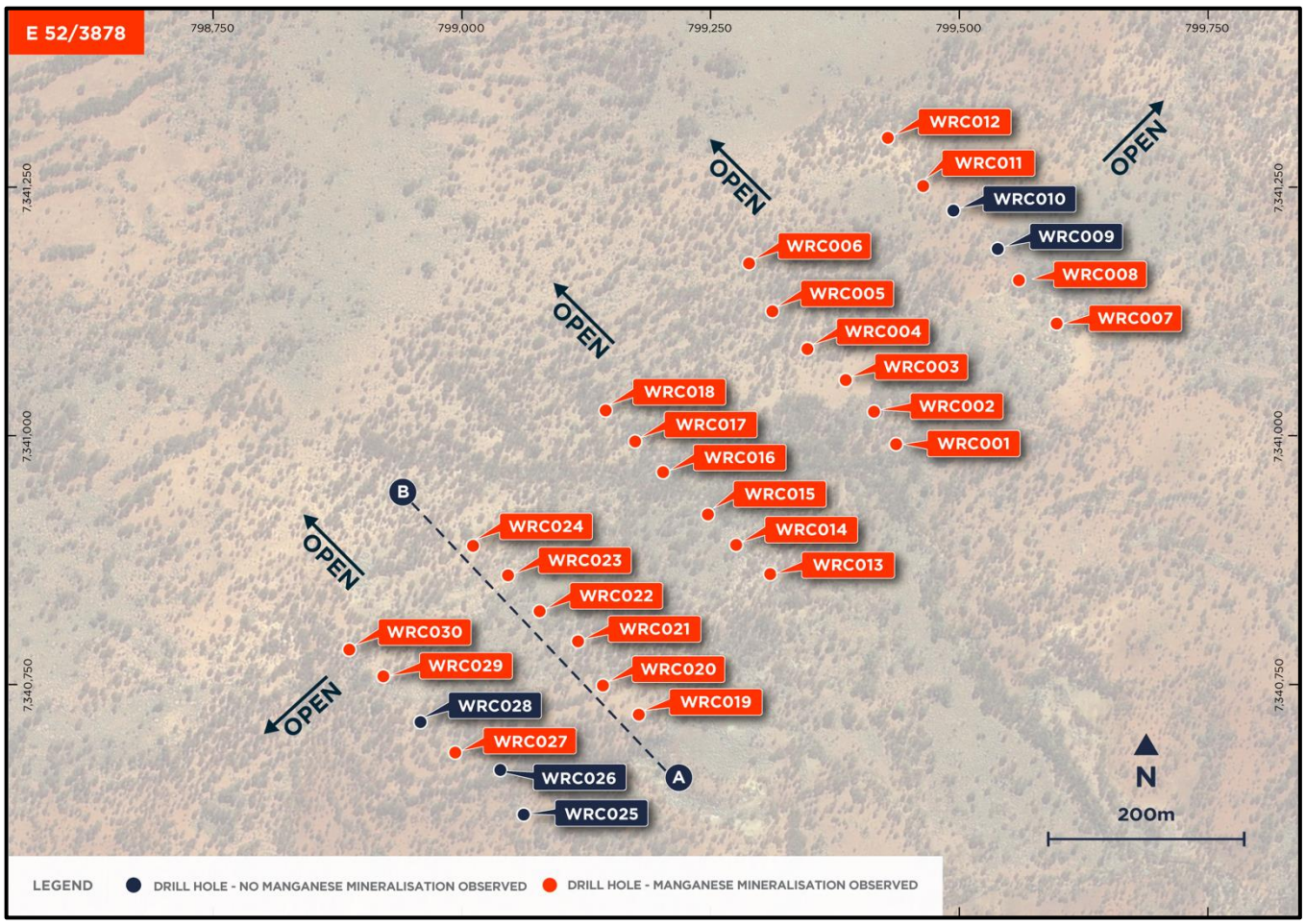

Figure 2 – Drill hole location plan showing the location of drill hole with manganese mineralisation

Geological logging has identified a laterally continuous, gently north dipping, near surface manganiferous shale unit with zones of semi-massive to massive manganese developed within the shale unit[2]. Figure 3 shows a cross section of the interpreted geology from drilling showing the consistent geology encountered along each drill line and the persistence of the manganiferous shale unit.

[2] *Refer to cautionary statement on page 6 for commentary on visual estimates of manganese mineralisation*

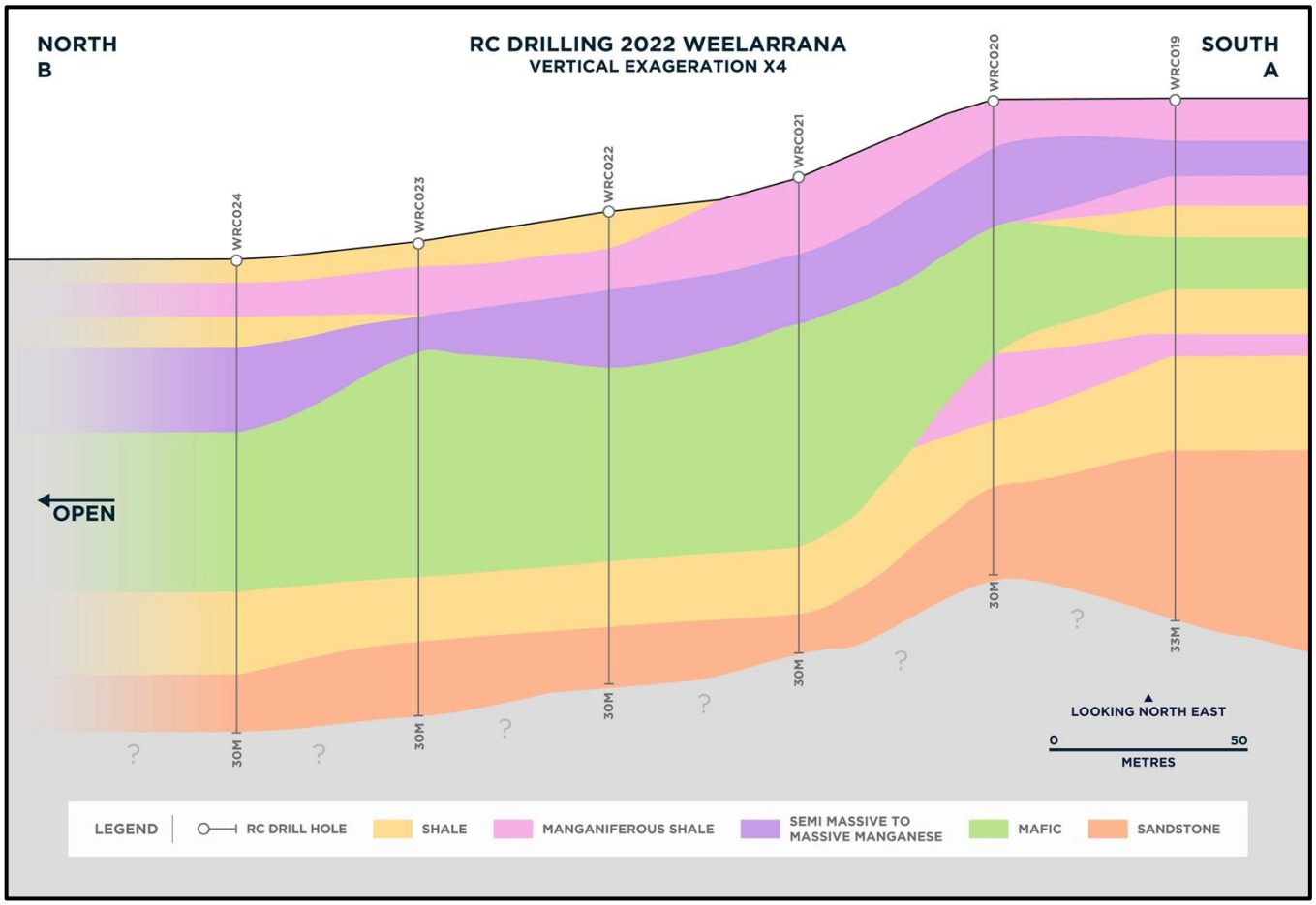

Figure 3 – Cross section from drill line 4 (WRC019 to WRC024) showing the interpreted geology and the laterally continuous maganiferous shale unit (*Note: 4 x vertical exaggeration*)

The manganiferous shale unit varies from 3 to 12m in thickness with zones of semi-massive to massive manganese varying from 1m to 7m in thickness developed preferentially at the base of manganiferous shale. In all drill holes the manganiferous shale unit is overlying a dolerite sill. The high-grade manganese rock chip samples reported in previous ASX announcements[3] can be directly correlated with the semi-massive to massive manganese zone.

The manganiferous shale unit is still open to the north, east and west.

NEXT STEPS

Once assay results are received these will be reviewed and infill drilling of Mn Area 1 planned and permitted.

[3] *See ASX PFE Announcement: Weelarrana Manganese Project Update Drilling to Commence – Mineralisation Extended – 10 October 2022 & Multiple High Grade Manganese Targets Identified at Weelarrana – 3 May 2022*

A review of geophysical targeting methods will also be undertaken to aid in the identification of extensions of the manganiferous shale unit under cover to the north, east and west as well as determining if there is a geophysical method that can identify the semi-massive to massive manganese zones.

Drilling permitting and drilling of Mn Areas 2 to 4.

Field work will recommence in early 2023.

WEELARRANA PROJECT BACKGROUND

Located within the Proterozoic Collier Basin some 80 km south of Newman, Western Australia, the Weelarrana Project covers 958 km^2 of tenure considered prospective for manganese and precious metal mineralisation. All tenements cover either Ilgarari Formation manganiferous shales or Backdoor 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.

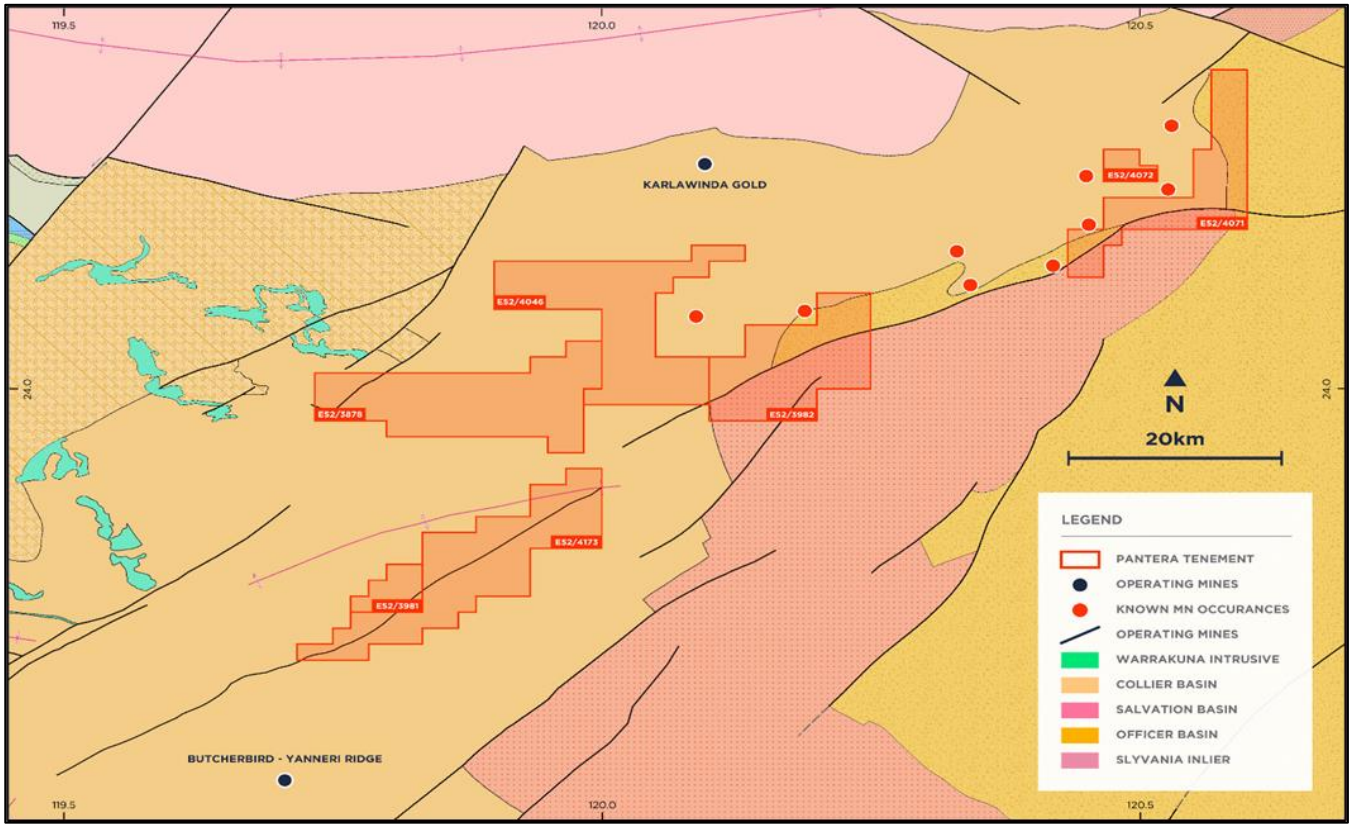

Figure 4 - Weelarrana Project - location plan

- END -

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

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CAUTIONARY STATEMENT ON VISUAL ESTIMATES OF MANGANESE MINERALISATION

References in this announcement to visual results are from visual estimates of manganese mineralogy from RC drilling samples by qualified geologists. Laboratory assays are required for representative estimates of quantifiable elemental values. Results are expected December 2022.

Manganese mineralisation discussed in this release is based on the following criteria:

Mineralisation	Visual Estimation Criteria	Estimation Method
Manganiferous Shale	Shale containing between 5% and 20% manganese mineralogy by volume	Visual
Semi Massive Manganese	Shale containing between 20% and 50% manganese mineralogy by volume	Visual
Massive Manganese	Shale containing greater than 50% manganese mineralogy by volume	Visual

Manganese mineralogy is interpreted to be predominantly pyrolusite and cryptomelane.

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.

Hole ID	Easting	Northing	Elevation	Zone	Dip	End of Hole (m)
WRC001	799437	7340991	627	MGA94_Z50	-90	29
WRC002	799416	7341024	628	MGA94_Z50	-90	33
WRC003	799386	7341056	629	MGA94_Z50	-90	33
WRC004	799347	7341088	630	MGA94_Z50	-90	33
WRC005	799313	7341126	627	MGA94_Z50	-90	36
WRC006	799289	7341174	636	MGA94_Z50	-90	33
WRC007	799598	7341113	629	MGA94_Z50	-90	33
WRC008	799560	7341157	628	MGA94_Z50	-90	36
WRC009	799538	7341188	630	MGA94_Z50	-90	30
WRC010	799494	7341227	632	MGA94_Z50	-90	24
WRC011	799464	7341251	631	MGA94_Z50	-90	42
WRC012	799428	7341299	632	MGA94_Z50	-90	39
WRC013	799310	7340862	638	MGA94_Z50	-90	36
WRC014	799276	7340891	633	MGA94_Z50	-90	36
WRC015	799247	7340921	632	MGA94_Z50	-90	33
WRC016	799202	7340964	629	MGA94_Z50	-90	30
WRC017	799174	7340994	630	MGA94_Z50	-90	33
WRC018	799144	7341026	633	MGA94_Z50	-90	33
WRC019	799177	7340720	644	MGA94_Z50	-90	33
WRC020	799141	7340749	644	MGA94_Z50	-90	30
WRC021	799116	7340794	639	MGA94_Z50	-90	30
WRC022	799077	7340823	637	MGA94_Z50	-90	30
WRC023	799046	7340860	635	MGA94_Z50	-90	30
WRC024	799010	7340889	634	MGA94_Z50	-90	30
WRC025	799062	7340619	637	MGA94_Z50	-90	30
WRC026	799038	7340665	642	MGA94_Z50	-90	30
WRC027	798993	7340681	642	MGA94_Z50	-90	30
WRC028	798958	7340713	642	MGA94_Z50	-90	30
WRC029	798921	7340759	642	MGA94_Z50	-90	30
WRC030	798886	7340785	641	MGA94_Z50	-90	30

Table 1 - Mn Area 1 Drill Hole Locations

Hole ID	Depth From (m)	Depth To (m)	Width (m)	Description	Visual Mn %
WRC001	0	3	3	Manganiferous Shale	20
	3	6	3	Semi Massive Manganese	30
WRC002	3	7	4	Manganiferous Shale	20
WRC003	6	9	3	Manganiferous Shale	5
WRC004	8	11	3	Manganiferous Shale	20
WRC005	9	14	5	Manganiferous Shale	20
WRC006	0	3	3	Manganiferous Shale	20
	12	14	2	Manganiferous Shale	15
WRC007	13	15	2	Manganiferous Shale	30
WRC008	**8**	**9**	**1**	**Massive Manganese**	**80**
WRC009	No manganese mineralogy observed				
WRC010	No manganese mineralogy observed				
WRC011	34	35	1	Manganiferous Shale	30
WRC012	32	35	3	Manganiferous Shale	15
WRC013	**2**	**5**	**3**	**Massive Manganese**	**80**
WRC014	**4**	**9**	**5**	**Massive Manganese**	**70**
WRC015	**5**	**9**	**4**	**Massive Manganese**	**70**
WRC016	4	6	2	Semi Massive Manganese	30
WRC017	6	9	3	Manganiferous Shale	15
WRC018	0	5	5	Manganiferous Shale	10
	7	11	3	Manganiferous Shale	20
	11	14	3	Semi Massive Manganese	40
WRC019	0	3	3	Manganiferous Shale	10
	3	**5**	**2**	**Massive Manganese**	**80**
	5	7	2	Manganiferous Shale	15
WRC010	0	3	2	Manganiferous Shale	10
	3	8	5	Massive Manganese	70
WRC021	1	5	4	Manganiferous Shale	5
	5	**9**	**7**	**Massive Manganese**	**70**
	9	12	3	Semi Massive Manganese	40
WRC022	3	5	2	Manganiferous Shale	10
	5	10	5	Semi Massive Manganese	30
WRC023	2	5	3	Manganiferous Shale	5
	5	**7**	**2**	**Massive Manganese**	**70**
	7	10	3	Semi Massive Manganese	30
WRC024	2	4	2	Manganiferous Shale	5
	6	11	5	Semi Massive Manganese	30
WRC025	No manganese mineralogy observed				
WRC026	No manganese mineralogy observed				
WRC027	2	3	1	Semi Massive Manganese	25
WRC028	No manganese mineralogy observed				
WRC029	14	15	1	Semi Massive Manganese	25
WRC030	2	4	2	Semi Massive Manganese	25
	5	6	1	Semi Massive Manganese	30

Table 2 - Visual manganese mineralisation intersections in drill hole

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.*	• Every metre drilled was collected into a 1 to 2kg calico sample bag via a cone splitter with the remainder of the sample put into a sample pile for logging. The split between the calico bag sample and the sample pile is approximately 1:12.
	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 sub surface geology
	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.	• No assay results are reported in this announcement. • The references to the intersected manganese mineralisation styles are described in the Cautionary Statement and are based on the visual estimate of the percentage of manganese minerals found in each metre sample by volume
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.).*	• Slim line Reverse Circulation drilling method was used using 3.5 inch diameter drill bit . A full sample of each metre drilled was taken.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	• RC chip recovery was recorded for each metre and was based on the volume and weight of each sample recovered based on the theoretical volume and weight which should be recovered using the hole diameter that was drilled
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	• Best practice sampling procedure was used which included use of dust suppression, suitable shroud, lifting of bottom between each metre, ensuring a dry sample and cleaning of the rig cyclone after each metre drilled
	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 assay results are reported and as such the relationship between sample recovery and grade is not yet known
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.*	• RC drill chips were logged on a metre by metre basis by a suitably qualified geologist with sufficient experience in the geology encountered using an industry standard geological logging system which could eventually be utilised within a Mineral Resource Estimation • RC drill chips were washed each metre and stored in chip trays for preservation and future reference

Criteria	JORC Code explanation	Commentary
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	• Logging of RC samples is both qualitative and quantitative
	The total length and percentage of the relevant intersections logged.	• All drilling intersections reported are based on the visual estimation of manganese mineralogy encountered on a 1 metre basis
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	• No drillcore was taken
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	• All samples were dry and all samples were taken from a rotary cone splitter mounted directly to the drill rig
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	• No assay results are reported and sample preparation has not yet occurred.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	• No assay results are reported
	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.	• No assay results are reported
	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.*	• No assay results are reported
	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.	• No assay results are reported
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 twinned holes were drilled
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	• All geological logging data was directly entered into MX Deposit geological logging software and the data was uploaded to the company database on a daily basis
	Discuss any adjustment to assay data.	• No assay data is reported
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 drillholes 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 distribution	*Data spacing for reporting of Exploration Results.*	• The data spacing is appropriate for Exploration Results
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity	• No Resource Estimation has been conducted

Criteria	JORC Code explanation	Commentary
	appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied	
	Whether sample compositing has been applied.	• No sample compositing has been applied
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.*	• The geology is flay lying or gently north dipping (5-10˚) with drillholes being vertical. The orientation of the drillholes is perpendicular to the geology and is considered unbiased
	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 drilling orientation is considered to be optimal to the orientation of the mineralised horizon and as such no bias exists that is known
Sample security	*The measures taken to ensure sample security.*	• The samples were hand carried by Pantera staff from Weelarrana to Newman and transported to Perth via a reputable transport company
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 two granted and five applications covering approximately 958 sq. km. All of 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.*	• 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 and Sipa Resources. • The reports are available on the West Australian Mines Department WAMEX open file library.
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 and Backdoor Formations which are known Mn mineralisation hosts. • Manganese mineralisation within the area is strataform and primary in deposition with supergene enrichment and occurs within 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 Siltstone 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	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:*
	  • *easting and northing of the drillhole collar*
	  • *elevation or RL (elevation above sea level in metres) of the drillhole collar*
	  • *dip and azimuth of the hole*
	  • *down hole length and interception depth hole length.*
		• No drilling for manganese has been performed on the two granted tenements.
		• No drilling for silver-gold has occurred within the area

Criteria	JORC Code explanation	Commentary
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	• Rock chip samples are reported as whole rock percentages. No cut off grades have been applied. No drilling assays have been reported
Relationship between mineralisation widths and intercept lengths	• *If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• No drilling for manganese has been performed on the two granted tenements, prior to this drill program • No drilling for silver-gold has occurred within the area
Diagrams	• *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 drill hole location map showing the location of drill holes with visual manganese mineralisation and the location of drill holes without visual manganese mineralisation • A cross section of the interpreted geology is included. Note this cross section has a 4 x Vertical Exaggeration to aid in visualisation of the geology
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 drillhole observations and rock chip results based on current and past 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 Weelarrna Project and Ilgarari East 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. tests for lateral extensions or depth extensions or large-scale step-out drilling).*	• Near future exploration plans for Weelarrana are discussed in the release.