

# Coziron Resources Limited

The Company Announcements Office ASX Limited via E-Lodgement

23 September 2014

### **Contact Details**

**ASX Code: CZR** 

Level 24, 44 St Georges Tce Perth WA 6000

PO Box Z5183 Perth WA 6831

T +61 (0) 8 6211 5099 F +61 (0) 8 9218 8875 E <u>info@coziron.com.au</u> W <u>www.coziron.com</u>

ABN 91 112 866 869

#### **Board of Directors**

Adam Sierakowski Non-Executive Chairman

### **Dr Rob Ramsay**

Non-Executive Director Senior Geologist

#### **Steve Lowe**

Non-Executive Director

Summary of Assay Results from infill drilling on the Robe Mesa Pisolitic Iron-stones, Yarraloola Project

### HIGHLIGHTS

- A total of 53 RC drill-holes were completed into pisolitic ironstone (CID) hosted by the Robe Mesa on the Yarraloola Project.
- Geological logging identified the upper (outcropping) and lower (subcropping) interval of sub-horizontal pisolitic ironstone with Fe>50% (calcined iron as Fe<sub>Ca</sub>>55%) which is a feature of the Robe Mesa in almost all the drill-holes.
- All assays have been received and samples with Fe>50% (Fe $_{Ca}$ >55%) are characterised by low phosphorus (<0.05%) and high loss on ignition (<10%).
- Upper zone mineralisation extends entirely across the surface of the mesa and is up to 28m thick. Intercepts report Fe up to 22m @ 57.3 (Fe<sub>ca</sub> @ 63.7%) in YAR147.
- Subcropping lower zone mineralisation is up to 30m thick but wider intercepts are more localised within a broad channel that underlies the western and central parts of the Robe Mesa. Intercepts report Fe up to 30m @ 55.37% (Fe<sub>ca</sub> @ 61.2%) in YAR121.
- The easterly outcrop and subcrop extension of pisolitic ironstone in the Lower Robe represents a significant target for future exploration drilling

### **Yarraloola Project**

### Robe Mesa - Background

During 2014, Coziron Resources Limited ("CZR or Company") mapped, surface-sampled and completed 25 vertical RC drill-holes for 1562m into part of the Robe Mesa which extends for a length of about 2km and a width of between 400 to 600m on tenements E08/1060 and E08/1686 at the Yarraloola Project (Fig 1). This drilling intersected two intervals of pisolitic iron-stone (CID

mineralisation) with grades of Fe>50%. The upper zone outcrops as a cap on the mesa, while the lower zone typically underlies 10 to 20m of silty and sandy material.

Following the initial round of drilling in 2014, Optiro Ltd used the available geological and geochemical data and Surpac to independently generate an Inferred Resource which is summarised in Tables 1 and 2.

Table 1. Robe Mesa – Mineral Resource Estimate at January 2015 – reported above a **Fe cut-off grade** of **50%**.

Category	Mt	Fe%	SiO2%	Al2O3%	TiO2%	LOI%	Р%	<b>S</b> %	Fe <sub>ca</sub> %
Inferred	73	53.9	8.0	3.4	0.13	10.8	0.04	0.02	60.4

Table 2. Robe Mesa – Mineral Resource Estimate at January 2015 – reported above a **Fe cut-off grade** of 55%.

Category	Mt	Fe%	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	TiO2%	LOI%	Р%	<b>S</b> %	Fe <sub>ca</sub> %
Inferred	20	55.7	6.2	2.9	0.11	10.6	0.04	0.02	62.3

(Full details of the parameters used to calculate the Inferred Resource model were announced by CZR on the ASX on  $3^{rd}$  February 2015.)

#### Robe Mesa - 2015 Activities and Results

The recently completed 2015 RC programme by Topdrill Pty Ltd on the Robe Mesa (drill-hole locations and a map reported to the ASX on 16<sup>th</sup> August 2015 but included here for completeness) has infilled the 200m spaced drill-holes from the 2014 drilling campaign to approximately 100m intervals (Table 3; Fig 2). The 53 holes for 3374m were each sampled with appropriate duplicates at 1m intervals by a cone splitter attached to the RC drill-rig. The samples, each weighing about 3-5kg, were packed in bulka bags onsite and dispatched using RGR Transport to Bureau Veritas Laboratories in Perth for analysis. After grinding, a representative sample was fused with a sodium borate flux and analysed for a suite of major elements by XRF. Details of the process are contained in Appendix 1.

The purpose of the drilling was to provide a significant increase and confidence in the amount of geological and geochemical data within the confines of the Inferred Resource model which was announced to the ASX on 13<sup>th</sup> February 2015. The material results to date from the 2014 and 2015 drilling programmes can be summarised as follows.

- 1. The planned depth for all the 2015 RC holes was sufficient to intercept both the upper and lower intervals of pisolitic ironstone and all holes were completed in weathered material derived from the Duck Creek Dolomite.
- 2. All the holes reported 1m samples with Fe >50% (calcined iron Fe<sub>ca</sub>>55%) and all the intercepts that extend over at least 5m in thickness are reported in Table 4.
- 3. The increased drill-hole density supported the initial geological model, which interpolated mineralisation as being represented by two flat-lying sheets of pisolitic iron-stone separated by silty sandstone (Fig 3 and 4).
- 4. The thickness of both the upper and lower zone pisolites has remained relatively consistent in adjacent drill-holes.



- 5. The upper zone of pisolitic iron-stone with Fe>50% that outcrops on the mesa is characterised by stronger development of a goethitic cement, is widely distributed and up to 29m thick (Fig 5).
- 6. The lower zone of pisolitic iron-stone with Fe>50% which is also up to 30m thick and appears to have lesser amounts of vitreous goethite cement is contained within a slightly asymmetric channel that has the thickest development along the western and northern margins of the drilled prospect (Fig 6).

The Chairman of CZR Mr Adam Sierakowski commented: "The Board is very happy with the results of the recent drilling at the Robe Mesa. The drilling not only confirms the geological model but appears to show there is significant opportunity to increase both the resource tonnage and confidence. Further this exploration success represents only the first of multiple targets of similar geology and scale that exist on the Yarraloola project.

While early days, it appears as if the Robe Mesa could support a stand-alone mining operation, particularly given it is ideally located in proximity to both existing and proposed transportation infrastructure and coastal ports. These elements afford CZR the rare potential to be a commercial iron ore producer even at current depressed iron ore prices."

#### **Future Work**

Following from the RC drilling programme, priority activities to be completed by the Company over the coming weeks include the following.

- 1. Acquisition of survey control on the surface of the Robe Mesa
- 2. Complete an independent review of the JORC-compliant Inferred Resource completed with the view of increasing both the tonnage and confidence of the resource.
- 3. Review the grade distribution and thickness models in detail to determine whether the core of the channel system contains higher grade material.

Results will be announced as they become available.



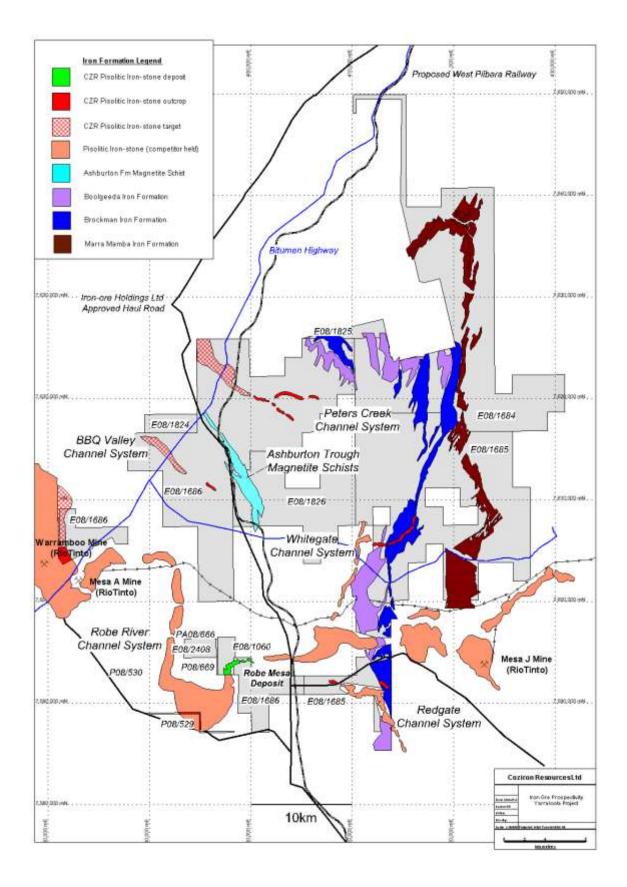


Fig 1. Distribution of banded iron-formations and prospects for CID mineralisation on the Yarraloola Iron-ore project in the West Pilbara highlighting the Robe Mesa deposit on E08/1060.



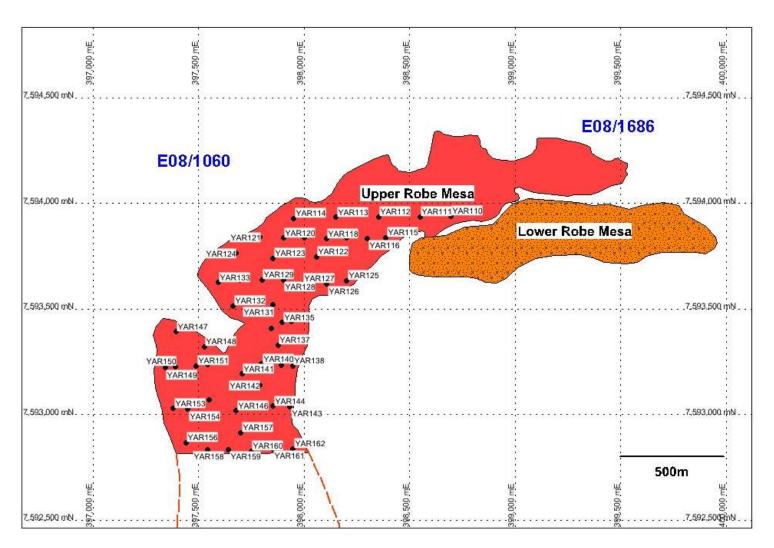


Fig 2. Location of drill-sites on the Robe Mesa within the tenements E08/1060 and E08/1686 from which the downhole intervals in Table 3 are reported and the cross-sections at 7593300N and 7593950N as Figs 4 and 5 are updated.

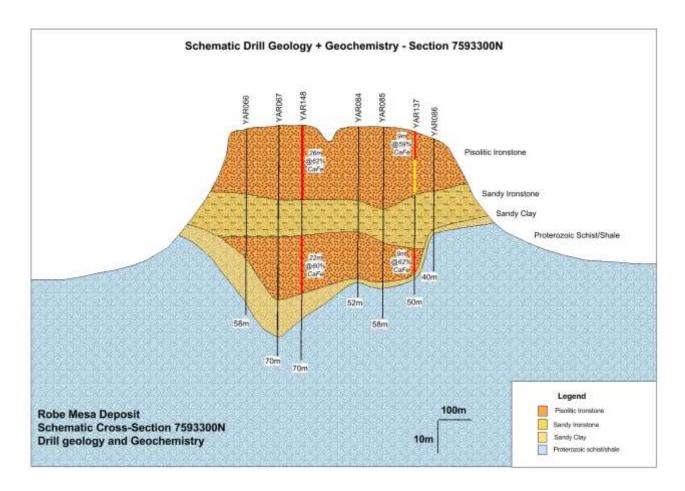


Fig 3. Interpreted geological cross-section on 7593300N (from Fig 2) showing the 1m sampled down-hole intervals in red for the 2015 drilling reporting Fe>50% (ie calcined iron or Fe<sub>ca</sub>>55%) in the pisolitic iron-stone as defined by the 2014 and 2015 drill-holes.



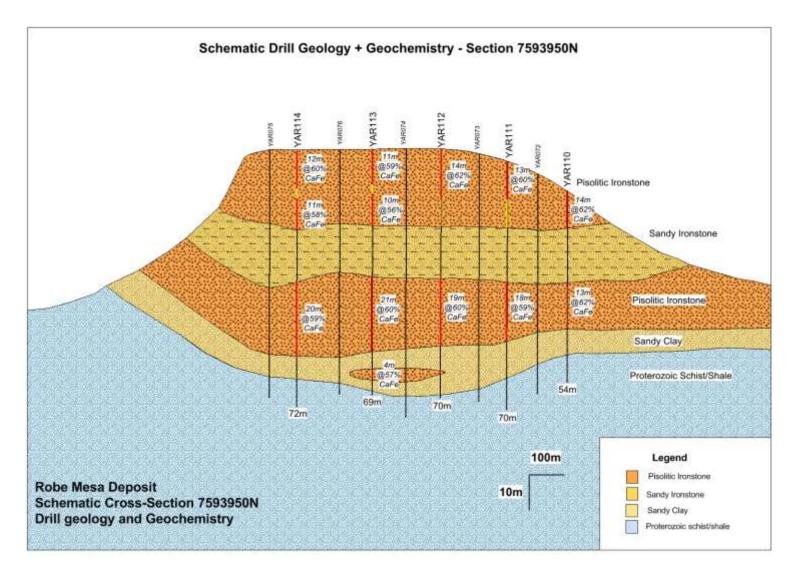


Fig 4. Interpreted geological cross-section on 7593950N (from fig 1) showing the 1m sampled down-hole intervals in red for the 2015 drilling reporting Fe>50% (ie Fe<sub>ca</sub>>55%) in the pisolitic iron-stone as defined by the 2014 and 2015 drill-holes.



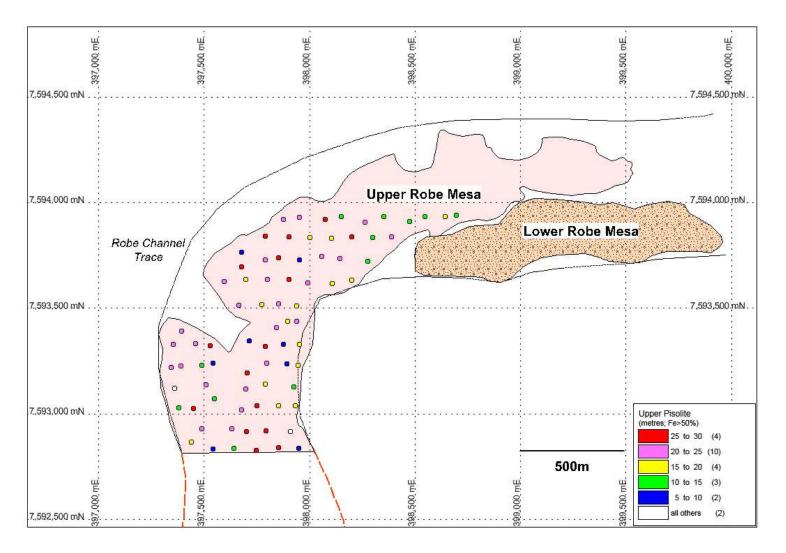


Fig 5. Calculated thickness of drill intercepts (>5m) with Fe>55% from upper zone pisolitic iron-stone on the Robe Mesa from the 2014 and 2015 RC programmes.

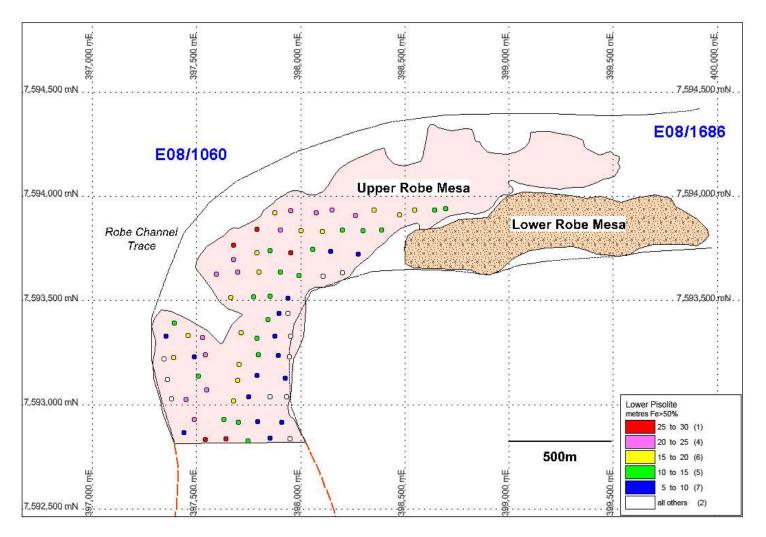


Fig 6 Calculated thickness of drill intercepts (>5m) with Fe>55% from the lower zone pisolitic iron-stone on the Robe Mesa from the 2014 and 2015 RC programmes.



Table 3. Locations of all RC drill-collars collars completed during 2015 on the Robe Mesa, Yarraloola Project, West Pilbara.

Hole	Easting GDA	Northing GDA			
Number	Zone 50	Zone 50	RL (AHD) Nom	Angle	Depth (m)
YAR110	398695	7593941	140	-90	54
YAR111	398548	7593936	140	-90	150
YAR112	398352	7593936	140	-90	70
YAR113	398150	7593935	140	-90	69
YAR114	397950	7593930	140	-90	72
YAR115	398387	7593838	140	-90	66
YAR116	398300	7593835	140	-90	65
YAR117	398200	7593838	140	-90	64
YAR118	398104	7593833	140	-90	66
YAR119	398001	7593836	140	-90	72
YAR120	397902	7593837	140	-90	72
YAR121	397790	7593824	140	-90	96
YAR122	398057	7593747	140	-90	54
YAR123	397852	7593740	140	-90	72
YAR124	397676	7593765	140	-90	78
YAR125	398201	7593635	140	-90	48
YAR126	398107	7593618	140	-90	45
YAR127	397990	7593621	140	-90	60
YAR128	397902	7593638	140	-90	60
YAR129	397800	7593639	140	-90	60
YAR130	397696	7593638	140	-90	78
YAR131	397853	7593520	140	-90	54
YAR132	397663	7593514	140	-90	66
YAR133	397593	7593626	140	-90	72
YAR134	397937	7593440	140	-90	48
YAR135	397896	7593437	140	-90	48
YAR136	397843	7593408	140	-90	48
YAR137	397876	7593330	140	-90	50
YAR138	397944	7593231	140	-90	42
YAR139	397892	7593236	140	-90	48
YAR140	397797	7593240	140	-90	66
YAR141	397704	7593193	140	-90	60
YAR142	397789	7593141	140	-90	52
YAR143	397933	7593038	140	-90	48
YAR144	397853	7593040	140	-90	45
YAR145	397750	7593038	140	-90	60
YAR146	397678	7593018	140	-90	66
YAR147	397392	7593393	140	-90	66
YAR148	397527	7593322	140	-90	70
YAR149	397342	7593222	140	-90	63
YAR150	397390	7593227	140	-90	66
YAR151	397489	7593231	140	-90	72
YAR152	397543	7593239	140	-90	66

Hole	Easting GDA	Northing GDA			
Number	Zone 50	Zone 50	RL (AHD) Nom	Angle	Depth (m)
Hole	Easting GDA	Northing GDA	RL (AHD) Nom		
Number	Zone 50	Zone 50		Angle	Depth (m)
YAR153	397379	7593029	140	-90	54
YAR154	397448	7593026	140	-90	70
YAR155	397548	7593072	140	-90	70
YAR156	397439	7592867	140	-90	48
YAR157	397700	7592915	140	-90	60
YAR158	397541	7592835	140	-90	90
YAR159	397641	7592839	140	-90	70
YAR160	397748	7592827	140	-90	66
YAR161	397851	7592839	140	-90	51
YAR162	397947	7592838	140	-90	48

Easting and Northing by a hand held Garmin GPS ±3m accuracy, AHD nominal at 140m from SRTM90.



Table 4. Down-hole XRF intercept summary of the available 1m RC samples from the Robe Mesa reporting Fe>50% that include a maximum of 2m of samples reporting Fe<55% in intervals of at least 5m thickness.

Hala	Danth	Danth	I saka musal		1	<u> </u>				1.010/
Hole Number	Depth From	Depth To	Interval	Fe%	CaFe%*	SiO <sub>2</sub> %	Al₂O₃%	Р%	S%	LOI% 1000
YAR110	1	15	14	55.42	57.16	5.92	2.98	0.03	0.02	11.43
YAR110	30	44	13	56.73	62.47	5.58	2.62	0.05	0.02	10.13
YAR111	1	13	12	54.34	60.57	6.81	2.54	0.03	0.02	11.50
YAR111	36	54				9.09	3.48	0.04	0.02	10.41
			18	53.29	58.85					
YAR112	20	14	13	56.94	63.14	4.85	2.44	0.04	0.02	10.90
YAR112	38	57	19	54.36	60.13	7.49	3.33	0.06	0.01	10.62
YAR113	1	11	10	53.69	59.51	8.45	2.97	0.04	0.02	10.84
YAR113	39	60	21	54.11	59.51	8.10	3.76	0.05	0.01	9.97
YAR114	1	13	11	54.71	60.61	7.14	3.14	0.04	0.02	10.76
YAR114	17	28	11	51.59	57.57	9.83	4.21	0.03	0.03	11.58
YAR114	39	59	20	53.92	59.32	8.50	3.50	0.07	0.01	9.99
YAR115	1	23	23	54.24	60.54	6.43	3.83	0.03	0.02	11.62
YAR115	34	48	14	55.27	61.12	6.64	2.95	0.05	0.01	10.58
YAR116	1	15	14	55.34	61.48	6.30	3.08	0.04	0.02	11.13
YAR116	38	49	11	55.86	61.81	5.92	2.75	0.05	0.01	10.67
YAR117	1	28	27	54.72	60.81	6.88	3.29	0.03	0.02	11.15
YAR117	39	52	13	55.10	61.00	6.38	3.49	0.05	0.01	10.72
YAR118	4	12	8	53.45	58.64	10.57	2.61	0.03	0.02	9.70
YAR118	15	25	10	55.95	62.49	5.31	2.57	0.03	0.02	11.70
YAR118	38	55	17	53.84	59.68	7.34	4.06	0.05	0.02	10.87
YAR119	12	30	18	53.38	59.51	7.98	3.70	0.03	0.02	11.51
YAR119	38	55	17	55.49	61.38	6.26	3.02	0.05	0.02	10.64
YAR120	1	28	26	53.34	59.29	8.18	3.55	0.04	0.02	11.18
YAR120	36	59	23	55.77	61.51	6.46	2.80	0.04	0.01	10.31
YAR121	2	28	26	54.34	60.48	7.10	3.26	0.03	0.02	11.30
YAR121	36	66	30	55.37	61.15	6.78	2.80	0.07	0.01	10.44
YAR122	1	24	23	53.77	59.78	8.19	3.30	0.03	0.02	11.18
YAR122	36	47	11	56.95	62.75	5.17	2.62	0.04	0.01	10.18
YAR123	1	27	26	53.82	59.64	8.16	3.47	0.04	0.02	10.83
YAR123	36	50	14	55.80	61.31	6.81	2.79	0.04	0.01	9.86
YAR124	1	8	7	51.25	56.23	11.68	4.27	0.03	0.02	9.73
YAR124	36	66	30	54.86	60.56	7.19	3.14	0.08	0.01	10.38
YAR125	1	17	16	56.09	62.48	4.93	3.11	0.03	0.02	11.42
YAR126	0	17	17	55.28	61.40	6.25	3.05	0.03	0.02	11.09
YAR127	0	21	21	55.37	61.50	6.27	2.95	0.04	0.02	11.06
YAR127	34	47	13	55.82	61.22	6.73	3.07	0.04	0.01	9.68
YAR128	1	27	26	53.20	59.10	8.40	3.84	0.03	0.02	11.09
YAR128	36	48	12	55.91	61.72	5.56	3.46	0.04	0.01	10.38
YAR129	0	21	21	52.75	58.12	10.76	3.01	0.04	0.02	10.33
YAR129	35	52	17	54.26	59.77	8.06	3.46	0.04	0.01	10.16
YAR130	1	16	15	55.04	60.90	7.37	2.87	0.04	0.01	10.66
YAR130	33	56	23	54.20	59.57	8.51	3.40	0.03	0.02	9.88
IMUTOO		30	23	J4.ZU	J3.J/	0.51	3.40	0.04	0.01	9.00



Hole	Depth	Depth	Interval							LOI%
Number	From	To	m	Fe%	CaFe%*	SiO <sub>2</sub> %	Al₂O₃%	Р%	S%	1000
YAR131	1	23	22	53.70	59.75	7.78	3.58	0.04	0.02	11.26
YAR131	32	45	13	55.60	61.04	7.11	2.76	0.03	0.01	9.77
YAR132	0	24	24	54.26	60.27	7.42	2.89	0.04	0.02	11.10
YAR132	32	48	16	54.29	59.84	7.82	3.47	0.05	0.01	10.25
YAR133	1	24	23	54.45	60.49	7.45	3.16	0.04	0.02	11.08
YAR133	35	56	21	55.80	61.71	5.85	2.83	0.07	0.01	10.60
YAR134	2	24	22	52.93	58.93	8.86	3.43	0.03	0.02	11.34
YAR135	1	20	19	55.39	61.69	5.60	3.24	0.03	0.02	11.39
YAR135	33	40	7	55.14	60.94	7.25	2.72	0.04	0.01	10.51
YAR136	1	22	21	54.69	60.68	6.98	3.17	0.03	0.02	10.98
YAR136	32	45	13	53.32	58.87	9.08	3.32	0.04	0.01	10.41
YAR137	1	8	7	55.02	60.09	8.60	2.87	0.03	0.02	9.23
YAR137	36	44	8	55.93	61.80	6.13	2.75	0.04	0.02	10.52
YAR138	1	20	19	55.13	61.37	6.15	3.19	0.03	0.02	11.34
YAR139	4	11	7	51.88	56.97	11.28	3.96	0.03	0.02	9.85
YAR139	14	19	5	53.68	59.90	7.04	4.02	0.03	0.02	11.58
YAR140	1	17	16	54.20	59.88	6.96	3.37	0.03	0.02	10.53
YAR140	20	27	7	53.70	60.11	7.46	3.18	0.03	0.02	11.92
YAR140	37	48	11	54.15	59.84	8.26	2.96	0.04	0.01	10.50
YAR141	0	26	26	55.09	60.92	6.65	3.12	0.04	0.02	10.60
YAR141	34	49	15	54.42	60.17	7.60	3.30	0.04	0.01	10.56
YAR142	1	16	15	54.67	60.26	7.67	3.34	0.03	0.03	10.24
YAR142	38	45	7	54.41	60.31	7.30	3.26	0.04	0.01	10.87
YAR143	1	20	19	56.20	62.26	5.13	3.20	0.03	0.02	10.79
YAR144	5	21	16	55.38	61.29	6.63	2.91	0.04	0.02	10.68
YAR145	0	17	17	51.64	56.97	11.17	3.95	0.04	0.02	10.31
YAR145	19	28	9	54.38	60.83	6.49	3.28	0.04	0.02	11.85
YAR146	0	16	16	53.46	58.93	8.94	3.83	0.04	0.02	10.24
YAR146	19	26	7	52.10	58.24	8.90	4.21	0.04	0.02	11.78
YAR146	34	51	17	55.45	61.45	5.80	3.22	0.05	0.02	10.84
YAR147	0	22	22	57.26	63.66	6.99	3.26	0.04	0.02	11.71
YAR147	34	46	12	52.14	57.64	9.10	4.83	0.05	0.01	10.59
YAR148	0	25	25	55.50	61.82	5.74	3.04	0.04	0.02	11.38
YAR148	32	53	21	53.89	59.64	8.02	3.59	0.05	0.01	10.65
YAR149	1	25	24	54.81	60.67	7.39	2.98	0.03	0.02	10.67
YAR150	1	24	23	56.15	62.05	5.72	3.06	0.04	0.02	10.51
YAR150	39	58	19	53.85	59.77	7.55	3.73	0.07	0.01	10.98
YAR151	0	12	12	54.47	59.61	8.49	3.27	0.03	0.02	9.49
YAR151	15	20	5	54.16	60.22	8.63	2.01	0.03	0.02	11.19
YAR151	35	56	21	52.53	58.14	9.17	4.18	0.05	0.01	10.70
YAR152	1	6	5	53.50	58.74	8.28	4.79	0.03	0.02	9.79
YAR152	32	52	20	53.96	59.55	8.44	3.22	0.05	0.01	10.37
YAR153	1	13	12	55.36	60.62	7.21	3.65	0.03	0.02	9.52
YAR154	1	27	26	53.98	59.50	8.92	3.00	0.03	0.02	10.21
YAR154	38	61	23	55.43	61.25	6.33	3.16	0.06	0.01	10.49
YAR155	1	10	10	51.72	56.69	11.61	4.09	0.04	0.01	9.65



Hole	Depth	Depth	Interval							LOI%
Number	From	To	m	Fe%	CaFe%*	SiO <sub>2</sub> %	$Al_2O_3\%$	Р%	S%	1000
YAR155	36	57	21	54.54	60.16	7.81	3.10	0.05	0.01	10.29
YAR156	1	17	16	52.22	57.52	10.53	3.94	0.03	0.02	10.20
YAR156	32	40	8	55.43	61.03	7.76	2.29	0.04	0.01	10.10
YAR157	0	28	28	54.68	60.58	6.86	3.39	0.04	0.02	10.81
YAR157	36	48	12	55.81	61.72	5.62	3.20	0.05	0.02	10.60
YAR158	9	16	7	54.03	59.35	8.80	3.15	0.03	0.01	9.84
YAR158	39	68	29	54.10	59.49	8.72	3.10	0.07	0.01	9.95
YAR159	1	12	11	51.48	56.68	10.76	4.08	0.03	0.01	10.12
YAR159	36	62	26	55.88	61.69	6.36	2.71	0.04	0.01	10.40
YAR160	0	29	29	54.17	59.98	7.53	3.29	0.04	0.02	10.75
YAR160	36	50	14	54.02	59.86	7.22	3.77	0.05	0.01	10.80
YAR161	1	26	25	55.33	61.25	6.50	3.18	0.04	0.02	10.71
YAR161	34	42	8	54.18	59.78	7.93	3.59	0.04	0.01	10.36
YAR162	1	9	8	52.87	58.72	8.16	4.53	0.04	0.02	11.04

CaFe% = %Fe divided by (100 minus LOI) multiplied by 100 and represents the Fe-grade after volatiles (mainly water) are lost.

For further information regarding this announcement please contact Adam Sierakowski on 08 6211 5099.

### **Competent Persons Statement**

The information in this report that relates to mineral resources and exploration results is based on information compiled by Rob Ramsay (BScHons, MSc, PhD) who is a Member of the Australian Institute of Geoscientists. Rob Ramsay is a full-time Consultant Geologist for CZR and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Rob Ramsay has given his consent to the inclusion in this report of the matters based on the information in the form and context in which it appears.



Appendix 1 – Reporting of exploration results from the Yarraloola Project - JORC 2012 requirements.

	Section 1 Sampling Techn	iques and Data
Criteria	JORC Code explanation	Commentary
	<ul> <li>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.</li> </ul>	The results presented are derived from a 5.5" reverse circulation drilling programme with continuous down-hole sampling.
Sampling	<ul> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> </ul>	2-3kg of drill chips are collected during the drilling of each meter in a calico bag from a cone splitter which is attached to the drill-rig.
techniques	• 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 drill-chip sample is crushed, dried and pulverized at Bureau Veritas Laboratories in Perth. Western Australia. A sub sample was fused and the "basic iron-ore suite" of major oxide and selected trace-element analysis was obtained by XRF Spectrometry.
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).	Samples were collected by reverse circulation drilling using a 5.5" face sampling hammer.
	Method of recording and assessing core and chip sample recoveries and results assessed.	The volume of sample derived from each reverse circulation meter drilled is approximately equal.
Drill sample recovery	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Some water is injected into the sample stream during drilling to minimise the loss of fine particles.
	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.	The loss of fine material has been minimized during drilling. Sample recovery is regarded as being representative.
	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 is described geologically for mineralogy, colour and texture. The mineral resource estimate has not been updated in this report.
Logging	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Logging is qualitative.
	The total length and percentage of the relevant intersections logged.	Sample intervals from the entire drill hole are logged.



	If core, whether cut or sawn and whether quarter, half or all core taken.	No core was collected for this study
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	Reverse circulation drill chip samples are collected from a cone splitter during drilling.
Sub-sampling	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 though the interval of mineralization.
techniques and sample preparation	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Appropriate duplicate samples in mineralized intervals are collected and analysed to ensure representivity.
	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 splitter selects a representative proportion of the sample and provides an indication of compositional variations associated with each lithology or mineralized interval.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The 2-3kg of homogenized chips recovered is sufficient to provide a representative indication the material sampled.
	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	All analyses at Bureau Veritas Laboratories in Perth. Ironore suite for all major-element oxides and selected minor element oxides were determined by XRF on fused disks.
Quality of assay data and laboratory tests	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.	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.
	The verification of significant intersections by either independent or alternative company personnel.	No independent of alternative company has been used to verify the intersections.
Verification of	The use of twinned holes.	The drill intercepts reported are from an exploratory drill programme.
sampling and assaying	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Assay data is received electronically and uploaded into an access database. All hand-held GPS locations are checked against the field logs.
	Discuss any adjustment to assay data.	No adjustment or calibrations were made to any assay data presented.
Location of data	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.	Drill hole locations are derived from a hand held Garmin 72h GPS units, with an average accuracy of ±3m.
points	Specification of the grid system used.	The grid system is MGA GDA94, zone 50, all easting's and northings are in MGA co-ordinates
	Quality and adequacy of topographic control.	SRTM90 is used to provide topographic control and is regarded as being adequate for early stage exploration and the location of drill-sites.
	Data spacing for reporting of Exploration Results.	The early-stage drilling is located on sites spaced approximately on a 100m grid over an area of outcropping mapped mineralization.
Data spacing and 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.	The Mineral Resource statement that is summarised in this report was fully described and attributed in an announcement to the ASX on 3 <sup>rd</sup> February 2015.
	Whether sample compositing has been applied.	Sample results represent 1m interval reverse circulation drill-chips and samples have not been composited.



Orientation of	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	Mineralization is contained within a sub-horizontal sheets and the vertical drill-holes and associated sampling collects representative material through the mineralized zone.
data in relation to 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.	The drill orientation was selected to minimise any sampling bias.
Sample security	The measures taken to ensure sample security.	Samples are collected labelled and packed into bulka bags by Coziron Geologists. RGR Transport collected the sealed bulka bags from site and delivered them directly to Bureau Veritas Laboratories in 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 and 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 eastern section of the tenements covers Archaeanage chemical and clastic sediments overlying basalts in the Hamersley Basin. The western part of the tenements covers deformed Palaeoproterozoic mostly clastic sediments of the Ashburton Trough which are overlain by more recent undeformed detritus associated with the Carnarvon Basin. Sediments of the Hamersley and Carnarvon Basins are known to host economic deposits of iron-ore.



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:  a easting and northing of the drill hole collar  elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar  dip and azimuth of the hole  down hole length and interception depth  hole length.	Easting and Northing is reported as GDA Zone50 in Table 3.  The area has only minor relief and a nominal RL of 140m above sea level from the SRTM90 is used for results in this report. A differential GPS survey is planned to provide future surface control  Dip and azimuth is reported in Table 3.  Down hole lengths and intercept depths are reported in Table 4.  Hole lengths are reported in Table 3.
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.      Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used	Intercept values are numerical averages of the 1m sample results reporting Fe>55% with intercepts greater than 5m including a maximum of 2m of samples with Fe<55%. No cutting of high grades has been used.  All samples intervals used to calculate the intercepts are
	for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.  • The assumptions used for any reporting of metal equivalent values should be clearly stated.	of equal length.  No metal equivalents are presented
	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	The vertical drill-holes are designed to intercept the true widths of the essentially horizontal sheets of pisolitic ironstone mineralization.
Relationship between mineralisation widths and	<ul> <li>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').</li> </ul>	The down-hole widths are regarded as true widths of the mineralization.
intercept lengths	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.	Maps of the dill-hole locations are included in the report. Further assay and survey results are required to generate cross-sectional and wire frame models on the distribution of the mineralization. These results will be reported when they become available.
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.	Refer to the maps and cross-sections in body of text which provide a graphical summary of the locations and relationships between the data which is summarised in the tables.
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.	Intervals of samples with Fe>50% and the trace elements appropriate to the description of pisolitic ironstone are reported.



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).	DGPS surveying over the mineralized area, quantitative mineralogical studies, infill and extensional drilling is being planned.
	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 mineralization have been identified on the map in the body of the text highlight the high prospectivity areas for future work.
Further work		

