

#### **Coziron Resources Limited**

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The Company Announcements Office ASX Limited Via E Lodgement

31 October 2014

# **Quarterly Activities Report to 30 September 2014**

### **HIGHLIGHTS - Technical**

#### Yarraloola Project – West Pilbara

- A 2.5km section of the Robe River Channel system on E08/1060 has been selected as a priority drill-target. This section has a well sorted capping of pisolitic iron-stone mineralisation (CID) over 10m thick where samples typically report iron (Fe) from 57-59%.
- Other historically mapped CID systems have been sampled and areas reporting Fe > 55% are being prioritised for future drill programmes.
- A 4km long eastern extension of the Whitegate Channel system filling a narrow, deep valley in the Brockman Iron Formation has been mapped and sampled and is identified as a future drill prospect
- Mapping over the magnetic anomaly in the Ashburton Trough has identified magnetite schists and quartzites intermittently outcropping over a strike length of 6km and a width of 800m. Samples report Fe to 39.5% with low phosphorous (P typically less than 0.09%) and sulphur (S less and 0.07%). Three drill-holes are planned in the first drill programme to examine the sub-surface geology.
- The first-stage Robe and Ashburton drill-targets are proximal to current or proposed road and rail infrastructure.

### Shepherds Well Project - West Pilbara

- Initial follow-up of targets generated from the low level (40m), 100m line-spaced highresolution airborne magnetic-radiometric survey completed during the last quarter has identified some iron-formation in outcrop and other targets beneath overburden, representing future drill-targets.
- A rock-chip sample from a historical pit within a sequence of felsic rocks reported silver (Ag) at 9.8g/t, lead (Pb) at 4.4% and Zinc (Zn) at 0.5% and potentially represents a target for volcanic-hosted massive sulphide mineralisation.



#### Yarrie Project - North Pilbara

- Nine historical RC drill-holes sampled on 1m intervals have intercepts with iron (Fe) greater than 50%. The maximum down-hole intercept is 19m @ 63% Fe and the maximum Fe in a 1m interval sample is 67.8%.
- A gravity-seismic programme over magnetic targets which are interpreted as extensions
  of the Nimingarra Iron-formation has been completed. An initial assessment shows
  anomalous gravity responses are associated with the interpreted traces of the iron
  formation. The seismic results suggest shallower overburden depths are associated with
  the more iron-ore prospective geology.

### **Project Summaries**

#### Yarraloola Project – West Pilbara

### **Background**

The Yarraloola tenements cover 1450km² in the western part of the Hamersley Basin and adjacent parts of the Ashburton Trough in the West Pilbara. In parts these are overlain by younger sediments of the Carnarvon Basin. Sediments in the Hamersley Basin include iron-rich members of the Marra Mamba, Brockman and Boolgeeda Iron Formations. In the south, the Yarraloola tenements are transected by the RioTinto Ltd owned Robe River Channel Iron deposits (CID). These are basin margin sediments of the Carnarvon Basin that currently support large-scale mining operations at Warramboo, Mesa A and Mesa J (Fig 1). In addition to the established infrastructure associated with Yarraloola, there is a new haul-road and port infrastructure being developed by Iron-ore Holdings Ltd and rail and port facilities are proposed for development by the Baosteel JV. This planned infrastructure will traverse the CZR tenements and potentially improve the economics of any iron-ore deposits discovered within the project area

### Activities

During the quarter, the company received results from field activities which were reported on 11 July 2014 and 17 July 2014. The major focus of exploration is the assessment and ranking of palaeochannel systems which host pisolitic iron-stone mineralisation (CID). Secondary targets include strongly magnetic units within the Ashburton Trough and the upper units of the Brockman Iron Formation (Fig 1). Highly magnetic targets in the Ashburton Trough are of significant interest because the rocks have been subjected to periods of deformation and metamorphism and this provides an opportunity for magnetite to recrystallise and increase in grain-size. The upper part of the Brockman Iron Formation is also a target because it is both the feedstock for magnetite production at the Sino Mine to the north of Yarraloola and also hosts large-scale deposits of direct shipping iron-ore in the east and central Pilbara.

The focus of activity during the quarter has been the generation of drill-targets and submission of documentation for statutory and heritage clearances for drilling.

#### Results

Pisolitic Iron-stone - CID Mineralisation

On E08/1060, rock-chip samples from the pisolitic iron-stone capping which is in excess of 10m thick on the Robe Mesa have iron (Fe) from 55.6 to 59.4% and overlie an iron-stone conglomerate



reporting Fe from 55.6 to 57.9% (as reported on 11 July 2014). CZR's Robe target, which is about 2.5km in length, is the focus for a first-stage 200m-spaced RC drill-programme. A Programme of Works has been submitted to the WA Department of Minerals and Energy and a Heritage Notice has been submitted to the Native Title Party for a clearance programme.

In addition to the Robe Mesa, pisolitic iron-stone rock-chip samples from a section of the Redgate Channel system which is up to 50m thick and located in the south-east corner of E08/1685 report Fe to 60.1% (as reported on 11 July 2014). This also represents a priority drill target but requires earthworks to gain access and represents a second-stage target. Further north on E08/1685, an easterly extension to the Whitegate Channel system has been identified within a deep, steep-sided palaeo-valley which cuts through siliceous units of the Brockman Iron Formation. The channel which has been mapped over a length of about 4Km is up to 50m thick and includes pisolitic iron-stone in the upper part with rock-chip samples reporting Fe to 59.1% (as reported on 11 July 2014). While this also represents a priority drill-target, the area will require a significant programme of heritage clearance and earth-works to achieve access and as such is being included in follow-up work proposals.

On E08/1686, two pisolitic iron-stone systems have been mapped and sampled. In lower BBQ Valley, a ferruginous sandstone becomes pisolitic and thickens towards the west and rock-chip samples reported Fe to 58.3% (as reported 11 July 2014). At Peters Creek, the mapping along the exposed sections of a palaeo-channel system has identified intervals of well sorted pisolites where rock-chip samples report Fe to 57.9%. Each of these target areas is scheduled to be included in in follow-up work proposals for heritage clearance and the development of access to the most significant areas of interest.

#### Magnetite Mineralisation

Mapping along the 12km long and 800m wide magnetic anomaly on E08/1686 and E08/1826 in the Ashburton Trough has identified magnetite-bearing schists and quartzites intermittently outcropping along 6km of the strike length (as reported on 16 July 2014). The strongly foliated and coarser grained textures differentiate this iron formation from the finer grained, more siliceous and less deformed units of the Brockman Iron Formation. Inverse modelling of the airborne magnetic data which covers the anomaly suggest the magnetic units have lateral continuity and good down-dip extent. Rock-chip samples report Fe to 35.5% with phosphorous (P) generally less than 0.09% and sulphur (S) less than 0.07%.

Three RC drill-sites have been selected along the Ashburton system. The holes are planned to provide representative sections through the geology, indications of grade-distribution, some indicative mineralogy and data on the yield and quality of the magnetite concentrate. A Programme of Works has been submitted to the WA Department of Minerals and Energy and a Heritage Notice has been submitted to the Native Title Party for a clearance programme.



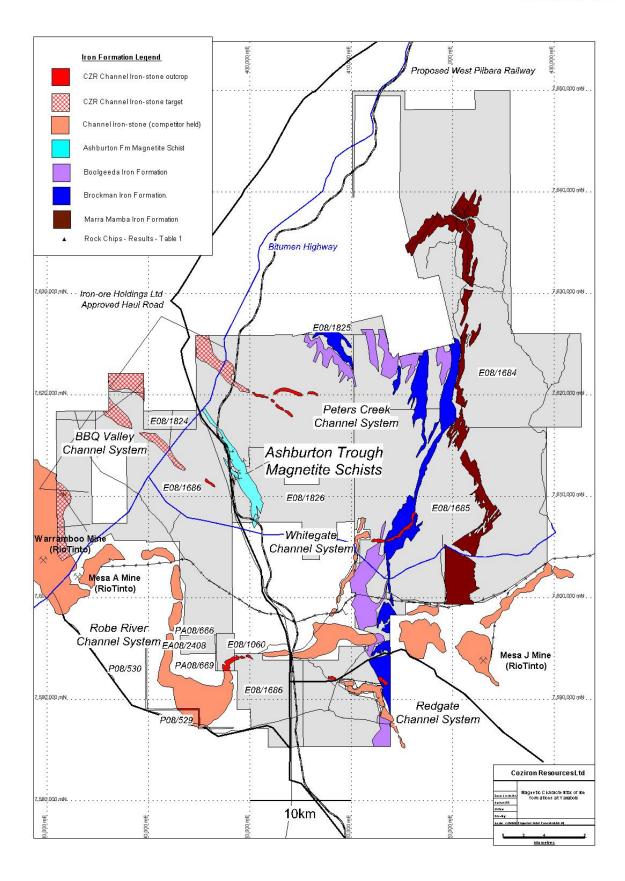


Fig 1. Distribution of targets with the potential to host iron-ore mineralisation on the Yarraloola Project, West Pilbara, Western Australia.



### Shepherds Well Project - West Pilbara

### **Background**

Shepherds Well is a 192.2km² exploration license (E08/2361) located 50 km southwest of Karratha (Fig 1). Geographically the tenement is contiguous with the Yarraloola Project and logistically it is serviced by bitumen road access from the Great Northern Highway, located only 25-50km from a new public access port being developed at Cape Preston East by Iron-ore Holdings and crossed in part by the proposed Baosteel JV railway (Fig 2). This planned infrastructure has the potential to improve the economics of any mineral deposits identified within the project area.

Geologically, Shepherds Well compliments Yarraloola through the addition of potential iron-ore mineralisation both as high-grade haematite and magnetite from Archaean-age metasediments of the Cleaverville Terrain. The Cleaverville consists of a sequence of ocean-floor basalts and associated sediments that are part of an accretionary domain that pre-dates the formation of the Hamersley Basin. Regionally, there are iron-formations up to 500m thick interbedded in the Cleaverville and base-metal (Cu-Au-Pb-Zn) occurrences attributed to a sea-floor volcanogenic origin.

### **Work Programmes**

The 2724 line km, fixed-wing, magnetic-radiometric survey completed by UTS Limited over the Shepherds Well licence earlier in the year on East-West lines spaced 100m apart at a height of 40m over the entire tenement has been processed. This has been followed by a short programme of mapping and rock-chip sampling.

#### Results

The most significant magnetic traces on the survey which have a strike length of about 9km appear to reflect the distribution of an iron formation in the Cleaverville Terrain. Some early-stage fieldwork identified sporadic outcrop of the iron formation along the western limb of the system with rock-chip samples reporting Fe to 39% (as reported on 29 July 2014). The eastern limb of the magnetic trace however, is covered by soil and colluvium and represents a future drill-target.

Additional to the iron-ore assessment, sampling of quartz-muscovite schist from historical pit spoil produced results reporting silver (Ag) to 9.8g/t, lead (Pb) to 4.4%, zinc (Zn) to 0.5% and gold (Au) to 23ppb (as reported on 16 July 2014). The felsic rocks associated with the mineralisation are highlighted by a potassium-channel radiometric anomaly that extends over several kilometres. Future work will investigate the unit as a potential host for volcanic-hosted massive sulphide mineralisation.



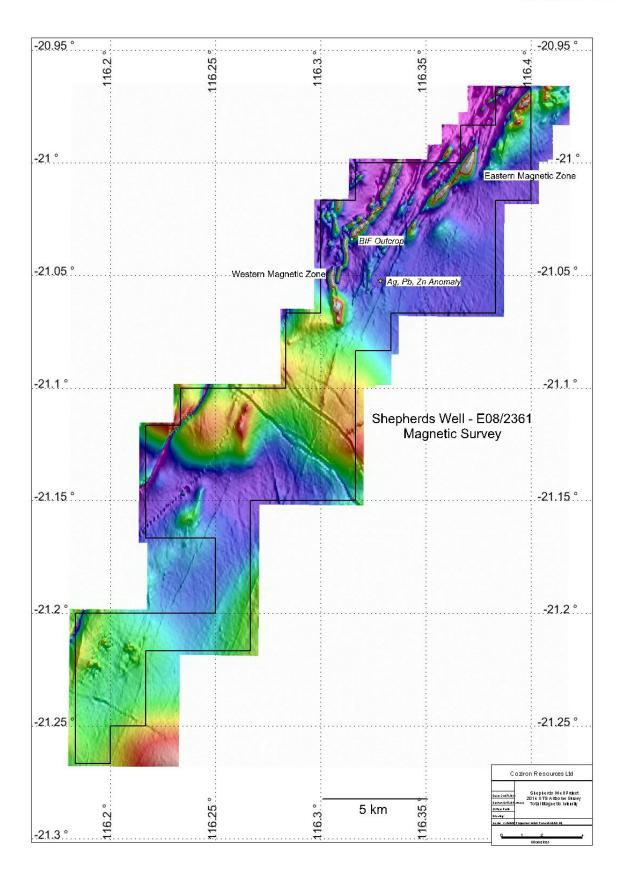


Fig 2. Regional geological setting of the Shepherds Well Project showing the distribution of the Archaean metasediments of the Cleaverville Terrain which are the more prospective rocks for iron and base-metal mineralisation.



### **Yarrie Project**

### **Background**

As reported in the previous quarter, Coziron has entered into an option with XFE Pty Ltd, a company within the Creasy Group, to purchase a 70% interest in four contiguous exploration licences (three granted, E45/3725, E45/3728, E45/4065 and one application E47/3727) covering a total of 1022.2km² and located 160km east of Port Hedland (Fig 3). The Yarrie tenements are largely underexplored. They share boundaries with the Yarrie-Goldsworthy mining project which was until recently, operated by BHP Billiton PLC (BHPB). Fortescue Metals Group Ltd (FMG) holds granted exploration licences along the northern boundary of the project.

The tenements are serviced by a bitumen road and natural gas pipeline between Pt Hedland and the Telfer copper-gold mine and major regional roads which service the cattle industry and other mining towns in the region. The BHPB-owned railway between the Yarrie-Goldsworthy mining area and Port Hedland also services this area (Fig 3)

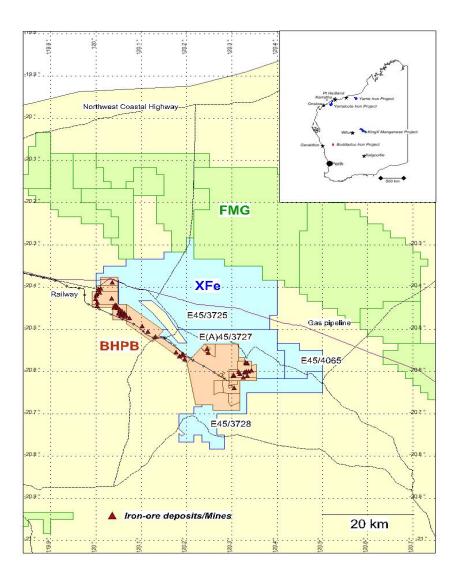


Fig 3. Location of the Yarrie tenements in relation to the other major iron-ore tenement holders and BHPB mines in the North Pilbara of Western Australia.



#### **Prospectivity**

The Yarrie project is prospective for high-grade iron-ore (Fe>62%) deposits within Archaean-age sequences of volcanics and sediments of the Cleaverville Terrain (Fig 4). These rocks unconformably overlie the granite basement, but underlie units of the Hamersley Basin. The Yarrie project covers outcrop extensions of the Cleaverville in the central and southern areas. In addition, there is significant tenement coverage to the east and north where interpretations of magnetic surveys indicate the presence of highly magnetic rocks beneath overburden. Within the sequence, the priority exploration targets are those parts of the Nimingarra Iron Formation which may be altered to high-grade haematite.

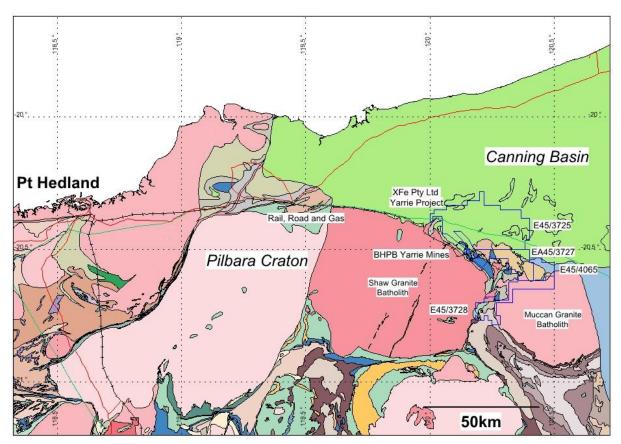


Fig 4. Regional geological setting of the Yarrie Project in the Pilbara with belts of Archaean sediments that include the Nimingarra Iron Formation marginal to the granite batholiths.

#### **Work Programmes**

A ground-based gravity programme supplemented by selected seismic profiles has been completed during the quarter. The gravity program covered an area of approximately 150 km² and includes zones with strongly magnetic responses beneath surficial deposits (Fig 5). The selected seismic profiles are utilised as a technique which can estimate the depth of cover above the iron formation sequence.

### Results

The focus of exploration at Yarrie is to identify drill-targets within the highly magnetic Nimingarra Iron Formation that have potential to host high-grade "Yarrie-style" haematite deposits. A review of available unpublished historical information covering the Yarrie tenement package has identified a total of nine drill-holes with ore-grade intercepts (Fe>50%; as reported on 6 August 2014). Three



drill-holes are located in the Kennedy Gap Prospect (06DHRC-01, -17, -18) and six holes 06DHRC-11, -12, 07DHRC-18, -19, -20, 26) in the Block Prospect (Fig 5) on EA45/3727 with the most significant intersection of 19m @ 63% Fe being reported from the Block Prospect. These results are significant because they demonstrate that mineralisation extends beyond the boundaries of the BHPB-controlled Yarrie-Goldsworthy-Nimingarra-Shay Mining district.

On the granted XFe tenements, the completed gravity surveys show an anomalous response associated with the traces of the highly magnetic units attributed to the Nimingarra Iron Formation. In addition, an early view of the seismic data suggests the overburden thickness is thinning over the areas of iron formation. This is consistent with the limited amount of published field data for the Staging Tank area which reports some outcrop of the iron-formation. Detailed work is now required to highlight opportunities for drilling.

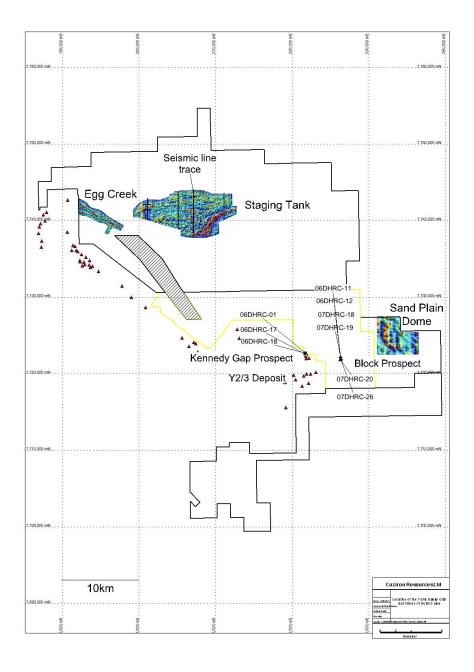


Fig 5. The Yarrie XFe iron-ore tenements (granted in black, yellow in application) showing the distribution of BHBP iron-ore deposits (red triangles) with inset images of the gravity survey results and traces of the seismic traverses.



**Buddadoo Project** - No significant work was undertaken during the quarter.

Earaheedy Project - No significant work was undertaken during the quarter.

### ABOUT COZIRON RESOURCES LIMITED

Coziron Resources Limited has exploration focussed on the Yarraloola (1450km² of granted tenements), KingX (859km² granted and 2127 km² under application) and Buddadoo (210km² granted) Projects and an option over Shepherd Well (193km²) and Yarrie (1022km²) (Fig 5). The Yarraloola, Buddadoo, Shepherds Well and Yarrie projects have iron-ore as the principal exploration target, while KingX is focused on prospectivity for manganese.

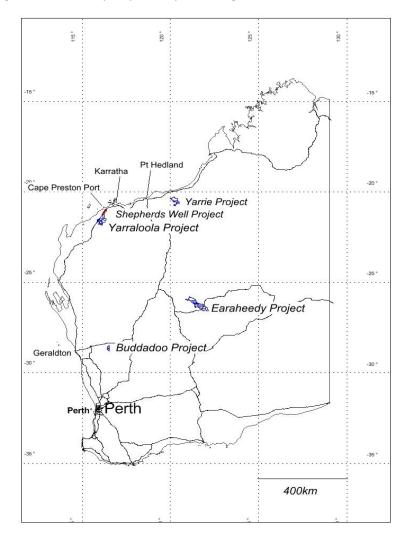


Fig 5. Location of the Coziron Resources Ltd projects in Western Australia.

For further information 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 (BSc Hons, MSc, PhD) who is a Member of the Australian Institute of Geoscientists. Rob Ramsay is a full-time Consultant Geologist for Coziron 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.



## <u>Coziron Resources Ltd – Changes to the Tenement Schedule in the past Quarter</u>

Project	Location	Tenement Number	Economic Entity's Interest at Quarter End	Change in Economic Entity's Interest During Quarter
Yarraloola	West Pilbara, WA	E08/1060	85%	No Change
Yarraloola	West Pilbara, WA	E08/1684	85%	No Change
Yarraloola	West Pilbara, WA	E08/1685	85%	No Change
Yarraloola	West Pilbara, WA	E08/1686	85%	No Change
Yarraloola	West Pilbara, WA	E08/1824	85%	No Change
Yarraloola	West Pilbara, WA	E08/1825	85%	No Change
Yarraloola	West Pilbara, WA	E08/1826	85%	No Change
Yarraloola	West Pilbara, WA	P08/529	85%	No Change
Yarraloola	West Pilbara, WA	P08/530	85%	No Change
Yarraloola	West Pilbara, WA	P08/666	100%	No Change
Yarraloola	West Pilbara, WA	PA08/669	100%	No Change
Kingsland	Earaheedy Basin WA	E38/2212	85%	No Change
Kingsland	Earaheedy Basin WA	E38/2213	85%	No Change
Kingsland	Earaheedy Basin WA	E53/1433	85%	No Change
Kingsland	Earaheedy Basin WA	E53/1437	85%	No Change
Kingsland	Earaheedy Basin WA	EA38/2211	85%	No Change
Kingsland	Earaheedy Basin WA	EA53/1434	85%	No Change
Kingsland	Earaheedy Basin WA	EA53/1435	85%	No Change
Kingsland	Earaheedy Basin WA	EA53/1436	85%	No Change
Kingsland	Earaheedy Basin WA	EA53/1622	85%	No Change
Kingsland	Earaheedy Basin WA	EA53/1623	85%	No Change
Kingsland	Earaheedy Basin WA	EA53/1624	85%	No Change
Kingsland	Earaheedy Basin WA	EA69/2573	85%	No Change
Buddadoo	Mid-west, WA	E59/1350	85%	No Change

In addition to the above tenements the Company is in the process of acquiring the Shepherds Well and Yarrie projects. The acquisition is currently awaiting completion under the acquisition contracts following approval of the acquisitions by shareholders at the meeting held on 28 October 2014.

Project	Location	Tenement Number	Economic Entity's Interest at Quarter End	Change in Economic Entity's Interest During Quarter
Shepherds Well	West Pilbara, WA	E08/2361	0%	No Change
Yarrie	East Pilbara, WA	E45/3725	0%	Option Exercised
Yarrie	East Pilbara, WA	E45/3727	0%	Option Exercised
Yarrie	East Pilbara, WA	E45/3728	0%	Option Exercised
Yarrie	East Pilbara, WA	E45/4065	0%	Option Exercised
Yarrie	East Pilbara, WA	E45/4433	100%	Application made