

#### **Coziron Resources Limited**

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The Company Announcements Office ASX Limited Via E Lodgement

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# QUARTERLY ACTIVITIES REPORT TO

# 30<sup>TH</sup> June 2019

# Yarraloola Iron Ore – West Pilbara

- Commercialisation strategies for the +90Mt indicated and inferred JORC compliant CID resource at the Robe Mesa are being reviewed.
- RC and diamond-drilling, Davis Tube sampling and metallurgical test-work programmes that will contribute to the generation of a JORC-compliant resource from the Ashburton magnetite have been planned.
- The Company received DMIRS approval for the planned drilling programmes.

# Croydon Top Camp Project (CTCP) – North Pilbara

- 203 gold nuggets ranging in weight from 0.04 to 2.14g for a total of 75.3g were recovered by a prospector using a metal detector from the Top Camp and Middle Valley Prospects on the Croydon Project (E47/2150).
- The nuggets were recovered from sites where carbonate-rich rocks in the Mallina Basin are fractured by regional NE to NNE-trending faults and where surface geochemistry is strongly anomalous in gold-pathfinder elements such as arsenic and antinomy.
- DMIRS has approved up to 2000m of RC drilling into the gold anomalies at the Top Camp prospect.
- DMIRS has approved the 500m of drilling at the Martin Prospect where an EM conductor is down dip from a gossan that reports copper (11.6%) and gold (2.6g/t) and other conductors along-strike that are to be targeted first with surface geochemistry and mapping.

# Buddadoo Project – West Yilgarn

• The vanadiferous magnetite is being evaluated as a source of coarse-grained concentrate as a feedstock for either roast-leach plants or iron-ore pellets.



- An independent review of the geology and geophysics has generated six targets with a high probability for gold mineralisation and a plan to systematically sample and drill has been generated.
- DMIRS has approved drilling on the vanadium and gold targets at Buddadoo.

# **Project Summaries**

Coziron Resources is advancing exploration on five projects, but the focus of activities this quarter has been the Yarraloola and Croydon Top Camp Projects in the Pilbara and the Buddadoo Project in the mid-west region of Western Australia. Details of each project and a summary of the activities and results are presented in the sections below.

# Yarraloola Project – West Pilbara

The Yarraloola project is located about 100km southwest of Karratha and contains **+90Mt @ 53% Fe** (calcining to Fe @ 60%) of indicated and inferred JORC compliant CID (Pisolitic ironstone) in the Robe Mesa, Robe East Extension and P529 deposits (Fig 1). The resource includes a higher grade surface interval on the Robe Mesa of 24.9Mt @ 56% Fe (calcining to 62.7% CZR:ASX 7<sup>th</sup> December 2015, 8<sup>th</sup> February 2016, 26<sup>th</sup> April 2017, 9<sup>th</sup> May 2017). The company continues to evaluate opportunities for the development of the Robe Mesa, including discussions with potential partners, against the backdrop of the improved pricing environment for iron ore. Coziron is also exploring a new style of volcanic-hosted magnetite mineralisation in the West Pilbara that has a similar geological setting to the FMG Iron Bridge Project. The Ashburton has Davis tube results from RC and diamond-core with mass recoveries up to 42% and concentrates at a P80 of 22 microns with Fe greater than 67% and SiO<sub>2</sub> less than 5% (CZR:ASX 28<sup>th</sup> April 2016, 3<sup>rd</sup> August 2016, 1<sup>st</sup> June 2017).

Although no field activities were undertaken during the Quarter, the Company has completed an extensive review of all data and relinquished tenements E08/1824 and E08/1825 that were peripheral to the targets of interest (Fig 1). The Company has also generated a staged and costed programme of RC and diamond drilling with geochemistry, Davis Tube and other metallurgical test-work that will contribute to the generation of a JORC-resource the magnetite mineralisation in the Ashburton (Fig 2).





Fig 1 Yarraloola tenements with the location of Robe Mesa, Robe East Extension and P529 pisolitic ironstone deposits, the Ashburton magnetite project and the traces of the major iron-formations in the West Pilbara of Western Australia.





Fig 2 Planned drill-collars for the Rossi Hill to Spinifex Hill portion of the Ashburton magnetite project.

# Croydon Top-Camp Project (CTTP) – Pilbara

CZR is acquiring a 70% interest in the 317 km<sup>2</sup> Croydon Top-Camp project (CTCP, E45/2150) from the Creasy Group which is located about 100km south-east of Karratha in the Pilbara. The tenement is subdivided into three discrete blocks that cover a crustal-scale north-east trending fault-system which separates granitic rocks of the Pilbara Craton from deformed, metasedimentary rocks of the Mallina Basin. These rocks are then overlain in parts by a significantly younger suite of conglomeratic sediments and volcanics of the Fortescue Group and extensive sheets of sand and colluvium. The project has a significant amount of historical exploration data and this has been increased by the



acquisition of high-resolution magnetic and radiometric coverage, re-assay of selected auger pulps to verify and increase the geochemical coverage and commencement of infill and extensional sampling of more prospective areas (CZR:ASX 10 October 2018 and 6 December 2018; 1<sup>st</sup> April 2019).

Subsequent to the end of the June quarter, the Company reported the recovery of 203 gold nuggets ranging in weight from 0.04 to 2.14g - for a total of 73.3g - from the Top Camp area (CZR:ASX 25 July 2019). This report complimented other prospector reports from 2018 where gold nuggets weighing 53.4g in total were recovered from the area (CZR:ASX 20-Sept-2018). Following the ASX release on the 25<sup>th</sup> July 2019, the Company received a high resolution photograph of the gold showing some partly intergrown with quartz but most with fine indentations suggesting they are eluvial having been released from the underlying carbonate-rich bedrock (Fig 3). Although the recovery of coarse gold particles by prospectors is not in itself economically significant, the reported distribution has been plotted and integrated with other geological and geochemical data from Top Camp. The resulting maps can then be used to outline and prioritise targets within the areas where the gridded samples are highly anomalous with gold and pathfinder elements such as arsenic and antinomy for further work (Fig 4).

During the Quarter, the Company received DMIRS permission to drill up to 2000m of RC on the Top Camp gold anomaly and up to 500m at the Martin Prospect-A anomaly where the down-dip projection of copper-gold bearing gossan is associated with a conductive EM anomaly (Fig 5).



Fig 3. A high resolution photograph of the gold nuggets recovered by a prospector with a metal detector from the Top Camp and Middle Valley Prospects.





Fig 4. Location of 203 prospector-recovered gold nuggets overlain on the gold distribution in surface samples from the Top Camp and Middle Camp Prospects and ESRI satellite imagery as a back-drop.





Fig 5. Outlines the geology associated with the gossan at Martin Prospect Anomaly-A overlain on the high resolution magnetics with traces of the EM lines, responses, conductive target and proposed drill traces (two inclined and one vertical).



# **Buddadoo Project – Murchison Province**

The Buddadoo Project (E59/1350 and the recently granted E59/2349) cover part of the Gullewa Greenstone Belt that contains gabbroic rocks with bands of massive and disseminated vanadiferous titanomagnetite along with prospectivity for gold and copper mineralisation. The project is located about 200 km east of Geraldton Port and 60 km from a rail siding at Morawa that connects to Geraldton and in proximity to the bitumen-road between the towns of Morawa and Yalgoo. During the past year, the Company completed an RC drilling programme of 2795m with downhole geochemistry and an initial phase of metallurgical test-work across two magnetic anomalies that extend over a strike length of about 6km (CZR:ASX on 28<sup>th</sup> February 2018, 21<sup>st</sup> March 2018, 5<sup>th</sup> April 2018 and 7<sup>th</sup> February 2019). All the holes into the magnetic anomalies report concentrations of magnetite that at -150 microns, can be upgraded by low-intensity magnetic separation to Fe greater than 62% and combined SiO<sub>2</sub> and  $Al_2O_3$  of less than 5%. This represents a potentially lowcontaminant feedstock for vanadium recovery by roast-leach. However, as the grind-size reduces to a P80 of -45 microns, concentrates report Fe from 66-68%,  $V_2O_5$  from 0.8 to 1.86%, TiO<sub>2</sub> from 1.4 to 5.7%, contaminants SiO<sub>2</sub> and Al<sub>2</sub>O<sub>3</sub> at less than 1% which is a potential feedstock for iron-ore pellets used in the direct smelting of vanadiferous steel. During the Quarter, the Company received DMIRS approval for a further programme of drilling that will contribute to the generation of a JORC compliant resource.

The Company also received results from an independent review of the available geophysical and geological data from the Buddadoo project that outlined five targets with a high potential for lodestyle gold mineralisation. Of the targets, four already have some supporting geochemical evidence for mineralisation from CZR-collected soil and rock-chip samples (CZR:ASX 29<sup>th</sup> July 2013, 17 Oct 2017 and 21 Nov 2018) but most require follow-up sampling and mapping to establish whether there is a supporting geochemical evidence in the regolith. There is also an additional target extending along the strike of a structure that hosts mineralisation in Copper Valley that requires further work. DMIRS permission for RC drilling of the targets has been received.





Fig 6 The location of the T1 to T6 exploration targets showing high potential for gold mineralisation on E59/1350 with the distribution of gold from CZR collected soils.

# Shepherds Well Project – West Pilbara

Shepherds Well (E08/2361), in the West of the Pilbara, is located about 60km south-west of Karratha. The project covers an area that is 25-50km from a new proposed public access port at Cape Preston East, serviced by tracks from the Great Northern Highway and is crossed in part by an easement for the proposed West Pilbara railway. The region has a basement of basaltic, felsic and metasedimentary rocks that are unconformably overlain by predominantly mafic volcanics from the Fortescue Group and sediments of the Hamersley Basin. Programmes of soil and rock-chip sampling and mapping have identified nickel (Ni), copper (Cu) and gold (Au) anomalism associated with an outcrop of talc-carbonate rock at Dorper Rise and lead (Pb), zinc (Zn) and silver (Ag) associated with a linear magnetic anomaly at Suffolk Ridge. In addition, where soil and drainage samples have been collected near the base of the Fortescue Basalt, they typically report anomalous gold.



No fieldwork was undertaken during the Quarter but an infill sampling programme to determine whether Suffolk Ridge represents a drill-target has been planned.

# Yarrie Project – North Pilbara

The Yarrie Project consists of six granted exploration licences (E45/3725, E45/3728, E45/4065, E45/4433, E45/4604, and E45/4605) that cover a total of 419km<sup>2</sup>, about 160km east of Port Hedland. Yarrie is serviced by bitumen and gravel roads and a natural gas pipeline between Pt Hedland and the Telfer copper-gold mine. The BHPB-owned rail connection between the Yarrie mining area and Port Hedland also services this area.

The Yarrie tenements have the potential to host high-grade (+62% Fe) iron-ore deposits within the magnetically active Archaean-age Nimingarra Iron Formation. Historical RC drill intercepts with Fe greater than 62% from the Cabbage Tree and Kennedy Gap prospects require follow-up. There is also the potential for gold and base-metals associated with the strongly deformed, mixed mafic to ultramafic volcanic rocks that have interbedded metasediments in the Pilbara basement. In addition, E45/3278 covers a portion of the basal interval of the Fortescue Group that is prospective for gold in conglomerate.

No fieldwork was undertaken during the Quarter.

# ABOUT COZIRON RESOURCES LIMITED

Coziron Resources Limited has exploration focussed on the Yarraloola (829km<sup>2</sup>), Shepherd Well (77km<sup>2</sup>), Croydon Top-Camp (317 km<sup>2</sup>) and Yarrie (419km<sup>2</sup>) Projects in the Pilbara region and Buddadoo (303km<sup>2</sup>) Project in the Yilgarn region of Western Australia.

For further information please contact Adam Sierakowski or Rob Ramsay 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.



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	NIL	Relinquished
Yarraloola	West Pilbara, WA	E08/1825	NIL	Relinquished
Yarraloola	West Pilbara, WA	E08/1826	85%	No Change
Yarraloola	West Pilbara, WA	E08/2408	NIL	Relinquished
Yarraloola	West Pilbara, WA	M08/519	85%	Application
Yarraloola	West Pilbara, WA	P08/666	NIL	Relinquished
Shepherds Well	West Pilbara, WA	E08/2361	70%	No Change
Yarrie	East Pilbara, WA	E45/3725	70%	No Change
Yarrie	East Pilbara, WA	E45/3728	70%	No Change
Yarrie	East Pilbara, WA	E45/4065	70%	No Change
Yarrie	East Pilbara, WA	E45/4604	70%	No Change
Yarrie	East Pilbara, WA	E45/4605	70%	No Change
Yarrie	East Pilbara, WA	E45/4433	100%	No change
Buddadoo	Mid-west, WA	E59/1350	85%	No Change
Buddadoo	Mid-west, WA	E59/2349	85%	Granted

# Coziron Resources Ltd – Changes to the Tenement Schedule in the past Quarter