

## Significant Exploration Targets Across Four Projects

### HIGHLIGHTS

**West Musgrave Project** (OZL earning up to 70%)

- \$4m exploration program concurrent with PFS, funded by OZ Minerals

**Mount Squires Gold Project** (100% CZI)

- All approvals now received
- Exploration to commence in Q2 2018

**West Arunta Zinc Project** (100% CZI)

- Airborne EM survey to assist identification of primary mineralisation
- WA Government EIS funding to drill test large gravity anomaly

**Yarawindah Brook Nickel - Copper - Cobalt Project** (Option to earn 80%)

- Early stage Ni-Cu-Co massive sulphide project with significant mineralisation
- Airborne EM survey to identify additional targets underway

Cassini Resources Limited (ASX:CZI) ("Cassini" or the "Company") is pleased to provide an update on exploration activities across its project portfolio which are set to escalate in 2018. OZ Minerals Limited recently committed to Stage 2 of the West Musgrave JV, commencing a \$4m spend at the project in 2018. The Company will now also recommence activities at its other exploration projects. The Company believes it can add significant value to these projects through modest expenditure as well as driving exploration at the West Musgrave Project, providing our shareholders excellent exposure to near-term exploration success.



Figure 1. Cassini project locations.

### **West Musgrave JV - Exploration** (OZ Minerals earning 70%)

As part of the West Musgrave JV with OZ Minerals Ltd, the second stage earn-in comprises a \$15m spend towards a Pre-Feasibility Study as well as \$4m on exploration. A further \$4m on exploration is also available during the Definitive Feasibility Study, for a total minimum of \$8m on exploration over a maximum time of 2.5 years. The initial 2018 exploration programs are nearing finalisation and are due to commence by the end of the March Quarter.

The West Musgrave JV partners have a strategic goal of identifying additional high-value ore to complement the development of the Nebo-Babel Deposits. To achieve this, the Company has a number of targets with the potential for providing high-grade nickel and/or copper mineralisation. The immediate priorities for exploration in 2018 will be to follow-up the One Tree Hill discovery made in 2017, a “Nebo look-a-like” at the Yappsu Prospect and potential extensions to the high-grade Startmeup Shoot at Babel.

Further details of these targets and programs will follow as they are finalised.

### **Mount Squires Gold Project** (CZI 100%)

Cassini has completed heritage surveys at the Mount Squires Project, clearing priority targets for reconnaissance drilling and regional geochemistry sampling. The Company now has all necessary approvals to commence exploration.

The Mount Squires Project lies adjacent to the West Musgrave Project allowing the Company to consolidate a significant land holding with demonstrated gold mineralisation potential. Previous drilling at the Handpump Prospect returned significant gold intercepts including 15m @ 2.3g/t from only 31m down hole (Figure 2). A new interpretation suggests mineralisation is controlled by two intersecting faults creating a west north-westerly plunging mineralised breccia. Mineralisation is open in the down-plunge position and will be tested in the upcoming drill program.

In addition, an extensive soil geochemistry database has identified a number of other gold anomalies that require further investigation through reconnaissance drilling or infill sampling. The most prominent of these soil anomalies is at the Centrifical Prospect with a zoned Mo-Pb-Zn anomaly at the intersection of prominent northwest and northeast striking structures (Figure 3). This may represent the heart of an epithermal mineralised setting. In this case, gold mineralisation at Handpump may represent more distal mineralisation that has leaked north-westwards along the major structure.

Work programs are scheduled to commence in the second quarter of 2018.

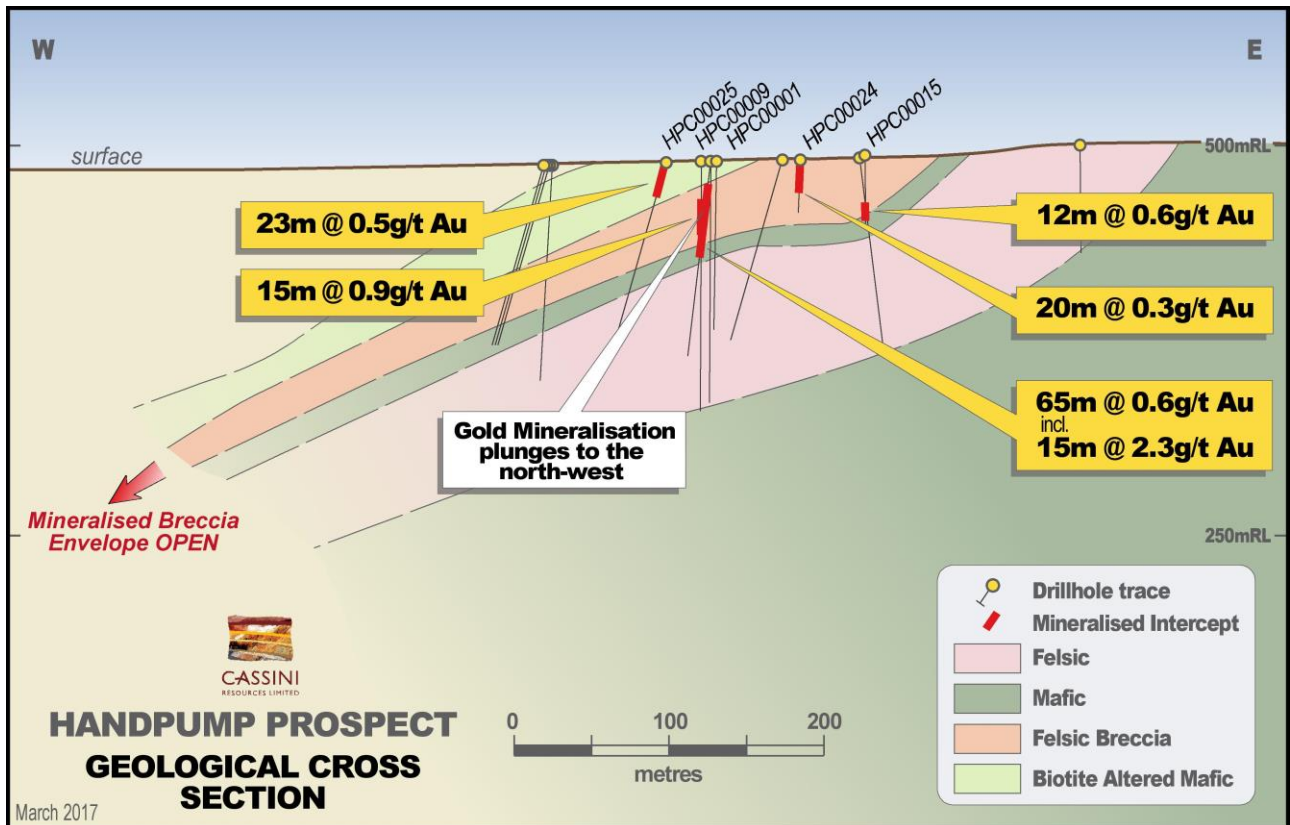


Figure 2. Longitudinal section of the Hand Pump Prospect and significant intercepts.

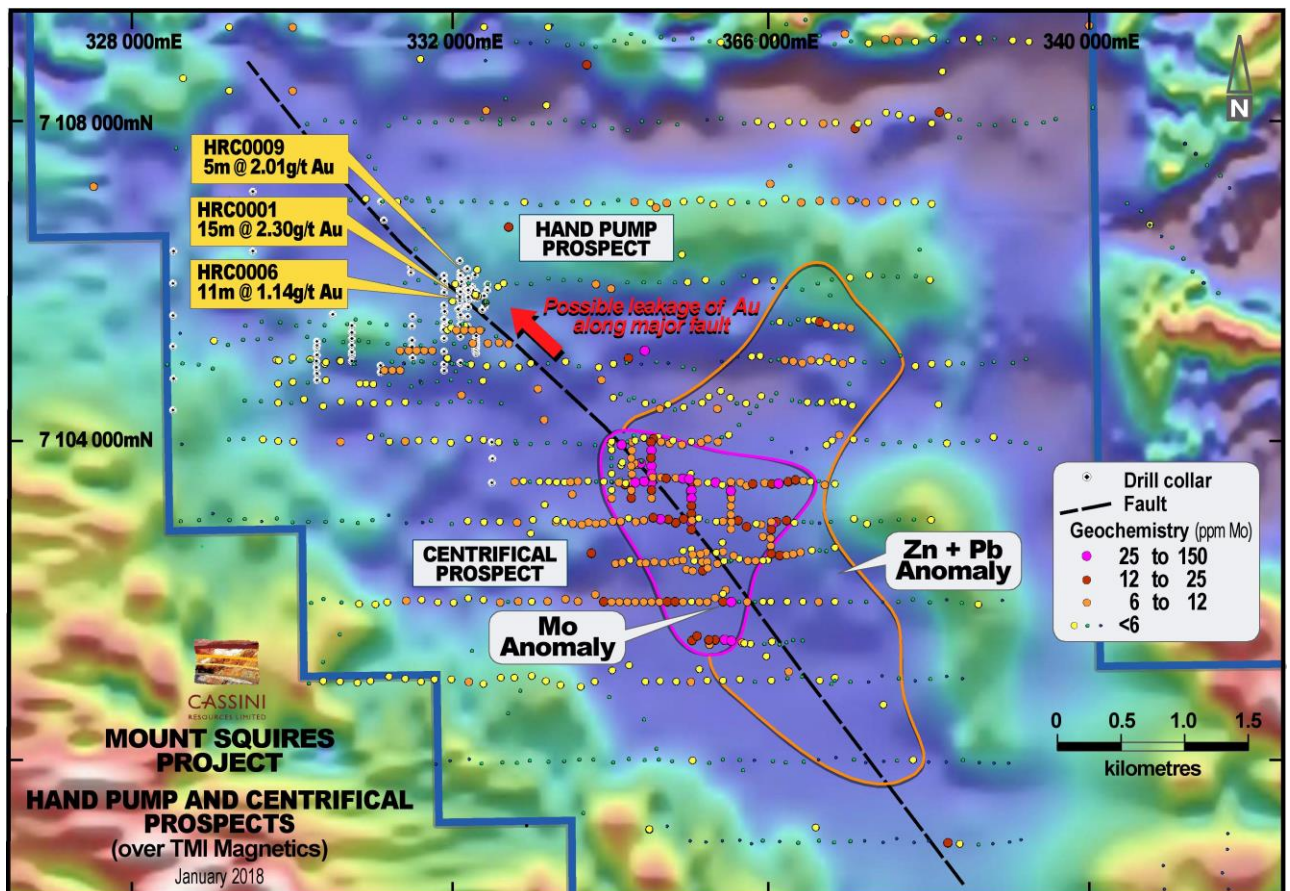


Figure 3. Handpump and Centrifical Prospects.

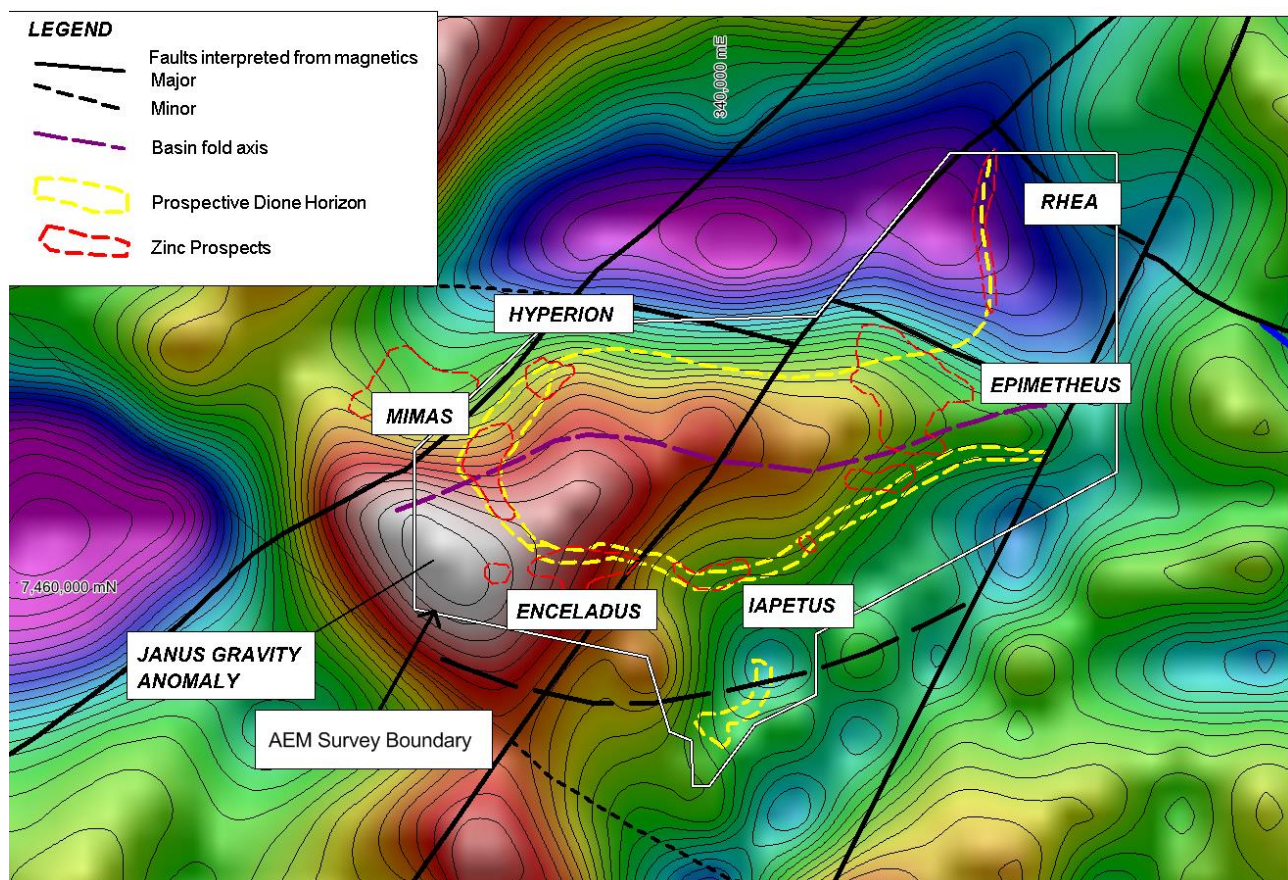
## West Arunta Zinc Project (CZI 100%)

Drilling by Cassini in 2016 tested several zinc anomalous outcrops identified through surface mapping and sampling. This drilling suggested that the West Arunta has potential to host sedimentary zinc mineralisation although the zinc anomalous outcrops were interpreted to be the result of hydromorphic dispersion in the regolith from a nearby primary source.

Cassini has designed an aerial EM geophysical survey to assist with mapping the regolith profile and the definition of key prospective stratigraphic positions, as well as potentially directly identifying base metal mineralisation. The survey is expected to be undertaken early in the second quarter, subject to suitable weather conditions and aircraft availability.

The Company has also won funding through the WA Government Exploration Incentive Scheme for co-funded drilling at the Janus gravity anomaly which the Company believes may represent a dense body of base metal mineralisation, close to the anomalous surface Zn enrichment at the Enceladus Prospect (Figures 4 & 5). The Company plans to complete this drilling by the end of June 2018.

With the long-term outlook for the zinc price to remain strong due to current supply deficits, the West Arunta Zinc Project remains a key exploration asset for the Company. Cassini has a “first-mover” advantage, due to very minimal historic exploration in the region and has built this project from conceptual model to proof-of-concept over the past few years. The Company now looks forward to undertaking the next step of identifying primary sedimentary zinc mineralisation.



**Figure 4.** West Arunta Prospects and area for upcoming AEM survey. Note the gravity high appears bound between fault structures and is elongated along the folded axis of the Dione Horizon.

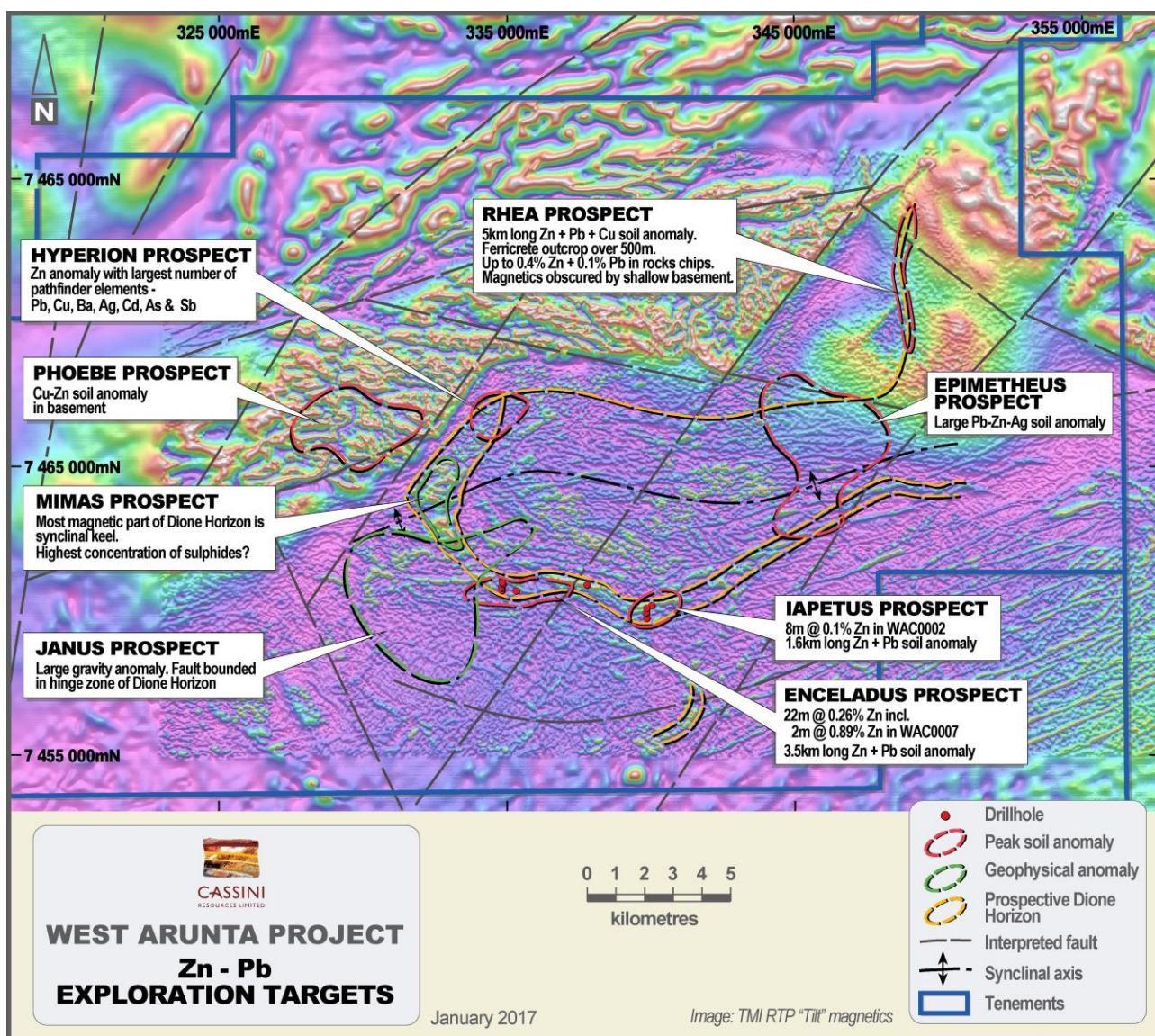


Figure 5. West Arunta Project Exploration Targets.

### Yarawindah Brook Nickel – Copper – Cobalt Project (Option to earn 80%)

Cassini recently announced it had acquired the right to an 80% equity interest in the Yarawindah Brook Nickel-Copper-Cobalt Project through private company Souwest Metals Pty Ltd.

The Company is pleased to report that an airborne EM (AEM) survey is now underway, with results expected in late March. The surface EM coverage completed to date has been limited and has not effectively covered the project area, particularly the ultramafic basal contact zone which is a highly prospective position for the accumulation of nickel sulphides. This survey will extend first-pass EM coverage over most of the project. An RC drilling program is intended to follow to test new and existing conductors in the second half of the year.

Yarawindah Brook is located 130km northeast of Perth, in agricultural land near the township of New Norcia. The Project has had only limited nickel, copper and cobalt exploration despite a favourable regional setting, prospective geology and near-surface occurrences of nickel and copper. Historic exploration has focussed primarily on a small platinum and palladium (PGE's) resource which the Company views as a "path-finder" anomaly for massive nickel - copper - cobalt sulphides. Exploration for

nickel and copper has been sporadic, however the most recent drilling in 2007 targeting surface EM anomalies, returned encouraging results from hole YWRC0083 including 7m @ 1.29% Ni, 0.21% Cu, 0.06% Co and 432ppb Pd from 74m. Despite the promising result no further follow-up drilling was conducted due to budget limitations of the previous operator during the exploration downturn post-GFC.

Historic drilling has identified primary nickel and copper mineralisation over a strike length of at least 2km, with only a handful of these holes deeper than 100m. In addition, reconnaissance rock chip sampling has identified other anomalous nickel outcrops on the project that are yet to be drilled (Figure 6). Rock chip samples have reached up to 0.49% Ni.

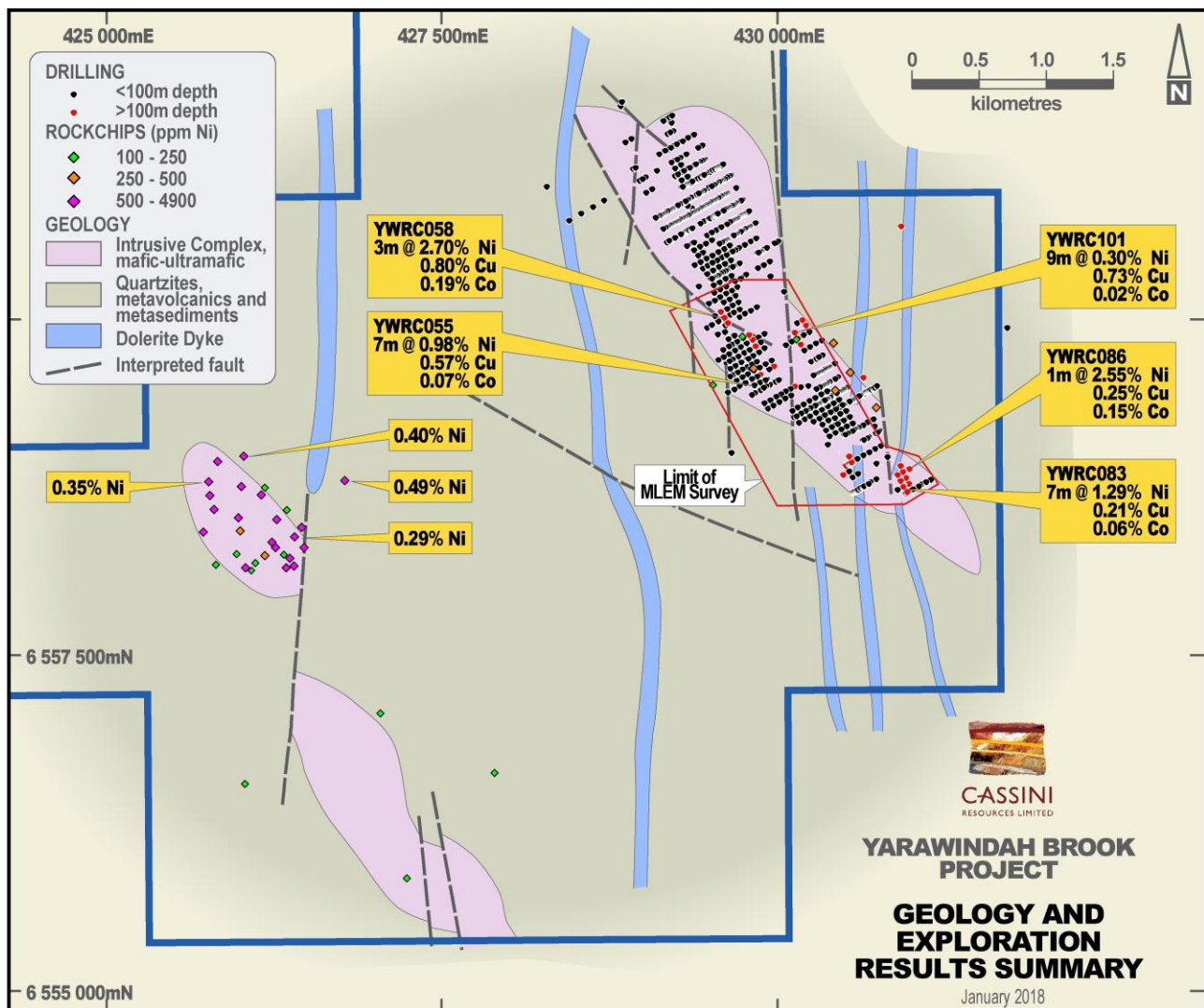
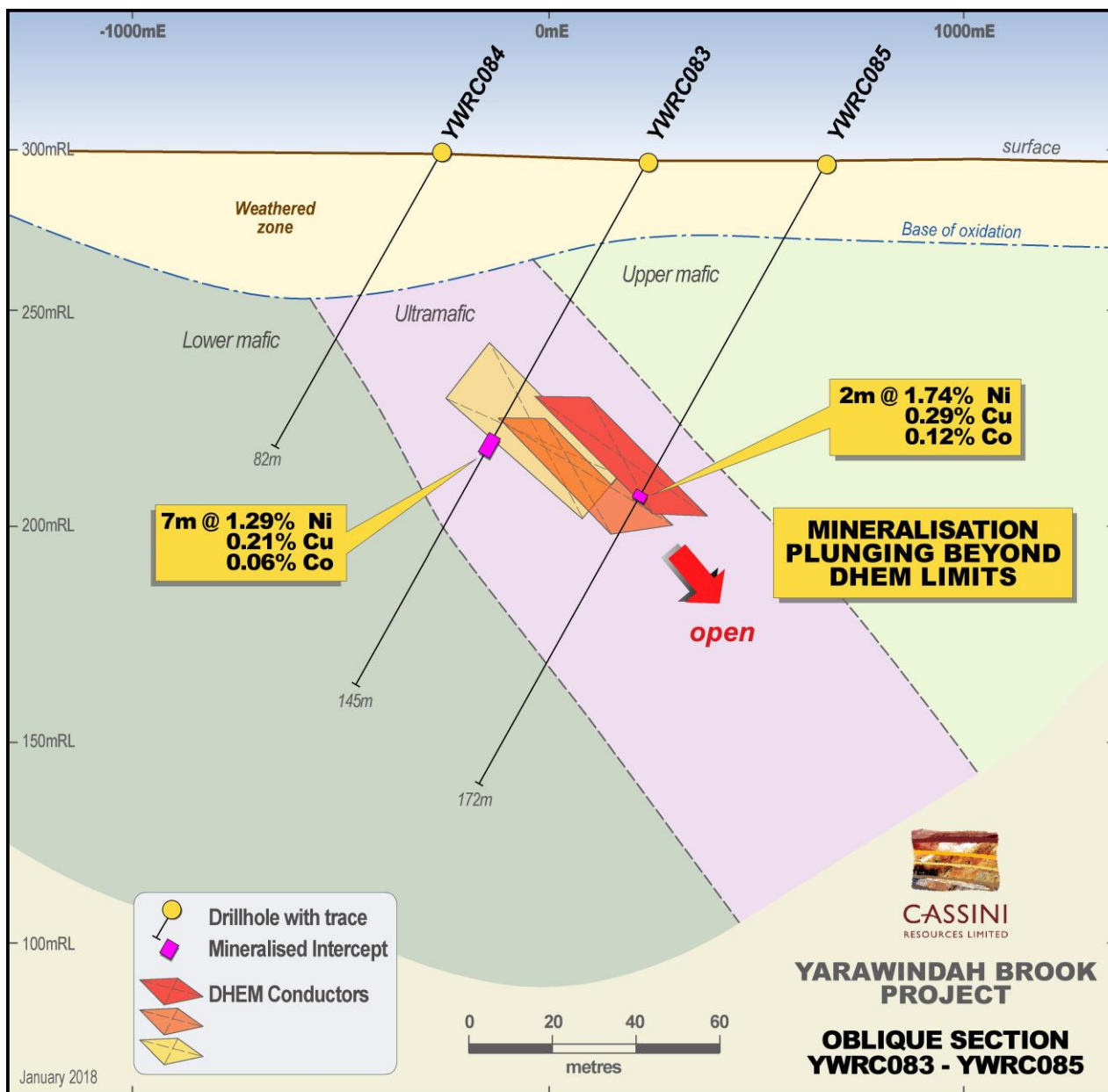


Figure 6. Yarawindah Brook geology and exploration summary.

Cassini has compiled all previous drilling as well as numerous geophysical surveys into a consolidated database. Re-modelling of this data has shown that a number of EM conductors have not been tested by previous drilling, with a number of holes either not hitting or only intersecting the margins of the conductor, which appears to be the case for YWRC083 (Figure 7). These conductors appear to plunge between existing drill holes and are a priority for further exploration targeting massive nickel-copper-cobalt sulphide. Additional EM conductors are also yet to be adequately tested at four other localities within the project. To date, all conductors have proven to be associated with magmatic sulphides.



**Figure 7.** Yarrowindah Brook drill section, AN1 Prospect.

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## About the Company

Cassini Resources Limited (ASX: CZI) is a base and precious metals developer and explorer based in Perth. In April 2014, Cassini acquired its flagship West Musgrave Project (WMP), located in Western Australia. The Project is a world-class asset which currently has over 1.0 million tonnes of contained nickel and 2.0 million tonnes of contained copper in Resource. The Project is a new mining camp with three existing nickel and copper sulphide deposits and a number of other significant regional exploration targets already identified. The WMP is the largest undeveloped nickel - copper project in Australia.

In August 2016, Cassini entered into a three-stage \$36M Farm-in/Joint Venture Agreement with prominent Australian mining company OZ Minerals Ltd (ASX: OZL). The Joint Venture provides a clear pathway to a decision to mine and potential cash flow for Cassini.

Cassini is also progressing its Mt Squires Gold Project, an early stage zinc exploration project in the West Arunta region and also has an option to acquire 80% of the Yarrowindah Nickel – Copper - Cobalt Project, all located in Western Australia.

## Competent Persons Statement

The information in this report that relates to Exploration Results is based on information compiled or reviewed by Mr Greg Miles, who is an employee of the company. Mr Miles is a Member of the Australian Institute of Geoscientists and has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Miles consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

The Company is not aware of any new information or data, other than that disclosed in this report, that materially affects the information included in this report and that all material assumptions and parameters underpinning Exploration Results, Mineral Resource Estimates and Production Targets as reported in the market announcements dated 23 June 2016, 14 July 2016, 14 November 2017 and 29 January 2018, continue to apply and have not materially changed.