



## West Musgrave Exploration Update

### HIGHLIGHTS

- **Significant regional exploration drilling program has commenced**
- **Targeting new EM conductors generated from recent surface and down-hole geophysical surveys**
- **All conductors adjacent to, or extensions of known Ni and/or Cu sulphide mineralisation**
- **Initial drilling commenced at Yappsu, with One Tree Hill to follow**
- **One Tree Hill drill program targeting a 700m long conductor**
- **Work program funded by OZL Earn-in/JV**

Cassini Resources Limited (ASX:CZI) (“Cassini” or the “Company”) is pleased to provide an update on the targets of the regional exploration program at the West Musgrave Project (“WMP” or the “Project”) in Western Australia. The program is funded as part of the Earn-in/JV Agreement (“JV” or “the Agreement”) with OZ Minerals Limited (ASX:OZL) (“OZ Minerals”). Under the Agreement, \$4m is allocated for regional exploration during the current stage, with a further \$4m available during the next stage of the JV should OZ Minerals progress.

The Project is currently progressing rapidly through the Pre-Feasibility Stage, with in excess of 30+ people onsite, and with 4 active drill rigs. The drilling rigs are for collecting metallurgical samples, resource infill at Nebo-Babel, water bores and regional exploration.

The regional exploration strategy, managed by Cassini, is designed to identify additional high-value ore outside the Nebo-Babel deposits to complement the proposed mining operation. To achieve this, the Company has identified a number of priority targets with the potential for providing high-grade nickel and/or copper mineralisation. The immediate priorities for 2018 program will be to follow-up the One Tree Hill discovery made in 2017, the Yappsu Prospect, and further drilling at the Succoth Copper deposit.

### Recent Geophysical Survey

Moving Loop Electromagnetic (MLEM) and Fixed Loop Electromagnetic (FLEM) surveys have been recently completed to assist with drill targeting at the One Tree Hill and Yappsu Prospects. The Company engaged GEM Geophysics, utilising a high-powered transmitter and Jessy Deeps HT SQUID sensor. The aim of each survey was to compare the surface response to surveys conducted in 2009, constrain earlier down hole EM models prior to drill testing and infill the existing MLEM coverage along strike from known mineralisation to resolve additional conductors in the surrounding areas.

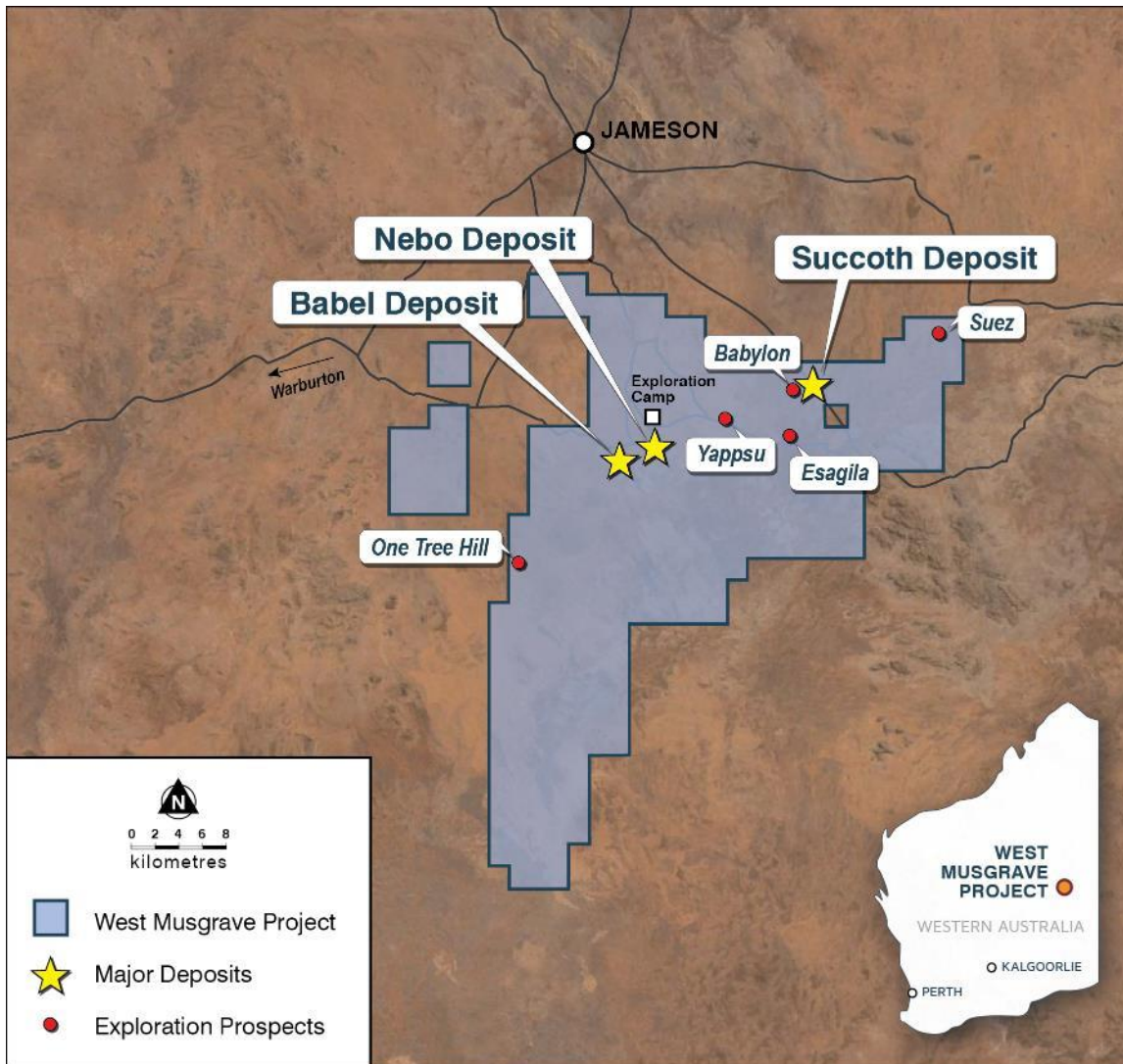


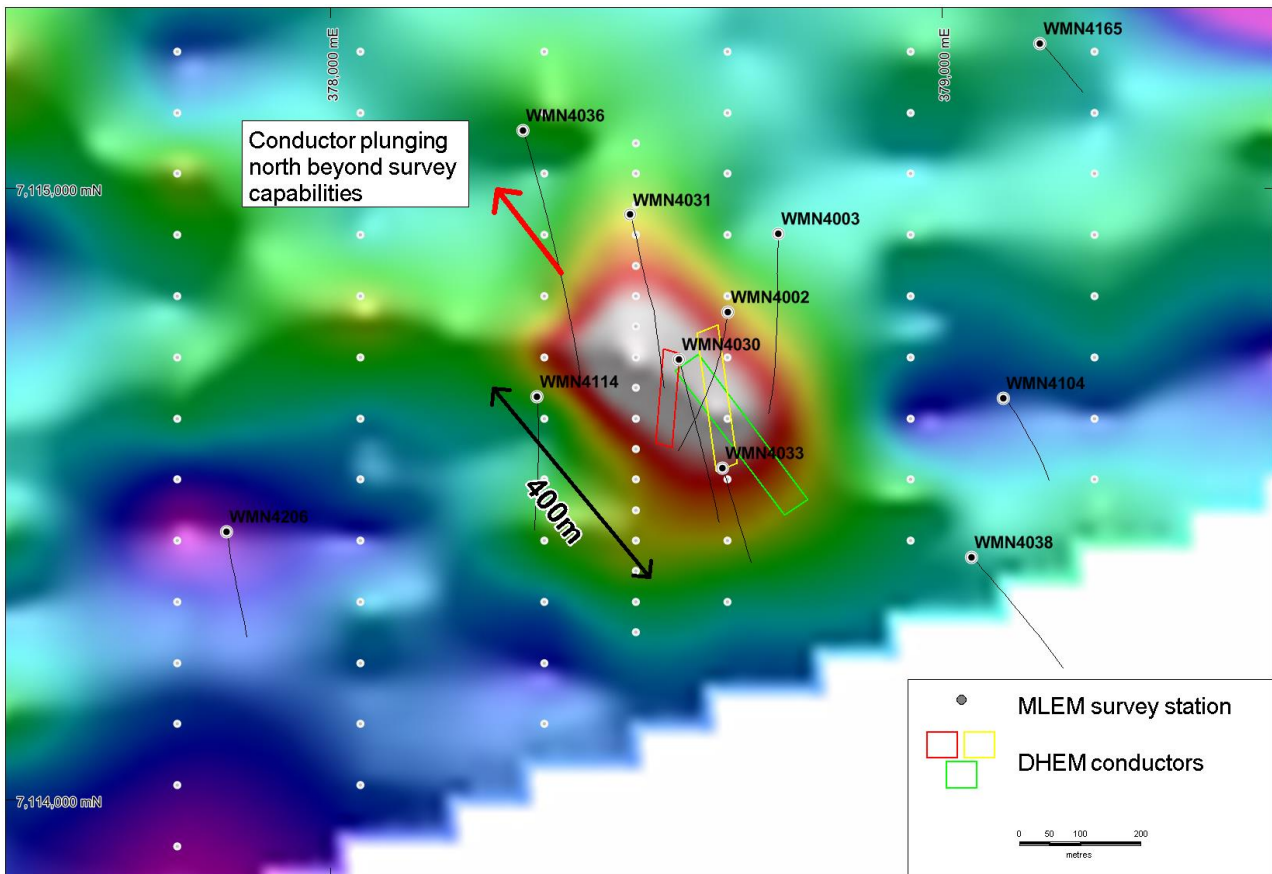
Figure 1 West Musgrave Project - Deposits and priority exploration targets.

### The Yappsu Prospect

Discovered in 2009, drilling initially targeted a surface MLEM anomaly, with several holes intersecting a thick zone of disseminated mineralisation and importantly, laterally-consistent zones of high-grade massive to breccia nickel sulphides. Platinum and palladium grades are significantly higher than at Nebo and Babel and are potentially indicative of a higher tenor system.

The recent MLEM survey was designed to compare the surface response against the original 2009 survey, help constrain the existing DHEM models from earlier drilling as well as infill the existing MLEM coverage along strike.

The new survey showed a much improved MLEM response over the known mineralisation at Yappsu represented as a strong, discrete, late-time anomaly with a NW-SE trend (Figure 2). However, the DHEM models do not fully explain the observed MLEM response. The data remains poorly constrained but shows that there is additional complexity in the area that is yet to be understood. In addition to resolving the main conductive system, the new MLEM data have resolved several other late-time responses that could represent small shallower conductors in the area.



**Figure 2.** Gridded image of late-time (Channel 25) response at Yappsu with drilling and downhole EM conductors.

The new MLEM survey has provided additional confidence to drill targeting. The primary target remains the confluence of DHEM plates from previous drilling. It is noted that the previous drilling has not tested the core of these conductors (Figure 3), yet holes have still returned significant mineralisation (Table 1). The implication is that the core zones of the plates, all of which exhibit high modelled conductance, may consist of thicker and/or higher grade massive/matrix sulphide mineralisation.

Drilling to test these conductors is now underway.

This new survey highlights the fact that the historical surface EM data has not effectively screened for massive-sulphide mineralisation, and that therefore there may be other potential Yappsu-like bodies in the region that would not have been resolved in the 2008–2012 surface EM programs. This will be the focus for further surface EM work later in 2018.

**Table 1. Yappsu Significant drill intercepts.**

HOLE ID	East	North	RL	Dip	Azi	EOH (m)	From (m)	Intersection			
								Width (m)	Ni %	Cu %	PGE g/t
WMN4002	378650	7114800	481	-65	187	660.9	467.4	45.6	0.50	0.68	0.50
						Incl.	469.4	2.0	2.49	0.68	1.54
WMN4030	378570	7114722	477	-62	166	579.8	402.0	44.25	0.49	0.48	0.32
						Incl.	405.6	2.55	2.42	0.48	0.88
WMN4031	378490	7114959	470	-65	162	678.6	538.5	70.5	0.44	0.42	0.27
						Incl.	549.1	2.65	1.98	0.50	0.19

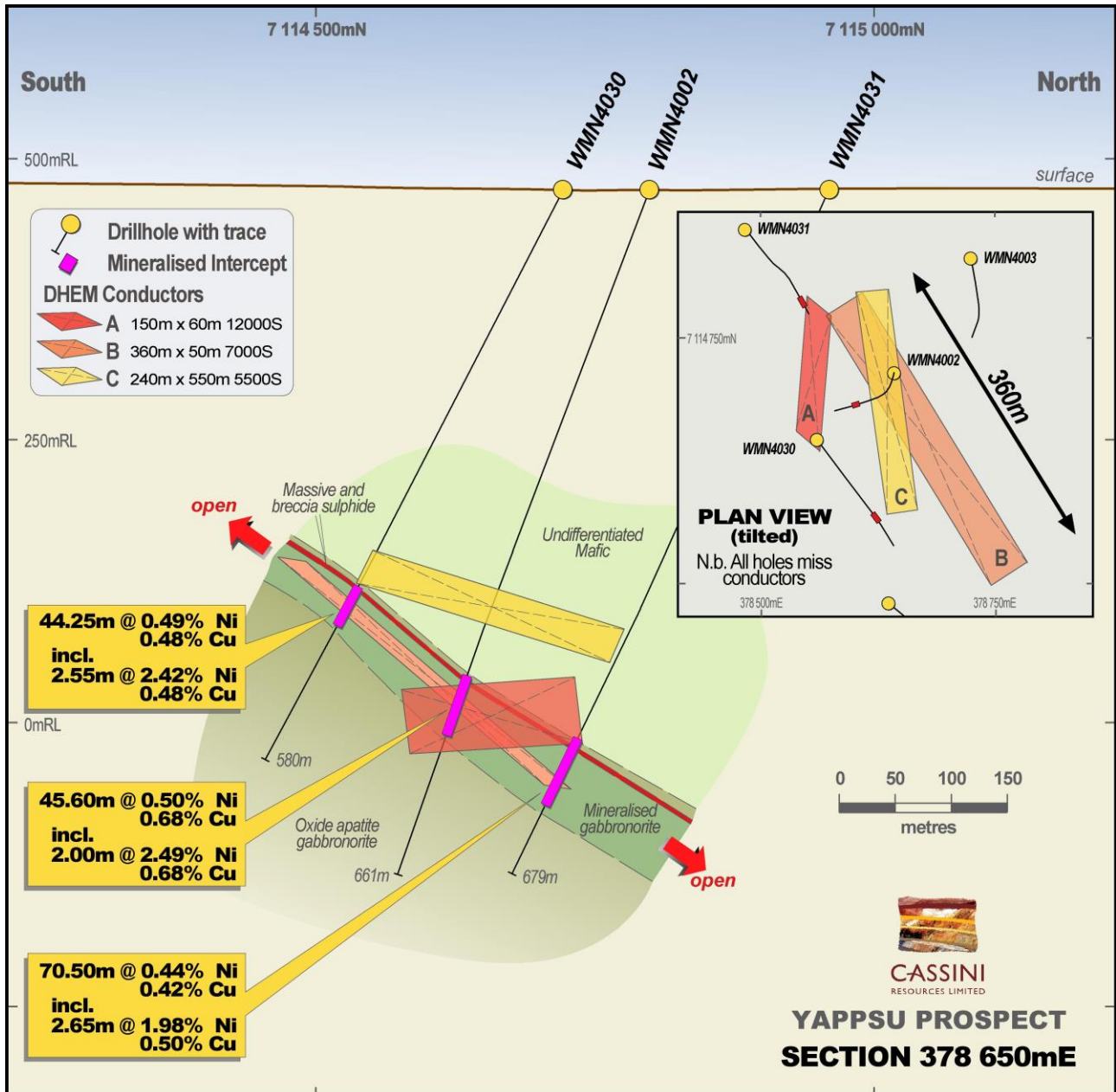


Figure 3. Yappsu section showing conductors and mineralised intersections.

### One Tree Hill Prospect

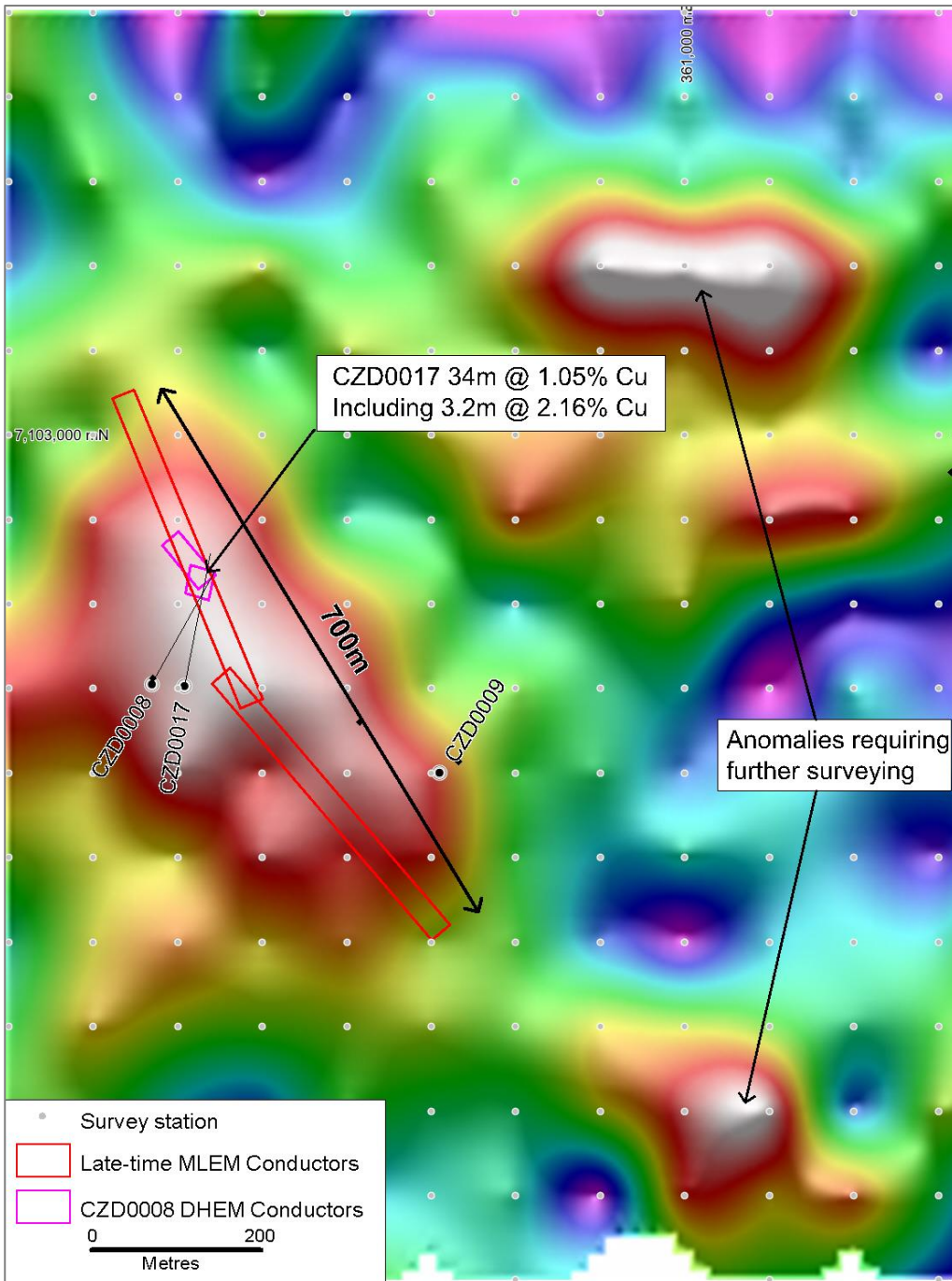
A total of 279 stations were recorded over 13 lines of MLEM and five lines of FLEM for a total of 22.9 line-km. The aims of the new survey were to confirm whether the deep, small, massive sulphide conductor intersected in CZD0017 can be seen from the surface, and if so use the MLEM response as a vector towards possible extensions and screen the area for other local bed-rock conductors

Drill hole CZD0017 intersected a massive sulphide zone returning 3.2m @ 2.16% Cu, 0.58% Ni, 0.10% Co and 1.0g/t PGE within a broader disseminated zone of 34m @ 1.05% Cu + 0.5 g/t PGE. An upper or hangingwall zone returned an intercept of 13.4m @ 0.85% Cu from 129.6m, including 1.6m @ 2.76% Cu from 134.9m. Almost the entire hole is copper anomalous (>250ppm) with numerous spikes of strong PGE anomalism (~0.1 g/t).

The new MLEM survey has clearly defined a late-time conductive trend consistent with the position and depth of the known massive sulphides at One Tree Hill. There is also a suggestion that the small massive sulphide body defined by DHEM surveying was resolved from the surface, providing confidence in other anomalies identified by the survey.

The MLEM data suggests that the known massive sulphide mineralisation could extend as a narrow (<30m) zone over a strike extent of more than 700m in a NW-SE trend, perpendicular to general stratigraphy (Figure 4).

There are a number of other interesting features in the survey, particularly a synclinal feature in the NE of the survey area. Conductors in this area are currently poorly constrained and require further evaluation.



**Figure 4.** Gridded image of late-time (Channel 30) response at One Tree Hill with drilling and downhole EM conductors.

This new survey has provided a direct targeting to tool for follow-up drill testing of CZD0017. Preparations are underway to test the NW-SE trend either side of CZD0017, which will be undertaken following drill testing at Yappsu.

The field program at the project is expected to continue through until November this year.



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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 Yarawindah 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 3 April 2014, 1 May 2017, 14 November 2017 continue to apply and have not materially changed.