CASSINI
RESOURCES LIMITED

ASX Release (CZI)
20 April 2017

# West Musgrave Project Resource Extension Drilling

## HIGHLIGHTS

- **RC Drill Program commences at Nebo-Babel**
- **Targeting shallow high-grade extensions to known mineralisation**
- **All targets supported by coincident EM conductors**
- **Positive results expected to improve project economics**
- **Results expected by late May**

Cassini Resources Limited (ASX:CZI) ("Cassini" or the "Company") is pleased to provide additional information regarding resource extensional drilling at the West Musgrave Project ("WMP" or the "Project"), located in Western Australia. The program forms part of Further Scoping Studies as part of Stage 1 of the Earn-in/JV Agreement with OZ Minerals Limited (ASX:OZL) ("OZ Minerals").

### Nebo-Babel Resource Extension Program

The Further Scoping Study (FSS) comprises a number of work programs aiming to identify opportunities for economic improvements on the 2015 Scoping Study completed by Cassini. The Nebo-Babel Resource Extension program is targeting additional high-grade nickel and copper sulphide mineralisation that could be developed early in the conceptual mine plan to positively influence mine economics.

A drilling program has been designed to test a number of potential high-grade extensions to both the Nebo and Babel deposits. The RC drill program will consist of approximately 11 holes for 1,800m and test a number of targets at relatively shallow depths. In addition, a number of significant deeper targets have also been identified but these will be tested at a later date with a larger capacity drill rig.

All of the targets have been developed through Cassini's advanced geological interpretation and a recent review of down-hole electromagnetic (DHEM) surveys. This produced a series of modelled EM plates, which on the basis of geometry and conductance, are highly likely to represent massive or breccia sulphides additional to the known resource. Given the lack of EM false positives encountered in historical drilling, the probability that the plate anomalies are due to Ni-Cu mineralisation is considered high.

Core Exploration Drilling, based in Perth, has been contracted to undertake the program following completion of two exploratory water bores at the Project as detailed in ASX release dated 10 April 2017. The resource extension drill program is due to start imminently and expected to take 3 weeks to complete, with assays likely to be returned by late May. Further details about the water bore program will be provided once interpretations are complete.

An update of the geology interpretation and resource model will follow and form the basis of updated mine plans and schedules.

## Babel Targets and Proposed Drilling

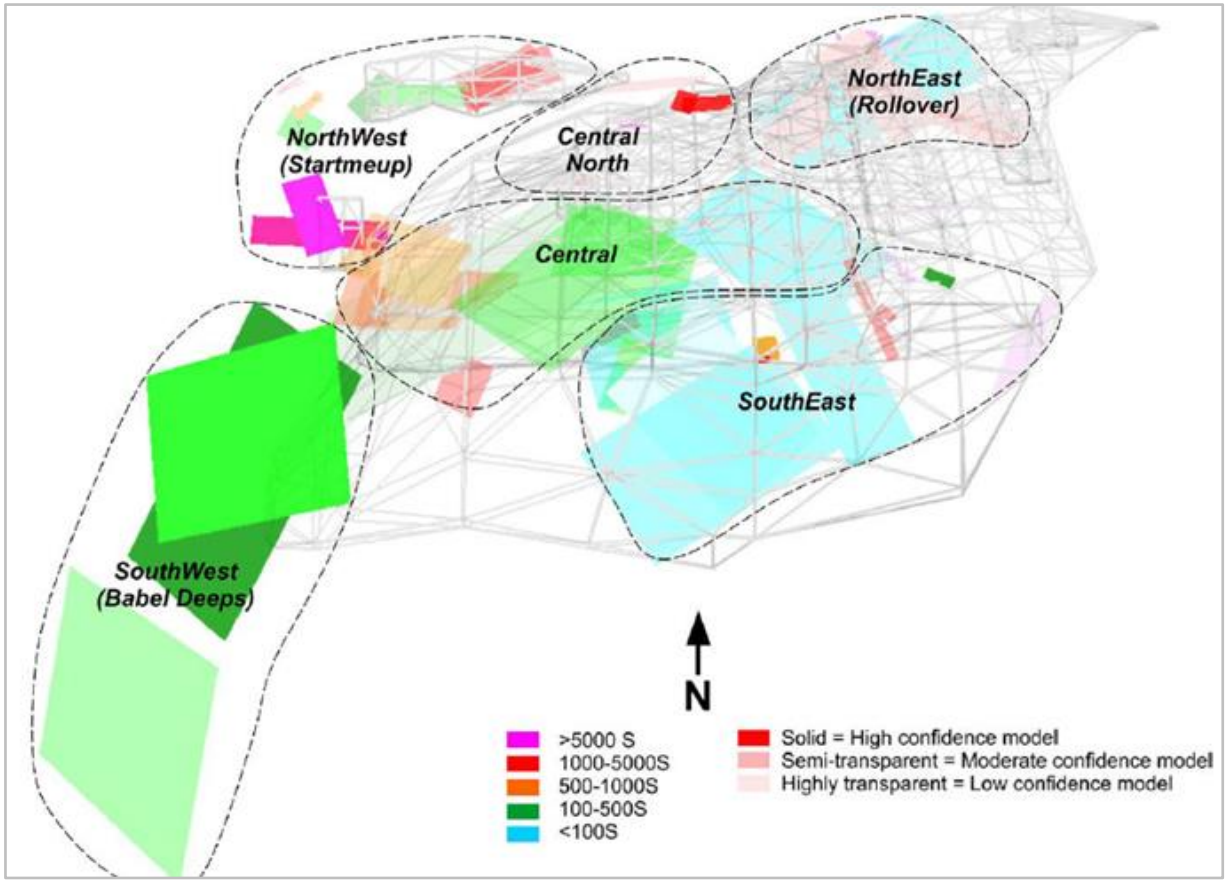


FIGURE 1. Modelled DHTEM plates at Babel colour coded by conductance and degree of confidence of modelling. Grey lattice represents the resource wireframe.

The majority of targets are located at the Babel deposit, primarily extensions to the Startmeup Shoot in the northwest and along strike to the east through the central and northeastern “rollover” zone (Fig 1). These are some of the highest grade portions of the Babel resource currently defined by drill holes on broad centres of 100m x 100m.

A target example is the western extension of the Startmeup Shoot, a high-grade lode of the Babel Deposit with circa 1% Ni and 1% Cu. Drilling by Cassini in 2014 missed extensions of mineralisation, however earlier drilling shows a number of off-hole conductors indicating potential extensions at least 100m west of the existing resource (Fig 2). The Startmeup Shoot is the first lode to be mined in the 2015 Scoping Study so additional resource extensions will have a positive impact on the revised model.

Further to the east in the central rollover zone are two high conductance modelled plates which may represent a high-grade zones north and west of CZC0129 (Fig 3). CZC0129 was drilled by Cassini in 2014 and returned 18m @.1.52% Ni & 1.50% Cu.

Note that the two high conductance plates modelled in the northwest in Figure 1 (magenta colour) present a high-priority but longer-term target that will be tested in subsequent programs due to timing and drill rig constraints.

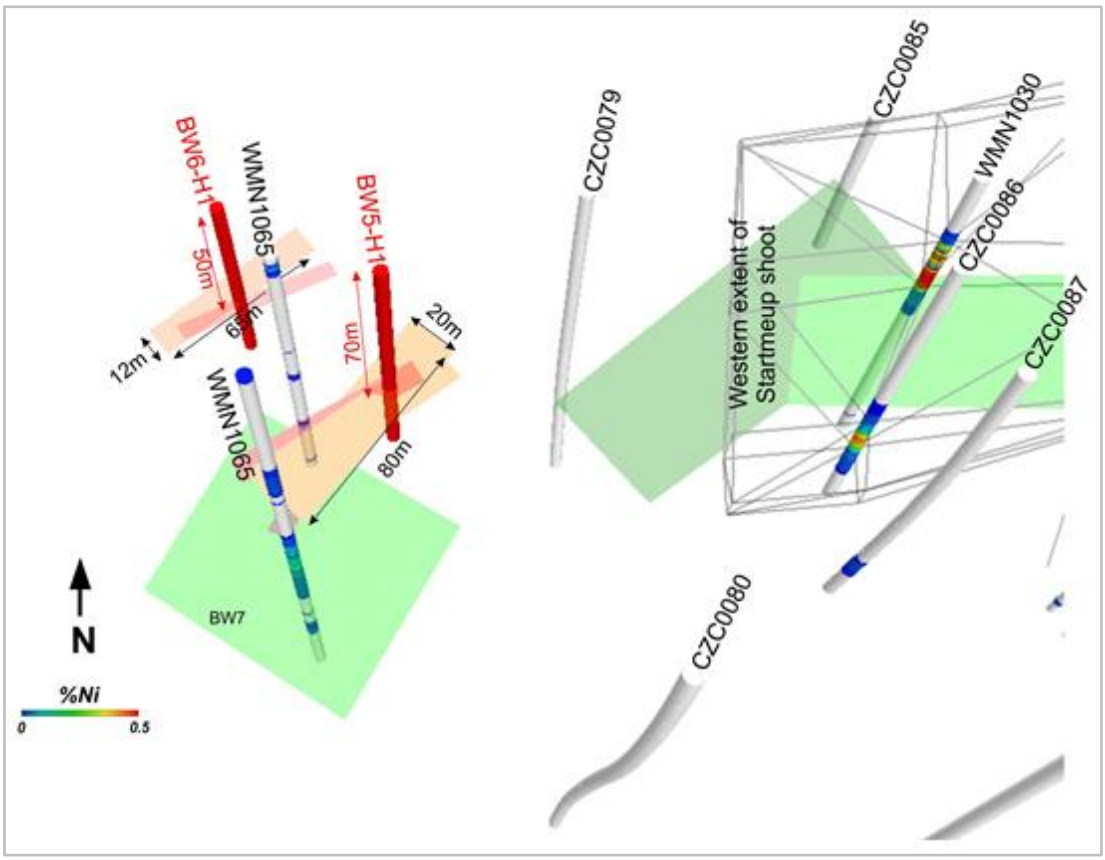


FIGURE 2. Modelled DHTEM target plates (BW5 and BW6) interpreted to be extensional to the known Startmeup Shoot.

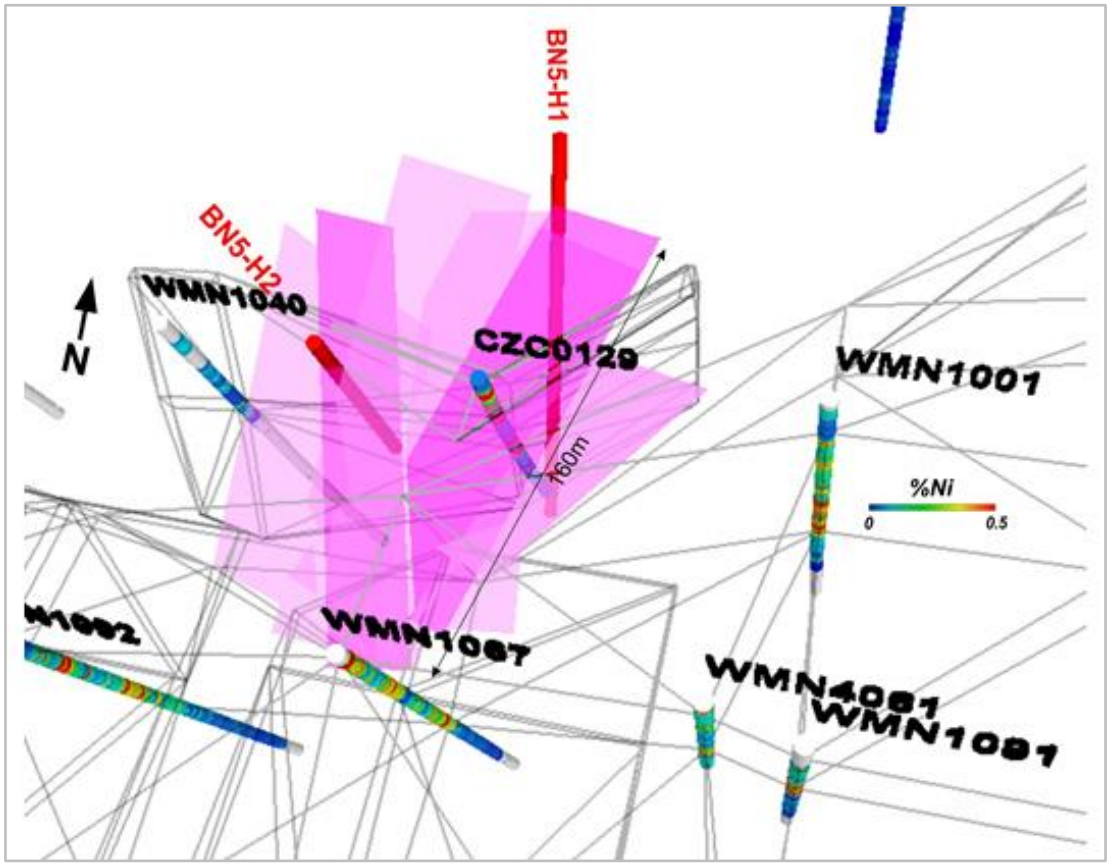


FIGURE 3. Modelled DHTEM target plate BN5 and proposed drill holes in the North East Zone of Babel.

## Nebo Targets and Proposed Drilling

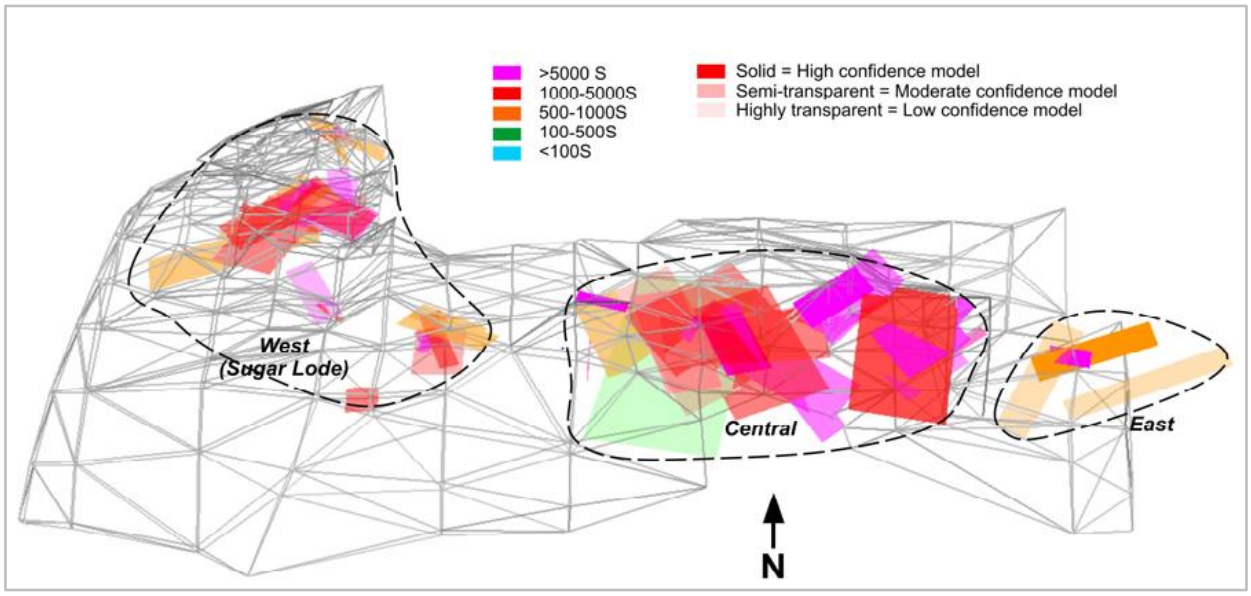


FIGURE 4. Modelled DHTEM plates at Nebo colour coded by conductance and degree of confidence of modelling. Grey lattice represents the resource wireframe.

Nebo targets are characterised by numerous high-conductance plates interpreted as extensions of massive or matrix sulphides in the Western (including the Sugar Lode), Central and Eastern Zones (Figure 4). It is important to note that mineralisation appears to be open at the eastern end of the deposit. Drilling will test several extensions to high-grade mineralisation, such as CZC0053 which returned 46m @ 0.98% Ni & 0.53% Cu (Figure 5) in the Sugar Lode.

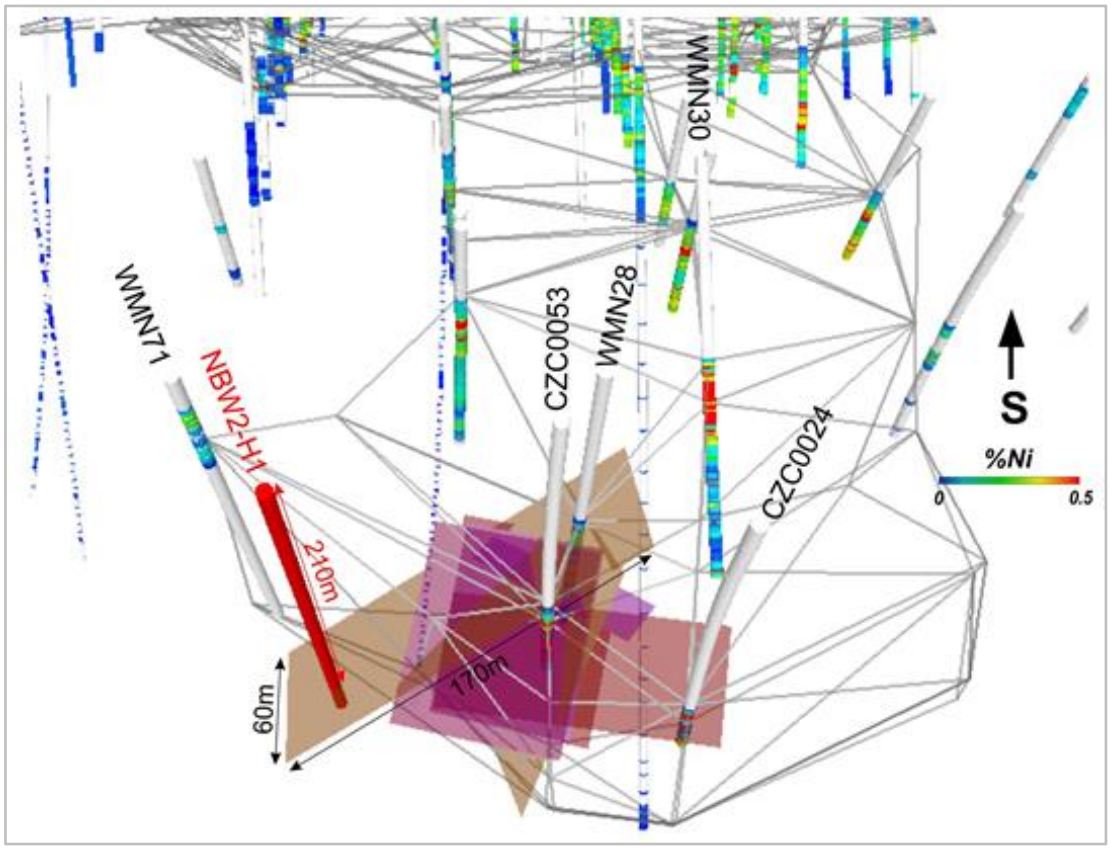


FIGURE 5. Modelled DHTEM target plates NBW2 and planned drill hole NBW2_H2, Sugar Lode, Nebo.

Geological and geochemical data will be used to improve and refine the existing Nebo-Babel geological model. Data from these drill holes will also be incorporated in the revised mineral resource estimate, which will be done as part of Further Scoping Study (FSS) in 2017. Additional, high-quality down-hole EM data from these holes, which is proposed to be collected and interpreted in the Pre-Feasibility Study, will be used to generate additional drill targets. The Company looks forward to presenting the results of the drill program at the earliest opportunity.

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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, the Company acquired its flagship West Musgrave Project (WMP), located in Western Australia. The WMP is a world-class asset which currently has over 850,000 tonnes of contained nickel and 1.8 million tonnes of contained copper in Resource. The WMP 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 $36M Earn-in/Joint Venture (JV) agreement with prominent Australian mining company OZ Minerals Ltd (ASX: OZL). The JV will fund the continued development and exploration of the WMP, and provides a clear pathway to a decision to mine and potential cash flow for the Company.

Cassini is also progressing its Mt Squires Gold Project in WA and an early stage zinc exploration project in the West Arunta region of WA.

Current Highlights:

- Cassini's West Musgrave project contains one of Australia's largest undeveloped nickel/copper deposits
- Cassini is free carried to a "decision to mine" via a 3 stage A$36m Earn-in/Joint Venture agreement with OZ Minerals
- Previous Scoping Study presented highly attractive economics, supporting a long life, open pit development
- Significant exploration upside across portfolio with Succoth Copper deposit and multiple other mineralised targets identified at additional deposits
- High impact A$8m regional exploration program to be executed in Stages 2 and 3 of the joint venture
- Track record of prudent investment and capital management with a CY2016 exploration / administration ratio of 1.5x (compares favourably to peer group average of 0.9x)[1]
- Leveraged to increases in nickel prices with reducing global inventories and a looming supply shortage, as well as significant exposure to copper

## 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 13, April 2015 and 7 December 2015, continue to apply and have not materially changed. Further details regarding previous drilling at Nebo (CZC0053) and Babel (CZC0129) can be found is market announcements dated 5 November 2014 and 18 December 2014 respectively.

## APPENDIX A

### West Musgrave Project Mineral Resources Statement[1,2]

| Prospect | Classification | Tonnes (Mt) | Ni (%) | Cu (%) | Co (ppm) | Au (ppm) | Pt (ppm) | Pd (ppm) |
|---|---|---|---|---|---|---|---|---|
| **Nebo** | Indicated | 25.8 | 0.52 | 0.46 | 215 | 0.05 | 0.07 | 0.09 |
| | Inferred | 3.0 | 0.60 | 0.48 | 229 | 0.04 | 0.08 | 0.10 |
| | **Total** | **28.9** | **0.53** | **0.46** | **217** | **0.05** | **0.07** | **0.09** |
| **Babel** | Indicated | 69.7 | 0.39 | 0.42 | 139 | 0.07 | 0.10 | 0.12 |
| | Inferred | 104.5 | 0.38 | 0.40 | 135 | 0.08 | 0.11 | 0.12 |
| | **Total** | **174.2** | **0.39** | **0.41** | **137** | **0.08** | **0.11** | **0.12** |
| **Nebo + Babel** | **Total** | **203.1** | **0.41** | **0.42** | **148** | **0.08** | **0.10** | **0.12** |
| **Succoth** | Inferred | 156 | 0.06 | 0.60 | - | 0.02 | 0.04 | 0.11 |

NOTES:

1. Nebo-Babel Indicated and Inferred Mineral Resource (0.3%Ni cut-off), February 2015
2. Succoth Deposit Inferred Mineral Resource estimate (0.3% Cu cut-off), December 2015