



CASSINI
RESOURCES LIMITED

ABN: 50 149 789 337

ASX Announcement & Media Release

20 November 2012

Cassini is an Australian exploration company focused on:

- Gold in the world class mining district of Nevada (USA)
- NiS, Cu, PGE's in the highly prospective Musgrave (WA)
- Gold in the historical mining province of Forrestania (WA)
- Actively generating new exploration projects

Capital Structure*

Shares on Issue 34,550,001
Shares Trading 20,749,999

Unlisted Options

7,000,000 (20 cents, 30/6/2015)
1,000,000 (25 cents, 30/6/2015)

Directors

Mike Young

Non Exec Chairman

Richard Bevan

Managing Director

David Johnson

Executive Director - Exploration

Greg Miles

Non Exec Director

Phil Warren

Non Exec Director

Steven Wood

Company Secretary

Cassini confirms West Musgrave Project as a high order, large scale Nickel Sulfide (NiS) target

Australian exploration company, Cassini Resources Limited (ASX: CZI) ("Cassini" or "the Company") reports that recent geophysical interpretation at the company's 100% West Musgrave Project in WA by widely recognised expert, Dr Jon Hronsky, has given context to several discrete anomalies, identifying them as high priority, potentially large scale NiS targets.

The positive nature of the interpretations has led the Company to re-evaluate the prospectivity of the West Musgrave Project. In summarising the outcomes of his geophysical analysis, Dr Hronsky stated that Cassini's West Musgrave Project "... is one of the most significant unexplored opportunities for a large scale, NiS deposit in Australia...".

The interpretation supports:


- A robust geological model that has put the anomalies in a regional and structural context that significantly elevates their prospectivity and identifies them as potentially large scale NiS mineralisation targets.
- Clear, simple exploration milestones to support progression to discovery, commencing with airborne electro-magnetic (EM) survey over the anomalies.
- Reduced risk and cost of exploration by defining and upgrading these targets to allow for a focused exploration programme
- High suitability for airborne electro-magnetic survey. This is being scheduled to be performed as soon as possible in early 2013.

Overview

The West Musgrave Project is targeting Norilsk (Siberia) or Voisey's Bay (Canada) style mafic –intrusion hosted Ni-Cu sulfide mineralisation similar to that recently discovered by Sirius Resources at Nova. This class of Ni-Cu deposit includes the largest known examples in terms of contained metal.

The potential of the West Musgrave region for this style of deposit has been previously established by the discovery of the Babel-Nebo deposits (400mt @ 0.3% Ni and 0.3% Cu, ~ 2mt contained Ni & Cu metal) by Western Mining Corporation which are now held by BHP Billiton.

Cassini has continued to advance exploration at the West Musgrave Project this year, having entered into an access agreement with the local Traditional



Owners (Ngaanyatjarra), completed heritage surveys and conducted reconnaissance mapping to determine appropriate exploration techniques.

Recent geophysical interpretation by independent consultant Dr Jon Hronsky, who carried out the targeting at WMC that led to the Nebo-Babel discovery, has identified very specific targets using a reinterpretation of existing data. Dr Hronsky is widely recognised as an expert in the area of exploration geology, in particular the broader Musgrave province. He consults to a number of the major mining and exploration companies world-wide focusing on reducing geological risk and biasing towards exploration success.

The generation of these new discrete targets will now allow the company to carry out airborne electro-magnetic (EM) surveys over a much smaller area, with a view to potentially locating EM conductors which can subsequently be drilled. It should be noted that due to the unique geology in the Musgrave, 'false EM conductors' are rare and anomalies generally signify metal sulfide mineralisation.

The Company has applied for additional exploration licenses, contiguous with the existing Musgrave licenses, where additional targets have been identified.

The Company has a clear exploration path ahead of it including airborne EM and if successful, drilling these targets to assess their potential for Ni-Cu sulfide mineralisation.

Agreement with Archer X Pty Ltd

The work undertaken by Dr Hronsky was part of a broader regional assessment commissioned by Archer X Pty Ltd (Archer X). Archer X is a company associated with Mr Greg Down, who originally identified the West Musgrave project and vended it to Cassini as part of the Company's IPO in January 2012.

The Company has reached an agreement with Archer X to acquire all the intellectual property (IP) and data relevant to its West Musgrave Project. The agreement has also allowed the Company to secure an additional exploration license application over a tenement contiguous with the West Musgrave project where additional target anomalies have been identified.

The consideration consists in the reimbursement of Archer X costs of \$50,000 and the issue of up to 3 million options based on certain exploration and financial outcomes.

In Detail

The West Musgrave Project covers the western extension of the Giles Complex, a major mafic and ultramafic suite of rocks that hosts, amongst others, the Nebo-Babel Ni-Cu deposit held by BHPB. Other significant deposits in the region include the Jameson Range Vanadium-Titanium Deposits and Beadell Resources Hand Pump gold deposit.

Nickel sulfide deposits are hosted by “chonoliths” which are pipe-shaped mafic intrusions that are emplaced along major fault zones. The emplacement of these intrusions is related to a major heat and magma source, represented at the surface by the Palgrave Caldera, which was an area of significant volcanism. The intersection of the Caldera complex and the Ngaanyatjarra Rift zone is believed to be a major factor in the generation of the magmatic Ni-Cu deposits such as the Nebo-Babel deposits. The Nebo-Babel deposits lie to the east of the Palgrave Caldera (Figure 1).

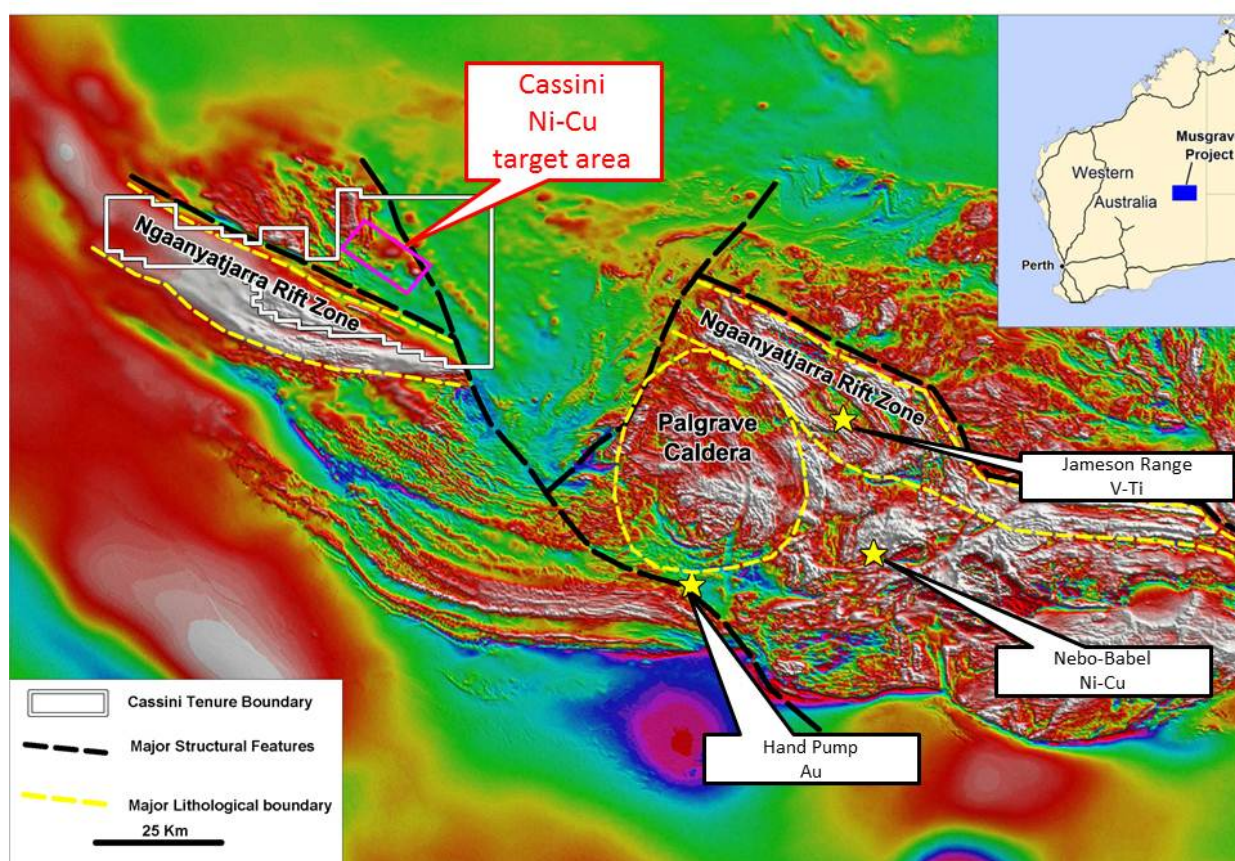


Figure 1: Aeromagnetic image of the Musgrave Project showing the exploration target and main features.

Cassini’s tenements lie to the west of the Palgrave Caldera and are considered to be a ‘mirror image’ of the geology that hosts the Nebo-Babel deposits as the geology includes a major tectonic intersection between the Palgrave Caldera and the faulted off-set of the Ngaanyatjarra Rift zone (Figure 2).

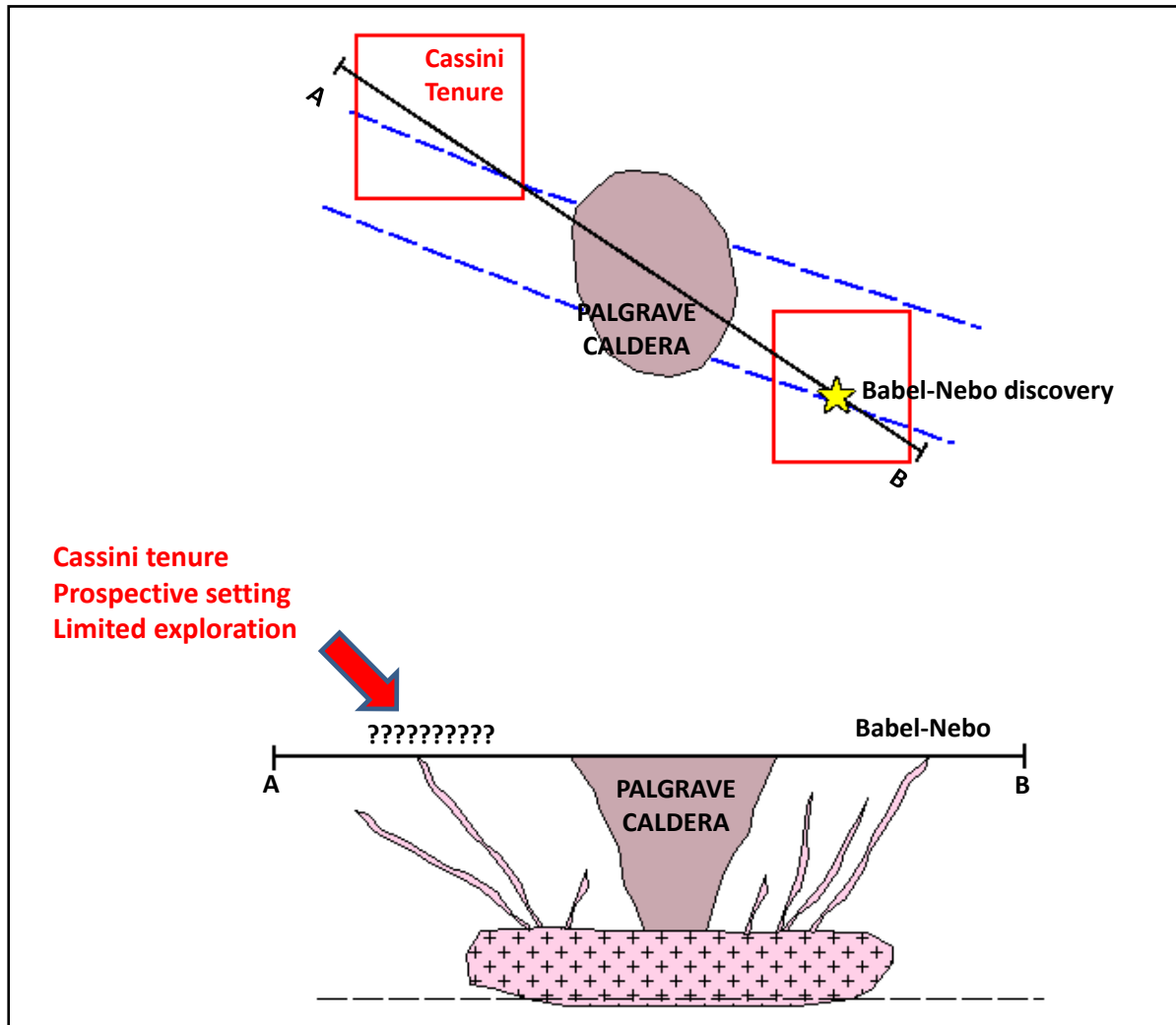


Figure 2: Schematic Plan & Sectional Views of Cassini Tenure and Prospectivity

Due to the depth of cover, this area has not received contemporary exploration, as early explorers, including WMC, concentrated on the area east of the Palgrave Caldera where cover was thin and exploration was successful. Work by Cassini revealed that ground geochemistry may not be effective over the target area.

The geological nature of the Musgrave region lends itself well to modern geophysical techniques such as magnetics and EM. Potentially ore-hosting chonoliths may occur as significant, discrete magnetic anomalies if the surrounding country rocks have a low magnetic background. This is the case in the Cassini ground, which means that magnetic targeting is more effective here than in the more strongly magnetic area near Babel-Nebo. In addition, nickel sulfide mineralisation typically has a strong response in EM surveying. The absence of any known barren sulfidic rock units and the lack of deep lateritic weathering as in the Yilgarn, mean that false positive EM anomalies are rare in the Musgrave. This means that in this region, good quality EM anomalies have a high probability of representing nickel sulfide mineralisation.

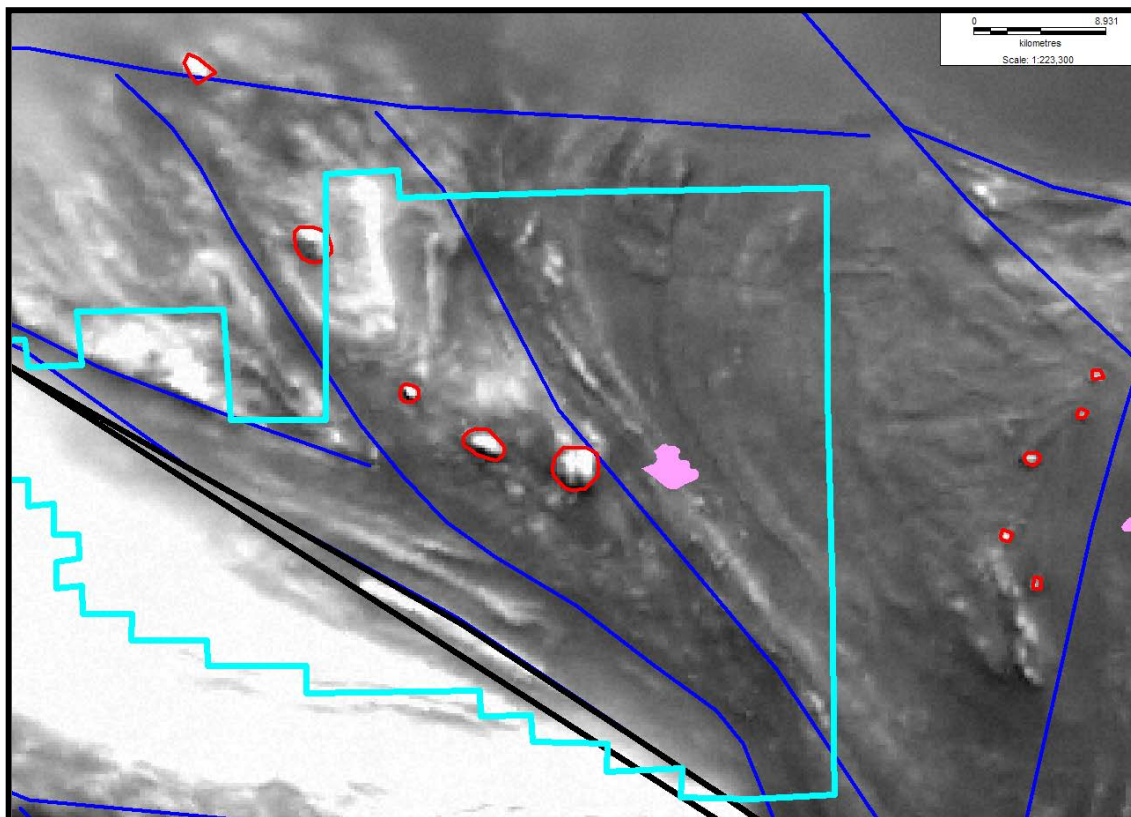



Figure 3: Image of the Musgrave Project showing string of magnetic “bulls-eye” anomalies

The work undertaken by Dr. Hronsky has led to the recognition of the magnetic signature of potentially-prospective chonolith bodies within the Cassini project. Importantly, these inferred bodies occur in a regionally favourable geological context (see Figures 1 and 2 above). This recognition has led to a re-evaluation of the prospectivity of this project. Dr. Hronsky is a leader in the nickel exploration field, as demonstrated by his previous success with WMC at Nebo-Babel and his ongoing consultancy with many other groups. He considers the Cassini project to be “...one of the most significant unexplored opportunities for a significant NiS deposit in Australia”.

Because these chonolith targets identified in Cassini’s tenure present as “bulls-eye” magnetic anomalies, the Company has therefore been able to narrow the area requiring airborne EM to a more manageable size that can be explored immediately and at less cost than previously anticipated.

The Company has a clear, staged path for exploration.

The area containing the bulls-eye targets will be surveyed by airborne EM at the earliest opportunity. If the EM produces high quality conductors/ anomalies, due to the low occurrence of false positive results, the likelihood they represent mineralisation is high. Suitable targets with then be drill tested. The survey may also be expanded to cover other regions in the Company’s land holding.



After each stage of exploration, the Company will assess the data and refine the subsequent stages as it moves forward.

The Company is pleased that the recent work on the West Musgrave Project confirms our view of the area as prospective and that in light of recent developments; exploration can proceed with reduced the risk and expense.

Further information:

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About Cassini

Cassini Resources Limited (ASX: CZI) is an Australian resource exploration company that successfully listed on the ASX in January 2012 with an asset package of prospective tenements and applications in Western Australia. In May 2012, Cassini added three gold exploration projects in Nevada, USA, via Joint Venture agreements with Renaissance Gold Inc. (TSX:REN).

Cassini has a dual focus, with gold exploration projects in Nevada (USA) and nickel, copper and gold prospects in Western Australia.

The Nevada projects represent a near term opportunity for exploration success in one of the world's pre-eminent mining jurisdictions. Nevada has a history of recent multi-million ounce discoveries despite a mining history of over 150 years.

Cassini's priority Western Australian project is located in the highly regarded Musgrave region, with limited previous exploration and potentially high reward.

Cassini aims to explore and progress its key projects, and to identify additional projects that are commercially attractive with the aim to increase shareholder value.

Competent Persons Statement

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Mr David Johnson, who is an employee of the company. Mr Johnson 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 2004 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Johnson consents to the inclusion in this report of the matters based on information in the form and context in which it appears.