

## ACTIVITIES REPORT FOR THE QUARTER ENDED 30 JUNE 2016

### QUARTER HIGHLIGHTS:

#### Mount Squires Gold Project

- New geological interpretation of historical data
- Prospective mineralisation corridor over 50km
- Numerous mineralised drill intersections at the Handpump Prospect

#### West Arunta Zinc Project

- Broad zones of anomalous zinc intersected at the Enceladus and Iapetus Prospects
- Associated pathfinder elements with anomalous Ag, Pb & Cu
- Results support sedimentary zinc model and indicates potential for nearby orebody
- Geophysical program and Infill soil geochemistry to assist targeting primary mineralisation
- WA Government awards EIS co-funded drilling grant to test additional targets

#### Corporate

- Cash at end of Quarter \$1.35m

Cassini Resources Limited ("Cassini" or the "**Company**") is pleased with the significant progress made at its development and exploration projects during the June Quarter.

## EXPLORATION

### Mount Squires Project

#### Significant gold mineralisation at Mount Squires

Cassini has been developing the Project over the past 12-18 months through the consolidation of tenements with a number of prospective gold targets, which includes a range of conceptual to advanced prospects. Previous RC drilling discovered gold at the Handpump Prospect which returned numerous shallow intercepts such as 15m @ 2.3g/t Au from 31m (Figure 1). Only 26 RC holes have been drilled at this prospect and mineralisation remains open in most directions. Whilst at an early stage of exploration, the thickness and tenor of gold mineralisation demonstrates the economic potential of the Project.

#### New interpretation provides numerous targets

Recent geological interpretation has benefited from Cassini's growing knowledge base at the adjacent West Musgrave Project through identification of structures controlling mineralisation in the Mount Squires Project. This has highlighted a structural corridor striking over 50km. The previous fractured ownership has prevented the structural corridor from being explored thoroughly.

Handpump is associated with a subtle magnetic anomaly. This signature has been used to identify other magnetic features elsewhere along the structural corridor that may potentially host similar styles of mineralisation.

In addition to the Handpump Prospect, the Mount Squires Project contains a number of recognised gold and pathfinder element geochemical anomalies including the Centrifical Prospect, 3km south east of Handpump which is part of the interpreted structural trend (Figure 2). Much of the structural corridor is obscured by a veneer of sand cover which has potentially inhibited prospecting and soil geochemistry, particularly in the south-eastern corner of the project area. The Company has also recognised fault intersections and magnetic anomalies in under-explored areas of the project which present prospective exploration targets.

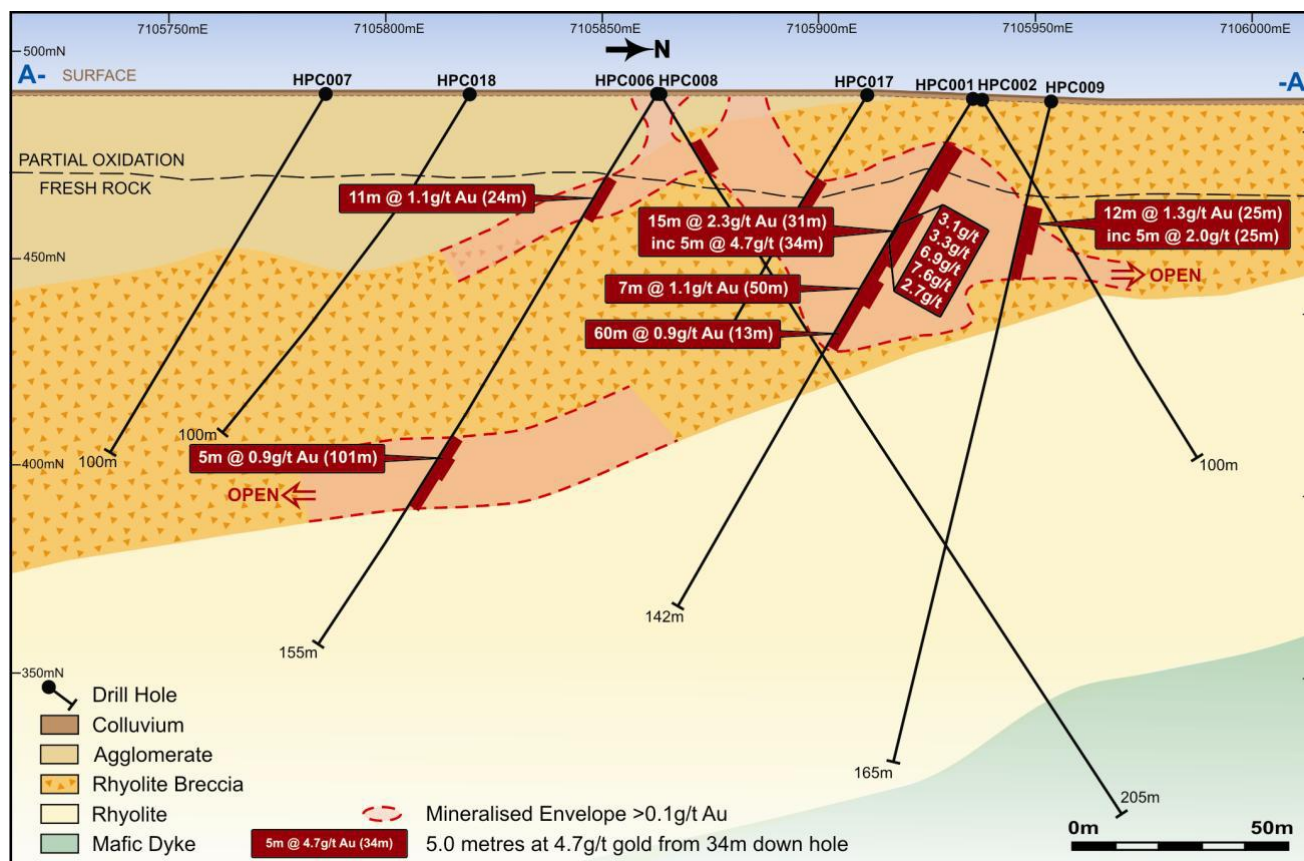


Figure 1. Handpump Prospect Section 332200E (Source: Beadell Resources Ltd ASX release 1 March 2010).

## Next Steps

The Company is finalising work programs involving targeted reverse circulation (RC), reconnaissance RAB drilling and soil geochemistry programs to be undertaken upon receipt of heritage and environmental approvals.

Step-out and infill RC drilling is warranted at the Handpump Prospect to determine the extent of mineralisation and controlling structures. Drilling is currently on 100m to 200m spaced sections. A second priority is drilling at the nearby Centrifugal Prospect which has very encouraging gold, molybdenum, antimony, lead and arsenic geochemical anomalies without any effective drill testing.

RAB drilling will target the NW-SE trending structural corridor, particularly in areas of cover and/or where soil geochemistry is considered to be ineffective.

A number of low order soil anomalies are recognised and require follow-up. These have primarily been sampled on a very broad spacing and require infill to assist drill targeting.

## Project background

Gold prospectivity was first identified at Mount Squires by Western Mining Corporation (WMC) during geochemical surveying in the late 1990's. WMC's primary target was nickel and copper sulphide which returned poor results although several gold anomalies were identified. Despite this, the tenements were later surrendered.

Later exploration by Beadell Resources Ltd in the mid 2000's identified a number of gold prospects with further soil geochemistry, rock chip sampling and mapping. Drilling of these anomalies led to the discovery of significant mineralisation at the Handpump Prospect with significant intercepts of 15m @ 2.3g/t from 31m including 5m @ 4.7g/t from 34m and 12m @ 1.3 g/t including 5m @ 2.0g/t from 25m. Mineralisation is described as flat-lying, hosted in rhyolite breccias and has epithermal style or intrusion-related mineralisation

characteristics. Beadell's exploration after the initial discovery was limited due to a change in corporate strategy and the project was later surrendered.

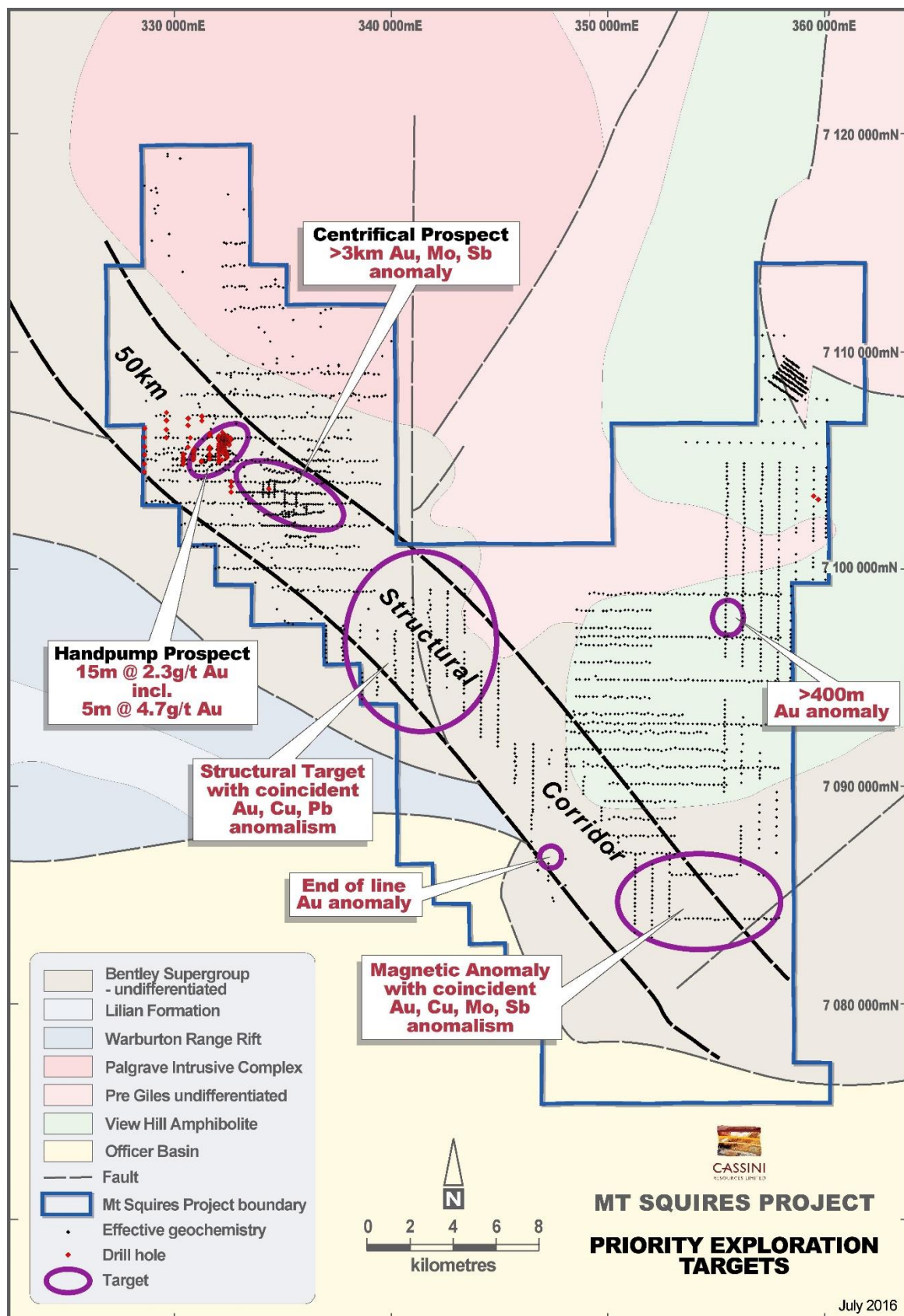


Figure 2. Mount Squires Project geology and exploration targets.



Anglo American PLC has also explored the region, primarily for nickel and copper sulphide but their soil geochemistry included a large multi-element analytical suite suitable for gold exploration. Anglo American surrendered their tenements following a decision to reduce global exploration expenditure.

Cassini has compiled all previous exploration into a consolidated database and utilised public geological and geophysical datasets to assist with geological interpretation and targeting. The adjacent West Musgrave Project provides a useful logistics base and the Company has demonstrated expertise in operating in the region (Figure 3). The Mount Squires Project complements the Company's diversified portfolio alongside the flagship West Musgrave nickel and copper assets and the early-stage West Arunta Zinc Project.

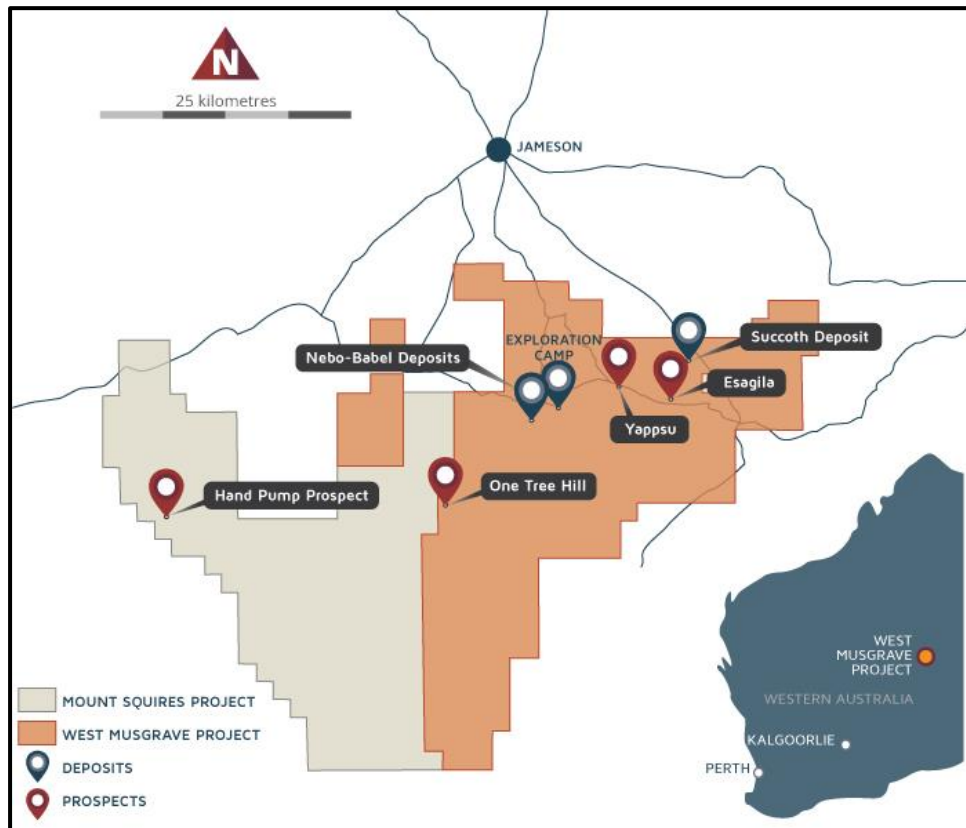


Figure 3. Mount Squires and West Musgrave Project location.

## West Musgrave Project

Work at the Project has progressed steadily during the Quarter focussing on refining exploration programs for high-value targets at Nebo-Babel using minimum economic criteria of approximately \$25M NPV to target these opportunities.

The Company has identified three priority target zones:

- Extensions of Nebo massive sulphide to the north west;
- Extensions to the Startmeup Shoot at Babel; and
- High-grade or massive sulphide in the “roll-over zone” (e.g. CZC0129 18m @ 1.50%Ni, 1.52%Cu) at Babel

The Company is also finalising a drill program to test the Babylon Prospect, adjacent to the Succoth Deposit. Cassini has been awarded \$148,500 to assist with this program through the WA Government co-funded drilling scheme.

## West Arunta Project

The West Arunta Project is a highly prospective base and precious metals target in an underexplored region near Lake McKay in Western Australia. The Project is now 100% owned by Cassini, following the completion of a share sale agreement for the outstanding balance of Crossbow Resources Pty Ltd in July 2015. During the Quarter the Company drilled 12 RC holes for 1,398m.

Cassini is targeting large-scale, sedimentary Zn-Pb mineralisation, similar to those deposits found in the Mt Isa region in Queensland. A modern day analogue is the Century Deposit mined by MMG, with a pre-production resource of 167mt @ 8.1% Zn, 1.2% Pb and 33g/t Ag. Century produced a prominent Zn-Pb soil anomaly centred on a siltstone outcrop. Rock chip samples from this outcrop returned only 1-2% Pb & Zn and was later recognised as part of the orebody, but due to strong leaching and a lack of iron oxides, produced a very subtle geochemical and visual expression of the mineralisation.

### Broad zinc zones highlight potential

Cassini has completed the first ever drill program for sedimentary zinc at the West Arunta Project targeting two ferruginous outcrops. The aim of the program was to test for enriched zinc mineralisation in fresh bedrock beneath these outcrops.

Drilling returned broad zones of sub-surface enrichment in zinc and associated elements within the weathered zone at both Iapetus and Enceladus Prospects. Best results include 22m @ 0.26% Zn from 13m including 2m @ 0.89% Zn from 22m in WAC0007 at the Enceladus Prospect (Figure 4). Anomalous zones of accessory metals were also intersected such as 21m @ 1.2g/t Ag from 9m in WAC0010. Individual samples of Pb & Cu peaked at 697ppm in WAC0010 and 178ppm in WAC0012 respectively. See Appendix A for a full table of results.

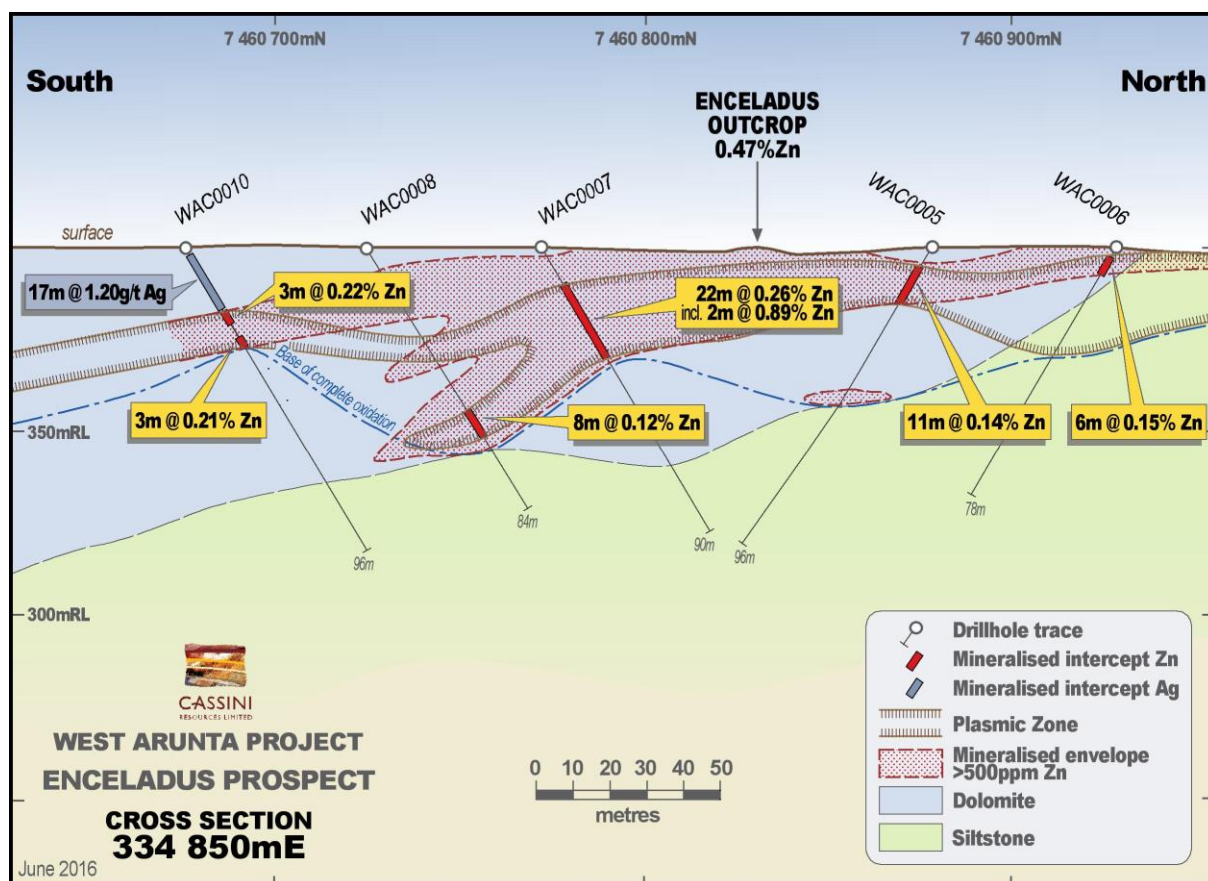


Figure 4. Enceladus cross section.

All zinc enrichment was intersected in the weathered zone within two main sub-horizontal layers. The zinc-anomalous ferruginous-zones, originally hypothesized as gossans, which were the target of drilling, are reinterpreted to represent hydromorphic ferricretes. These are iron-rich accumulations that have been deposited in the regolith through the lateral movement of groundwater. It is very likely that zinc-rich ferricretes are the result of dispersion plumes from a proximal primary zinc mineralisation source as most ferricretes in the area are not base-metal anomalous.

The quantum of zinc anomalism and the presence of accessory metals such as silver are very encouraging and point to a primary zinc sulphide source nearby.

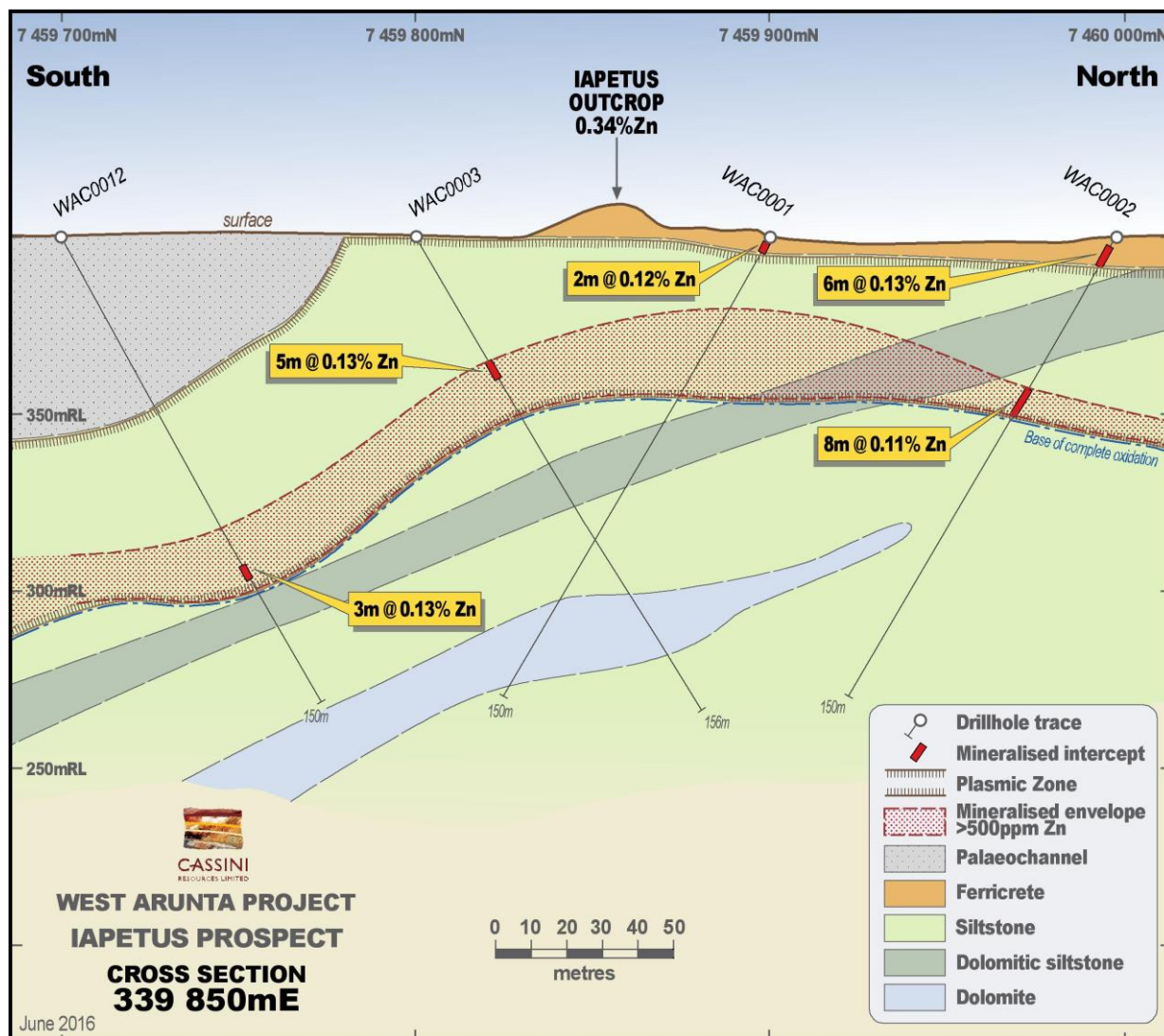


Figure 5. Iapetus cross section.

### Advancing the West Arunta Project

The Company has taken enormous strides in understanding the geology of the West Arunta Project through this drilling program.

The geology is dominated by dolomites and siltstones with an apparent gentle southerly dip. The degree of weathering is much stronger and deeper than first interpreted. The regolith profile includes a plasmic zone with complete oxidation of primary minerals to clays and is generally associated with zinc enrichment. The geology is broadly similar at both prospects.



Zinc enrichment occurs as an upper enrichment zone at, or near, the surface as well as a deeper saprolitic enrichment at the base of complete weathering. The upper enrichment zones manifest as ferricretes, originally hypothesised as gossan outcrops. No primary zinc mineralisation was intersected.

The near-surface zinc-enriched ferricretes and the lower zinc enriched zones have been formed by hydromorphic dispersion, that is, zinc has been deposited in the regolith through the lateral movement of ground water and variations in the water table. It is very likely that such zinc-rich ferricretes relate to a nearby primary zinc mineralisation source. Most ferricretes in the area are simply not base-metal anomalous.

Additional evidence for a nearby primary source at the West Arunta includes the following points:

- Drilling did not intersect any zinc-enriched lithological units in the fresh rock that could plausibly produce zinc-anomalous regolith concentrations through land surface leaching and residual enrichment in the regolith
- Other ferricretes have been found in the project area with no zinc enrichment.

The Company has also re-interpreted public gravity data over the region and has discovered a large residual gravity anomaly to the west of Enceladus (Figure 6). Residual gravity enhances anomalies in a localised area from shallow sources. Gravity is a useful exploration tool in sedimentary zinc provinces due to the contrast between high density sulphide minerals and low density sediments. This is a very positive development and requires follow-up.

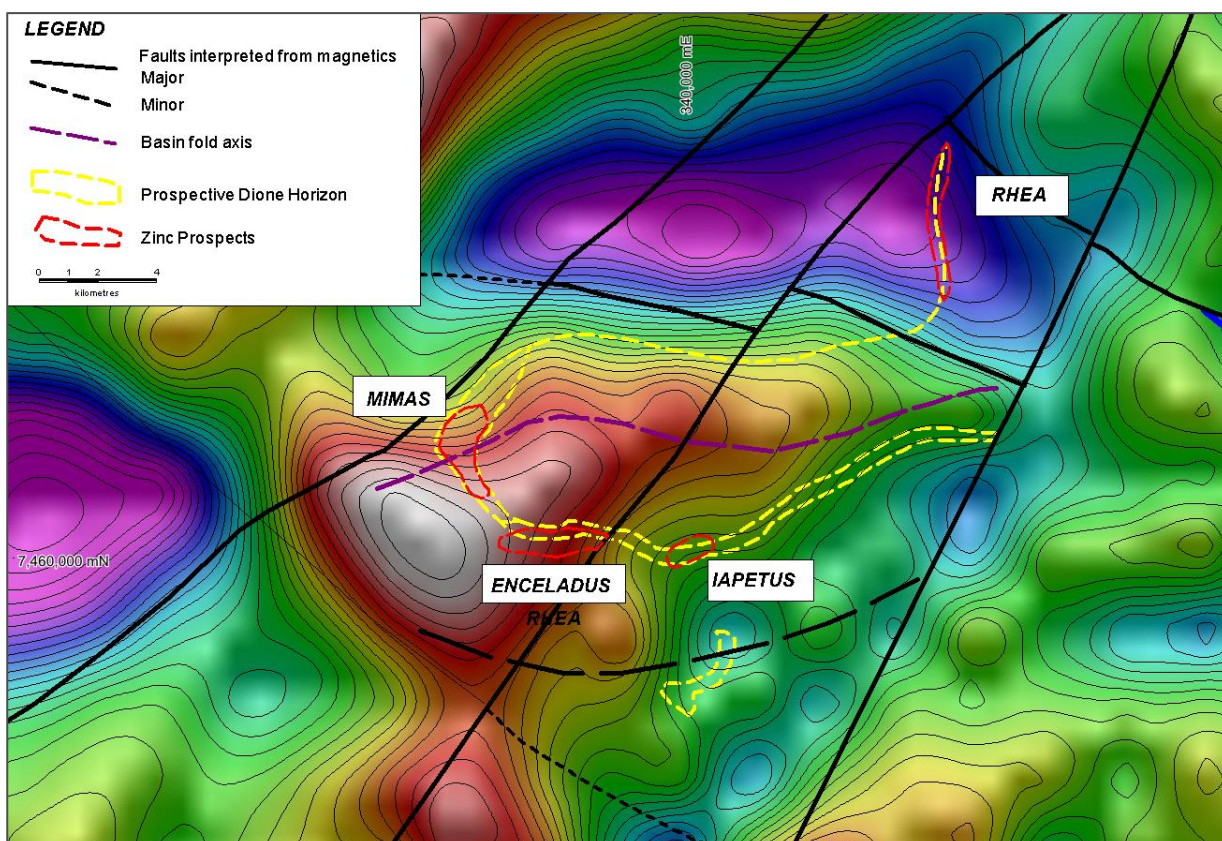


Figure 6. Residual gravity image of West Arunta Project showing zinc prospects.

## Next Steps

The Company is encouraged that the results to date support the geological model which points to a primary source of zinc mineralisation within the project area.

The dispersion plume that has formed the zinc-enriched ferricretes at Iapetus and Enceladus can be tracked to its source, likely to be only up to a few kilometres away. Ground water flow is controlled by the topographic gradient,



which can be modelled using modern geophysical techniques. Clay-rich, dispersion plume zones can be mapped by Airborne electromagnetics (AEM). Infilling the regional gravity survey over the anomaly west of Enceladus is also being considered.

Cassini has also received a co-funded drilling grant to the value of \$150,000 to be used to towards drilling the Rhea and Mimas Prospects.

The Mimas and Rhea Prospects both cover large areas along the prospective Dione horizon which strikes over 35km within the Project (Figure 7). Rhea is a geochemical anomaly striking over 5km with zinc in rock chips up to 0.4% Zn. The Mimas Prospect has no surface expression due to extensive sand cover but manifests as the strongest magnetic anomaly and interpreted to represent a sulphide accumulation in the synclinal position of the Dione Horizon; an ideal setting for thick packages of sedimentary zinc mineralisation. Mimas also lies alongside the gravity anomaly mentioned above.

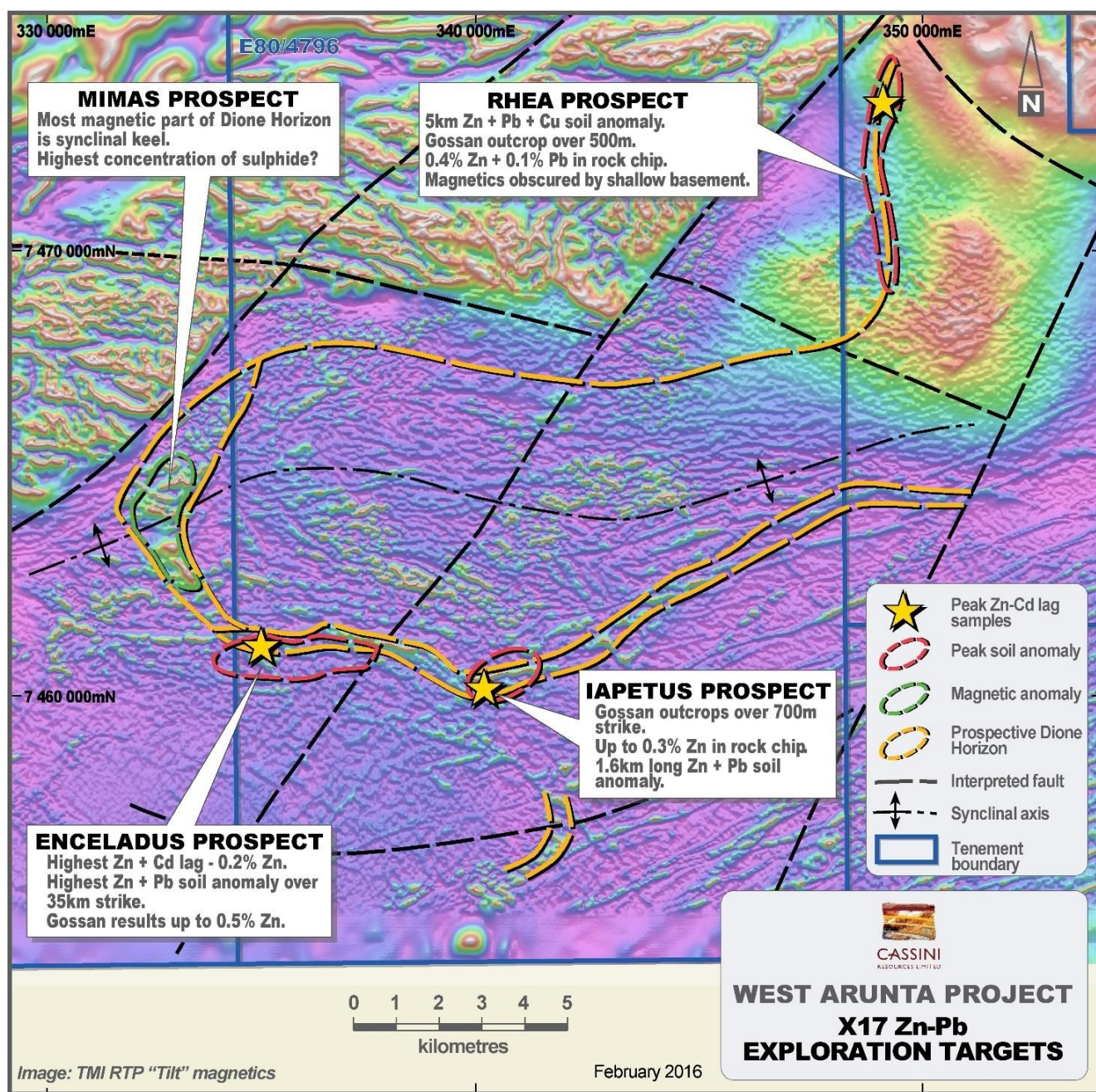


Figure 7. West Arunta Project Exploration Targets

Infill soil geochemistry has also been completed and samples are at the laboratory for analysis. There is enormous potential for the identification of further zinc targets due to the lack of previous exploration and shallow sand cover obscuring the bedrock geology.

## Nevada Gold Projects, USA

Subsequent to the end of the Quarter the Company provided notice that it was withdrawing from its remaining Nevada Projects. The Company is now positioned to concentrate funds on the emerging Mount Squires Gold Project.

No field activities were conducted during the Quarter on these Projects.

For further information, please contact:

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## About Cassini

Cassini Resources Limited (ASX: CZI) is an Australian resource company that successfully listed on the ASX in January 2012. In April 2014, Cassini acquired the significant Nebo and Babel nickel and copper sulphide deposits in the Musgrave region of WA. The Company's primary focus is now on the development of these deposits and progression to successful mineral production as a matter of priority.

Cassini aims to progress its development projects, to explore and add value to its exploration stage projects with the aim to increase shareholder value.

## 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 Mineral Resource Estimates as reported in the market announcement dated 25 of February 2015 (Nebo & Babel Deposits) and 7 December 2015 (Succoth Deposit) continue to apply and have not materially changed.

Additional information regarding exploration results can be found in ASX releases of 4 November 2015 and 23 November 2015.

**APPENDIX 1 – TENEMENT SUMMARY – 30 June 2016**

<b>1. MINING TENEMENTS HELD</b>				
<b>Tenement Reference</b>	<b>Location</b>	<b>Nature of interest</b>	<b>Interest at beginning of quarter</b>	<b>Interest at end of quarter</b>
<b>West Musgrave</b>				
E69/3163	WA	Granted	100%	100%
E69/3169	WA	Granted	100%	100%
E69/3137	WA	Granted	100%	100%
E69/3164	WA	Granted	100%	100%
E69/3165	WA	Granted	100%	100%
E69/3168	WA	Granted	100%	100%
E69/1505	WA	Granted	100%	100%
E69/1530	WA	Granted	100%	100%
E69/2201	WA	Granted	100%	100%
E69/2313	WA	Granted	100%	100%
M69/72	WA	Granted	100%	100%
M69/73	WA	Granted	100%	100%
M69/74	WA	Granted	100%	100%
M69/75	WA	Granted	100%	100%
P69/0064	WA	Granted	100%	100%
<b>Crossbow (X17)</b>				
E80/4749	WA	Granted	100%	100%
E80/4796	WA	Granted	100%	100%
E80/4813	WA	Granted	100%	100%
<b>Nevada</b>				
White Flats Project (12 claims)	Nevada	Leased	100% (leased)	100% (leased)
Cortez East (40 claims)	Nevada	Leased	100% (leased)	100% (leased)
Quinn Canyon (12 claims)	Nevada	Leased	100% (leased)	100% (leased)



2. MINING TENEMENTS ACQUIRED/DISPOSED				
Tenement Reference	Location	Nature of interest	Interest at beginning of quarter	Interest at end of quarter
<u>Acquired</u>				
<u>Disposed</u>				

3. BENEFICIAL PERCENTAGE INTERESTS HELD IN FARM-IN OR FARM-OUT AGREEMENTS				
Tenement Reference	Location	Nature of interest	Interest at beginning of quarter	Interest at end of quarter
Nil				

4. BENEFICIAL PERCENTAGE INTERESTS HELD IN FARM-IN OR FARM-OUT AGREEMENTS ACQUIRED OR DISPOSED				
Tenement Reference	Location	Nature of interest	Interest at beginning of quarter	Interest at end of quarter
<u>Acquired</u> Nil				
<u>Disposed</u> Nil				

## Appendix 5B

### Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/2013

Name of entity

Cassini Resources Limited

ABN

50 149 789 337

Quarter ended ("current quarter")

30 June 2016

### Consolidated statement of cash flows

Cash flows related to operating activities		Current quarter \$A'000	Year to date (12 months) \$A'000
1.1	Receipts from product sales and related debtors	-	-
1.2	Payments for (a) exploration & evaluation	(542)	(3,302)
	(b) development	-	-
	(c) production	-	-
	(d) administration*	(354)	(1,523)
1.3	Dividends received	-	-
1.4	Interest and other items of a similar nature received	4	35
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Other (R&D Grant, GST)	539	519
	<b>Net Operating Cash Flows</b>	<b>(353)</b>	<b>(4,271)</b>
<b>Cash flows related to investing activities</b>			
1.8	Payment for purchases of: (a) prospects	-	(75)
	(b) (i) equity investments	-	-
	(b) (ii) equity investments	-	-
	(c) other fixed assets	-	-
1.9	Proceeds from sale of: (a) prospects	-	-
	(b) equity investments	-	-
	(c) other fixed assets	-	-
1.10	Loans to other entities	-	-
1.11	Loans repaid by other entities	-	-
1.12	Other (stamp duty)	-	-
	<b>Net investing cash flows</b>	<b>-</b>	<b>(75)</b>
1.13	Total operating and investing cash flows (carried forward)	<b>(353)</b>	<b>(4,346)</b>

+ See chapter 19 for defined terms.

## Appendix 5B

### Mining exploration entity and oil and gas exploration entity quarterly report

1.13	Total operating and investing cash flows (brought forward)	(353)	(4,346)
	<b>Cash flows related to financing activities</b>		
1.14	Proceeds from issues of shares, options, etc.	-	-
1.15	Proceeds from sale of forfeited shares	-	-
1.16	Proceeds from borrowings	-	-
1.17	Repayment of borrowings	-	-
1.18	Dividends paid	-	-
1.19	Other (share issue costs)	-	-
	<b>Net financing cash flows</b>	-	-
	<b>Net increase (decrease) in cash held</b>	(353)	(4,346)
1.20	Cash at beginning of quarter/year to date	1,706	5,699
1.21	Exchange rate adjustments to item 1.20	-	-
1.22	<b>Cash at end of quarter</b>	1,353	1,353

### Payments to directors of the entity, associates of the directors, related entities of the entity and associates of the related entities

		Current quarter \$A'000
1.23	Aggregate amount of payments to the parties included in item 1.2	168
1.24	Aggregate amount of loans to the parties included in item 1.10	-
1.25	Explanation necessary for an understanding of the transactions Amount includes: - executive remuneration (including superannuation) - non-executive remuneration - geological and other consulting work provided to the Company - company secretarial and financial management fees to Grange Consulting, of which Mr Phil Warren is a director.	

### Non-cash financing and investing activities

- 2.1 Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows
- n/a
- 2.2 Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest
- n/a

+ See chapter 19 for defined terms.



## Mining exploration entity and oil and gas exploration entity quarterly report

**Financing facilities available***Add notes as necessary for an understanding of the position.*

	Amount available \$A'000	Amount used \$A'000
3.1 Loan facilities	-	-
3.2 Credit standby arrangements	-	-

**Estimated cash outflows for next quarter**

	\$A'000
4.1 Exploration and evaluation	400
4.2 Development	-
4.3 Production	-
4.4 Administration	350
<b>Total</b>	<b>750</b>

**Reconciliation of cash**

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows.	Current quarter \$A'000	Previous quarter \$A'000
5.1 Cash on hand and at bank	1,275	1,628
5.2 Deposits at call	-	-
5.3 Bank overdraft	-	-
5.4 Other (bank guarantee)	78	78
<b>Total: cash at end of quarter (item 1.22)</b>	<b>1,353</b>	<b>1,706</b>

+ See chapter 19 for defined terms.

### Changes in interests in mining tenements and petroleum tenements

	Tenement reference and location	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter
6.1	Interests in mining tenements and petroleum tenements relinquished, reduced or lapsed			
6.2	Interests in mining tenements and petroleum tenements acquired or increased			

### Issued and quoted securities at end of current quarter

Description includes rate of interest and any redemption or conversion rights together with prices and dates.

	Total number	Number quoted	Issue price per security (see note 3) (cents)	Amount paid up per security (see note 3) (cents)
7.1	<b>Preference securities</b> (description)			
7.2	Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs, redemptions			
7.3	<b>*Ordinary securities</b>	220,899,079	220,899,079	Fully Paid Ordinary
7.4	Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs			
7.5	<b>*Convertible debt securities</b> (description)			

+ See chapter 19 for defined terms.

## Mining exploration entity and oil and gas exploration entity quarterly report

7.6	Changes during quarter (a) Increases through issues (b) Decreases through securities matured, converted				
7.7	<b>Options</b> (description and conversion factor)	21,950,000		<b>Exercise Price</b> 100,000 - 11.2 cents  4,000,000 - \$0.20  1,000,000 - \$0.30  1,500,000 - \$0.241  15,350,000 - \$0.067	<b>Expiry Date</b> 19 November 2017  9 April 2018  9 April 2018  23 May 2019  14 December 2019
7.8	Issued during quarter				
7.9	Exercised during quarter				
7.10	Expired during quarter				
7.11	<b>Debentures</b> (totals only)				
7.12	<b>Unsecured notes</b> (totals only)				

## Compliance statement

- 1 This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Act or other standards acceptable to ASX (see note 5).
- 2 This statement does /does not\* (~~delete one~~) give a true and fair view of the matters disclosed.

Sign here: .....  
(Director/Company secretary)  
Steven Wood

29 July 2016  
Date: .....

Print name: .....

## Notes

+ See chapter 19 for defined terms.



- 1 The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.
- 2 The "Nature of interest" (items 6.1 and 6.2) includes options in respect of interests in mining tenements and petroleum tenements acquired, exercised or lapsed during the reporting period. If the entity is involved in a joint venture agreement and there are conditions precedent which will change its percentage interest in a mining tenement or petroleum tenement, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.
- 3 **Issued and quoted securities** The issue price and amount paid up is not required in items 7.1 and 7.3 for fully paid securities.
- 4 The definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report.
- 5 **Accounting Standards** ASX will accept, for example, the use of International Financial Reporting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.

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