

ACTIVITIES REPORT FOR THE QUARTER ENDED 31 DECEMBER 2018

QUARTER HIGHLIGHTS:

West Musgrave Project

- OZ Minerals satisfied 51% earn-in during quarter
- Project granted Lead Agency Status by Western Australian Department of Mines, Industry Regulation and Safety
- RC infill program completed, 2019 drill program brought forward
- Resource model update progressed
- Metallurgical test work focussing on variability program and flowsheet opportunities continued
- Process plant and infrastructure engineering progressed
- New exploration target defined at One Tree Hill

West Arunta Project (100% CZI)

- Interpretation of RC drilling results underway

Yarawindah Brook (CZI option to earn 80%)

- Permitting process underway prior to drill testing

Mount Squires Project (100% CZI)

- Evaluation of gold targets

Cassini Resources Limited (ASX:CZI) ("Cassini" or the "Company") is pleased to report on the significant milestones achieved at its development and exploration projects during the December 2018 quarter.

West Musgrave Project (CZI 49%, OZL 51% earning up to 70%)

Nebo-Babel Pre-Feasibility Study Progress

West Musgrave Joint Venture partners Cassini Resources Limited (Cassini or Cassini Resources) and OZ Minerals Limited (OZ Minerals) are working together on the West Musgrave nickel-copper project in Western Australia (the Project or West Musgrave Project). Activities are part of the Nebo-Babel Pre-Feasibility Study (PFS) where OZ Minerals has recently progressed through the Stage 1 Earn-in requirement of contributing \$22m to acquire a 51% interest in the Project.

The Partners continued to make significant progress on the PFS during the Quarter. The PFS is on-track for completion in the second quarter of 2019.



Lead Agency Status

The Project has been granted Lead Agency Status by the Western Australian Department of Mines, Industrial Regulation and Safety. This recognises the significance of the Project to the State of Western Australia and will greatly assist the approvals process across all government departments.

The Company would like to acknowledge the WA State Government for their assistance through the approvals process thus far.

Resource Infill Drilling

The PFS resource infill drill program was completed during the quarter and comprised approximately 40,000m of RC drilling. The results of the program should improve resource confidence and allow a maiden Ore Reserve estimate being published with the PFS results. A further 4,000m of RC was completed as part of an additional 23,000m brought forward from the planned Stage 2 Feasibility Study (FS) program.

Resource definition drilling is due to re-commence during the March Quarter.

A new resource model for Nebo-Babel is being progressed utilising the new infill assay and geological data.

Metallurgical Test Work, Process Plant and Infrastructure Engineering

Metallurgical test work continued, focused on a variability program as well as flowsheet improvement opportunities. Process plant and infrastructure engineering for the PFS progressed and market testing of power solutions was also undertaken.

The objectives of the metallurgy program are to improve concentrate recovery and grades across a representative range of nickel and copper ore-types, particularly focussing on lower grades close to the economic cut-off grade.

Metallurgical test work results received during the September Quarter (previously disclosed 23 October 2018) are highlighted in Table 1. Three master composites (MCX1, 2 & 3), representing different time periods of the current mine plan, were advanced from the optimised primary grind and roughing baseline conditions, reported in 2017, to produce separate nickel and copper concentrates. Of significance is the improved nickel and copper recoveries over the 2017 Scoping Study results, despite a significantly lower head grade.

Table 1. 2018 Master composite concentrate results compared to 2017 Scoping Study

Sample ID	Head Grade		Final Copper Concentrate		Final Grade Concentrate	
	% Ni	% Cu	% Cu Grade	% Cu Recovery	% Ni Grade	% Ni Recovery
2018 MCX1	0.53	0.57	26.4	82.5	10.8	68.9
2018 MCX2	0.37	0.43	26.4	87.4	11.0	66.9
2018 MCX3	0.38	0.42	26.4	83.8	10.8	66.3
Average			26.4	84.6	10.9	67.4
2017 Scoping Study	1.00	0.70	22.7	72.6	10.8	59.0
Variance			+3.7	+12.0	+0.1	+8.4

Small grade and recovery improvements have also been recognised in gold, platinum and palladium.

Note that there is no weathered material (pyrite–violarite zone) in the 2018 master composites, which typically produces poorer nickel recoveries and was included in one of the 2017 master composites. Pyrite–violarite mineralisation comprises less than 10% of the 2017 Mineral Resource estimate. Further

test work will develop a strategy of blending primary and weathered/pyrite-violarite material which may impact recoveries but ultimately optimise economic returns.



Figure 1. Final copper concentrate (left) and nickel concentrate (right) from Master Composites

Regional Exploration Update

Success at One Tree Hill

The One Tree Hill Prospect is an early stage exploration target, 15km south west of Nebo-Babel. The JV Partners have been steadily progressing this prospect as part of the regional exploration strategy. Whilst still in its infancy, the prospect hosts ore-grade mineralisation and the extent of anomalous Cu and PGE mineralisation indicates the potential for a very large mineralised system. In particular, the extensive and unusually (compared to the rest of the WMP) strong Pt and Pd anomalism observed throughout the host sequence is considered to possibly represent the halo to a much larger ore-system.

Two diamond drill holes were completed during the quarter targeting moving loop electromagnetic (MLEM) anomalies and extensions to mineralisation encountered in CZD0017 (ASX announcement 5 June 2018).

Drill hole CZD0083A, sited approximately 60m north of CZD0017, returned 24.65m @ 0.69% Cu & 0.44g/t PGE from 337m with a higher grade core of 9m @ 1.15% Cu & 0.64g/t PGE. The intersection also included a massive sulphide zone of 2.6m @ 0.96% Cu, 0.48% Ni, 0.10% Co and 1.0g/t PGE (Figure 2). Full details are in Table 2.

The results are generally consistent with earlier results from CZD0017 which intersected a massive sulphide zone returning 3.2m @ 2.16% Cu, 0.58% Ni, 0.10% Co & 1.0g/t PGE within a broader disseminated zone of 34m @ 1.05% Cu & 0.5 g/t PGE from 332m.

Mineralisation appears continuous between CZD0017 and CZD0083A and remains open to the north.

A second diamond drill hole, CZD0087A, sited approximately 100m south of CZD0017, missed the target intrusion because of an apparent fault offset. This fault strikes east-west and has down-thrown the geology on the southern side. The hole did intersect a 40m zone of PGE anomalism towards the bottom of hole, possibly representing the halo of magmatic mineralisation.

Importantly, a down hole electromagnetic survey (DHEM) in CZD0087A has identified a large off-hole conductor, 240m long by 140m wide, with a modelled conductance of 4,400S, which is consistent with copper sulphide conductivity. The conductor is less than 100m to the east of CZD0087A. Given that the new geological interpretation suggests approximately 200m of displacement along the fault, the

conductor may represent the extension of mineralisation observed in CZD0017, but on a much larger scale.

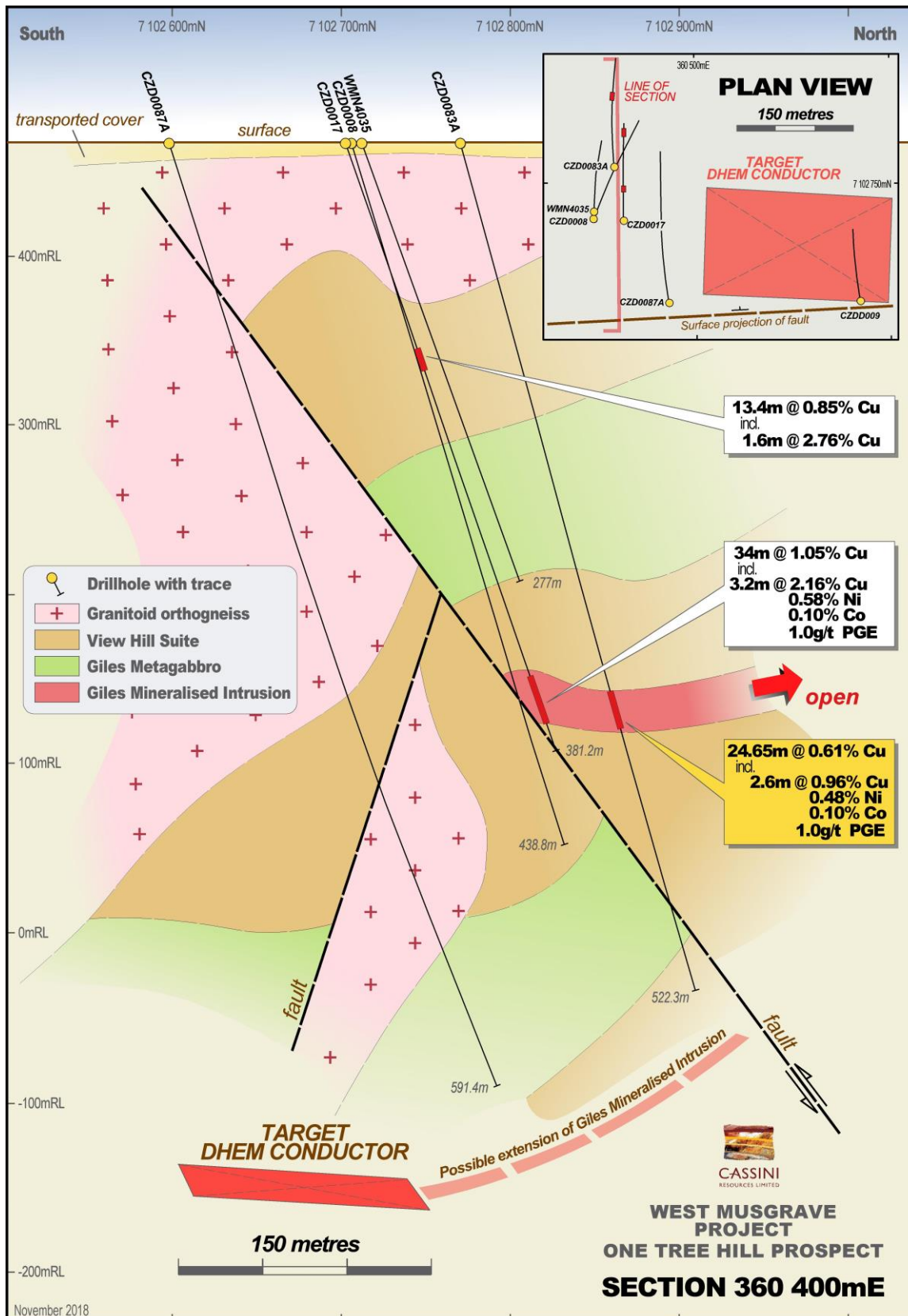


Figure 2. Composite section of drilling at One Tree Hill.

The new DHEM conductor is a priority target for drill testing when exploration operations resume in 2019. A secondary target is to continue exploring north of CZD0083A where mineralisation remains open.

Table 2. 2018 One Tree Hill Prospect Significant Drill Intercepts.

HOLE ID	East	North	RL	Dip	Azi	EOH (m)	From (m)	Width (m)	INTERSECTIONS			
									Cu %	Ni %	Co %	PGE g/t
CZD0083A	360397	7102770	469	-75	356	522.3	337.0	24.65	0.69	0.10	0.02	0.44
						Incl	339.0	9.0	1.15	0.09	0.02	0.64
						And	351.3	2.6	0.96	0.48	0.10	1.00
						And	360.0	1.65	1.10	0.03	<0.01	0.48
CZD0087A	360465	7102598	468	-72	354	591.4	No Significant Intersection					

Yappsu

The 2018 drilling program had early success at the Yappsu Prospect defining broad zones of nickel and copper mineralisation up to 80m thick intersections with narrower zones of higher grade massive sulphides. The thickness, grades and continuity of massive sulphide mineralisation indicates the overall potential for the system to host additional significant accumulations of massive sulphides.

Following on this early success the Company embarked on a bold program of step out drilling to test interpreted up- and down-plunge positions of mineralisation. One RC hole for 226m and 2 diamond holes for 1,395m were completed to test the extensions of the system. No significant mineralisation was encountered in these holes. The geological interpretation is not yet complete, but early indications are that the host intrusion does extend at depth, albeit at a slightly different geometry than first considered.

Revision of the geological model and further drill planning is ongoing.



Figure 3. Drilling operations at Babel.

West Arunta Project (100% CZI)

The West Arunta Project is a highly prospective base and precious metals target in an underexplored region near Lake McKay in Western Australia. Cassini is targeting large-scale, sedimentary Zn-Pb mineralisation, similar to those deposits found in the Mt Isa region in Queensland.

The Company completed an RC drill program comprising 10 holes for 1,878m in the September quarter, however a backlog at the laboratory in Perth meant initial results only became available early in the New Year. Evaluation and interpretation of results and geological data is ongoing and the Company will provide an update when complete.

Yarawindah Brook Ni-Cu-Co Project (CZI option to acquire 80%)

Cassini has entered an option agreement to earn into the Yarawindah Brook Project through private company Souwest Metals Pty Ltd (Souwest), a company associated with Kalgoorlie prospector Mr Scott Wilson.

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 @ 1.30% Ni, 0.22% 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.

The Company is currently seeking an access agreement with the local landholders and environmental approvals in preparation for drill testing two electromagnetic anomalies.

Mount Squires Gold Project (100% CZI)

The Mount Squires Project lies adjacent to the West Musgrave Project Joint Venture with OZ Minerals. Gold prospectivity was first identified at Mount Squires by Western Mining Corporation (WMC) during geochemical surveying in the late 1990's. The Company'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.

Cassini has been developing the Project over the past 2 years through the consolidation of tenements with a number of prospective gold targets, which includes a range of conceptual to advanced prospects.

Following completion of drilling at the West Arunta Project, attention has now turned to accelerating exploration at Mount Squires. A number of gold prospects are already defined although further work may enhance some of these targets prior to drill testing. Targeting work is expected to continue through the March Quarter in preparation for drill testing during the upcoming field season.

Corporate

The Company successfully held its Annual General Meeting on 29 November, and thanks all shareholders and stakeholders who attended or reviewed the presentation made available online.

For further information please contact

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About Cassini

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 information in this report which relates to the Nebo-Babel Mineral Resource estimation and classification has been prepared by Mr Andrew Weeks who is a full-time employee of Golder Associates Pty Ltd and a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Weeks has sufficient relevant experience to the style of mineralisation and type of deposit under consideration and to the activity for which he is undertaking to qualify as a Competent Person as defined in the JORC Code, 2012 Edition. Both Mr Miles and Mr Weeks consent 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 14 November 2017 (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 5 June 2018, 23 October 2018 and 28 November 2018.

APPENDIX 1 – TENEMENT SUMMARY – 31 December 2018

1. MINING TENEMENTS HELD				
Tenement Reference	Location	Nature of interest	Interest at beginning of quarter	Interest at end of quarter
West Musgrave*				
E69/3163	WA	Granted	100%	49%
E69/3169	WA	Granted	100%	49%
E69/3164	WA	Granted	100%	49%
E69/3165	WA	Granted	100%	49%
E69/3168	WA	Granted	100%	49%
E69/1505	WA	Granted	100%	49%
E69/1530	WA	Granted	100%	49%
E69/2201	WA	Granted	100%	49%
E69/2313	WA	Granted	100%	49%
M69/72	WA	Granted	100%	49%
M69/73	WA	Granted	100%	49%
M69/74	WA	Granted	100%	49%
M69/75	WA	Granted	100%	49%
E69/3412	WA	Granted	100%	49%
L69/0025	WA	Granted	100%	49%
Mt Squires				
E69/3424	WA	Granted	100%	100%
E69/3425	WA	Granted	100%	100%
Crossbow (West Arunta/X17)				
E80/4749	WA	Granted	100%	100%
E80/4796	WA	Granted	100%	100%
E80/4813	WA	Granted	100%	100%
Yarawindah**				
E70/4883	WA	Granted	0%	0%
E70/5116	WA	Granted	0%	0%

*Note West Musgrave Project (WMP) tenements subject to agreement whereby OZ Minerals has the right to farm-in to Cassini's wholly owned WMP via a three stage process. Refer ASX announcement 13 October 2016. OZ Minerals earned into 51% during the December 2018 quarter.

** Cassini has an option to earn an 80% equity interest in the Yarawindah Project through payment of an Option Fee of \$50,000 (paid) and committing to spend a minimum of \$250,000 on the Project prior to 30 March 2019. If Cassini decide to progress and acquire 80% of the Yarawindah Project (via acquiring shares in Souwest Metals Pty Ltd), a further payment of \$300,000 in cash or Cassini shares (at Cassini's election) will be made. Souwest will be free-carried until a decision to mine is made.

2. MINING TENEMENTS ACQUIRED/DISPOSED				
Tenement Reference	Location	Nature of interest	Interest at beginning of quarter	Interest at end of quarter
<u>Acquired</u>				
Nil				
<u>Disposed</u>				
- Reduced % ownership due to earn-in				
E69/3163	WA	Granted	100%	49%
E69/3169	WA	Granted	100%	49%
E69/3164	WA	Granted	100%	49%
E69/3165	WA	Granted	100%	49%
E69/3168	WA	Granted	100%	49%
E69/1505	WA	Granted	100%	49%
E69/1530	WA	Granted	100%	49%
E69/2201	WA	Granted	100%	49%
E69/2313	WA	Granted	100%	49%
M69/72	WA	Granted	100%	49%
M69/73	WA	Granted	100%	49%
M69/74	WA	Granted	100%	49%
M69/75	WA	Granted	100%	49%
E69/3412	WA	Granted	100%	49%
L69/0025	WA	Granted	100%	49%

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, 01/05/13, 01/09/16

Name of entity

Cassini Resources Limited

ABN

50 149 789 337

Quarter ended ("current quarter")

31 December 2018

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers		
1.2 Payments for		
(a) exploration & evaluation	(4,185)	(8,579)
(b) development	-	-
(c) production	-	-
(d) staff costs	(259)	(468)
(e) administration and corporate costs	(260)	(570)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	1	3
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Research and development refunds	-	-
1.8 Other (joint venture receipts & net GST)	4,751	8,613
1.9 Net cash from / (used in) operating activities	48	(1,001)

2. Cash flows from investing activities		
2.1 Payments to acquire:		
(a) property, plant and equipment	-	-
(b) tenements (see item 10)	-	-
(c) investments	-	-
(d) other non-current assets	-	-

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) property, plant and equipment	-	-
	(b) tenements (see item 10)	-	-
	(c) investments	-	-
	(d) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	Net cash from / (used in) investing activities	-	-

3.	Cash flows from financing activities		
3.1	Proceeds from issues of shares	-	4,200
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	-	13
3.4	Transaction costs related to issues of shares, convertible notes or options	-	(252)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	Net cash from / (used in) financing activities	-	3,961

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	4,271	1,359
4.2	Net cash from / (used in) operating activities (item 1.9 above)	48	(1,001)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	-
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	3,961
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	4,319	4,319

5. Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1 Bank balances	1,535	1,319
5.2 Call deposits	2,081	2,081
5.3 Bank overdrafts	-	-
5.4 Other (JV funds held)	703	871
5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)	4,319	4,271

6. Payments to directors of the entity and their associates

- 6.1 Aggregate amount of payments to these parties included in item 1.2
- 6.2 Aggregate amount of cash flow from loans to these parties included in item 2.3
- 6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2

**Current quarter
\$A'000**

210

-

Executive and non-executive Director fees

7. Payments to related entities of the entity and their associates

- 7.1 Aggregate amount of payments to these parties included in item 1.2
- 7.2 Aggregate amount of cash flow from loans to these parties included in item 2.3
- 7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2

**Current quarter
\$A'000**

38

-

Company secretarial & financial management consulting services to a company associated with Mr Warren.

Geological consulting services to a company associated with Dr Hronsky.

Mining exploration entity and oil and gas exploration entity quarterly report

8. Financing facilities available <i>Add notes as necessary for an understanding of the position</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
8.1 Loan facilities	-	-
8.2 Credit standby arrangements	-	-
8.3 Other (please specify)	-	-
8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.		

N/A

9. Estimated cash outflows for next quarter	\$A'000
9.1 Exploration and evaluation (net of JV funding)	(150)
9.2 Development	-
9.3 Production	-
9.4 Staff costs	(260)
9.5 Administration and corporate costs	(250)
9.6 Other	-
9.7 Total estimated cash outflows	(660)

10.	Changes in tenements (items 2.1(b) and 2.2(b) above)	Tenement reference and location	Nature of interest	Interest at beginning of quarter	Interest at end of quarter
10.1	Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced	West Musgrave, WA E69/3163 E69/3169 E69/3164 E69/3165 E69/3168 E69/1505 E69/1530 E69/2201 E69/2313 M69/72 M69/73 M69/74 M69/75 E69/3412 L69/0025	Granted. Reduced ownership across all tenements within West Musgrave Project due to earn in by OZ Minerals.	100%	49%
10.2	Interests in mining tenements and petroleum tenements acquired or increased	-	-	-	-

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

[lodged electronically without signature]

31 January 2019

Sign here:
(Director/Company secretary)

Date:

Steven Wood

Print name:

Notes

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 that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, 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. If this quarterly report has been

prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.

3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.