

## QUARTERLY REPORT

SEPTEMBER 2016

31 OCTOBER 2016

### BROKEN HILL PROSPECTING LTD (ASX: BPL)

An Australian Exploration company focussed on the **discovery & development** of **strategic technology mineral resources**

#### Commodity Exposure

Cobalt  
Heavy Mineral Sands

#### Directors & Management

Creagh O'Connor	Non-Executive Chairman
Geoff Hill	Non-Executive Director
Matt Hill	Non-Executive Director
Denis Geldard	Non-Executive Director
Trangie Johnston	Chief Executive Officer
Ian Morgan	Company Secretary

#### Capital Structure

Ordinary Shares on Issue (31/10/16)	145M
Options: Listed	53M
Market Cap (undiluted at 8.5cps)	\$12M



### Broken Hill Prospecting Ltd

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## HIGHLIGHTS

### Projects

#### Thackaringa Cobalt | Broken Hill, NSW

- + Final regulatory approvals expected very soon for 1000m diamond drill metallurgical test program
- + Planned drilling program hampered by above average wet weather
- + Infill and expansion drilling to upgrade resource to JORC 2012 standard
- + Cobalt price increase reflects ethical supply concerns as Lithium-ion battery technology accelerates
- + Market demand forecasts show average annual cobalt consumption growth of 5.1% to 2020

#### Heavy Mineral Sands | Murray Basin, NSW

- + Total resource inventory of **29.2Mt at 5.1% THM<sup>1</sup>** (Copi North & Magic Deposits)
- + Copi North Pre-feasibility study commenced with positive early results from bulk metallurgical testing
- + Relentless Resources (RRL) provide final \$0.5m payment to earn 50% interest in HMS Projects (Copi North, Magic & Sunshine)

### Corporate

- + Ian Morgan appointed as Company Secretary
- + Share Purchase Plan raises A\$746,086.25 with high demand for exposure to cobalt assets
- + Cobalt Blue Holdings Ltd incorporated on 26 August 2016 to drive future development of cobalt assets

<sup>1</sup> See note 4, page 5.

## THACKARINGA COBALT – PYRITE PROJECT, BROKEN HILL, NSW

Broken Hill Prospecting Limited's (BPL's) wholly-owned Thackaringa Cobalt Project comprises a very large mineralised system of potentially world scale. To date, BPL have defined a total Inferred Mineral Resource of **35.7Mt at 841ppm cobalt<sup>2</sup>** and a conceptual exploration target of **37-59Mt at 600-900ppm cobalt\***.

*\*The global Thackaringa exploration target is as released on 27 July 2012 under JORC 2004. The potential quantity and grade of these targets is conceptual in nature. There has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in determination of a Mineral Resource.*

Located proximal to existing rail and road infrastructure and just 25km southwest of Broken Hill, the Thackaringa deposits remain under-explored. There is more than 10km of mineralised outcrop, of which approximately 75% remains untested. Significant opportunity exists to upgrade and expand the near surface resource base.

Planned field activities have been delayed due to above average wet weather during the past few months. Regulatory approvals are expected any day, with drill site preparation completed and drillers standing by ready to commence.

The first phase of drilling comprises 1000m of diamond drilling spread across the three deposits (Pyrite Hill, Big Hill and Railway) (Figure 1). Representative samples across the ore body will support metallurgical test work programs.

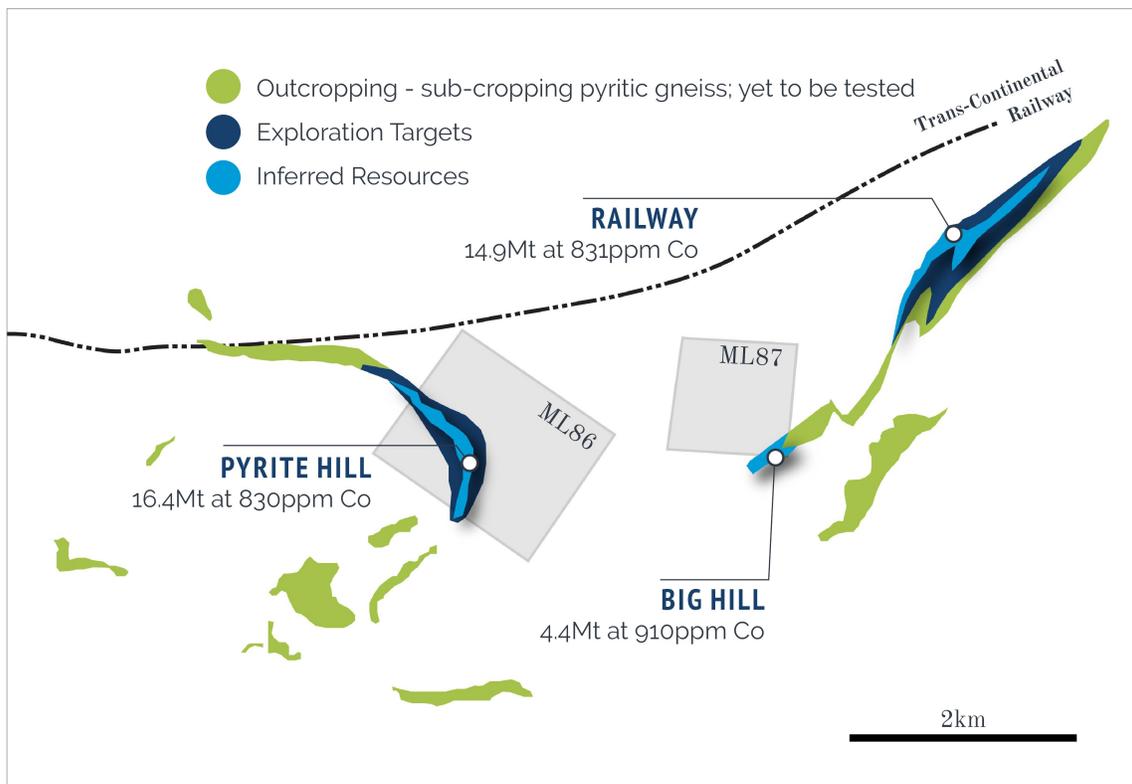
A new phase of geological mapping will assist in the development of a comprehensive geological model to support planning for a Reverse Circulation (RC) drilling program to upgrade and expand known resources, including untested outcropping mineralisation along strike. The program will commence upon completion of the diamond program and support resource upgrade to JORC 2012 standards.

A recent report by Palisade Research, a metals investor, concludes that annual global cobalt consumption in 2015 was 96,500 tonnes and average growth of 5.1% is expected each year to 2020. Cobalt for use in batteries will expand by 7.5% over the same period. By 2020, it is

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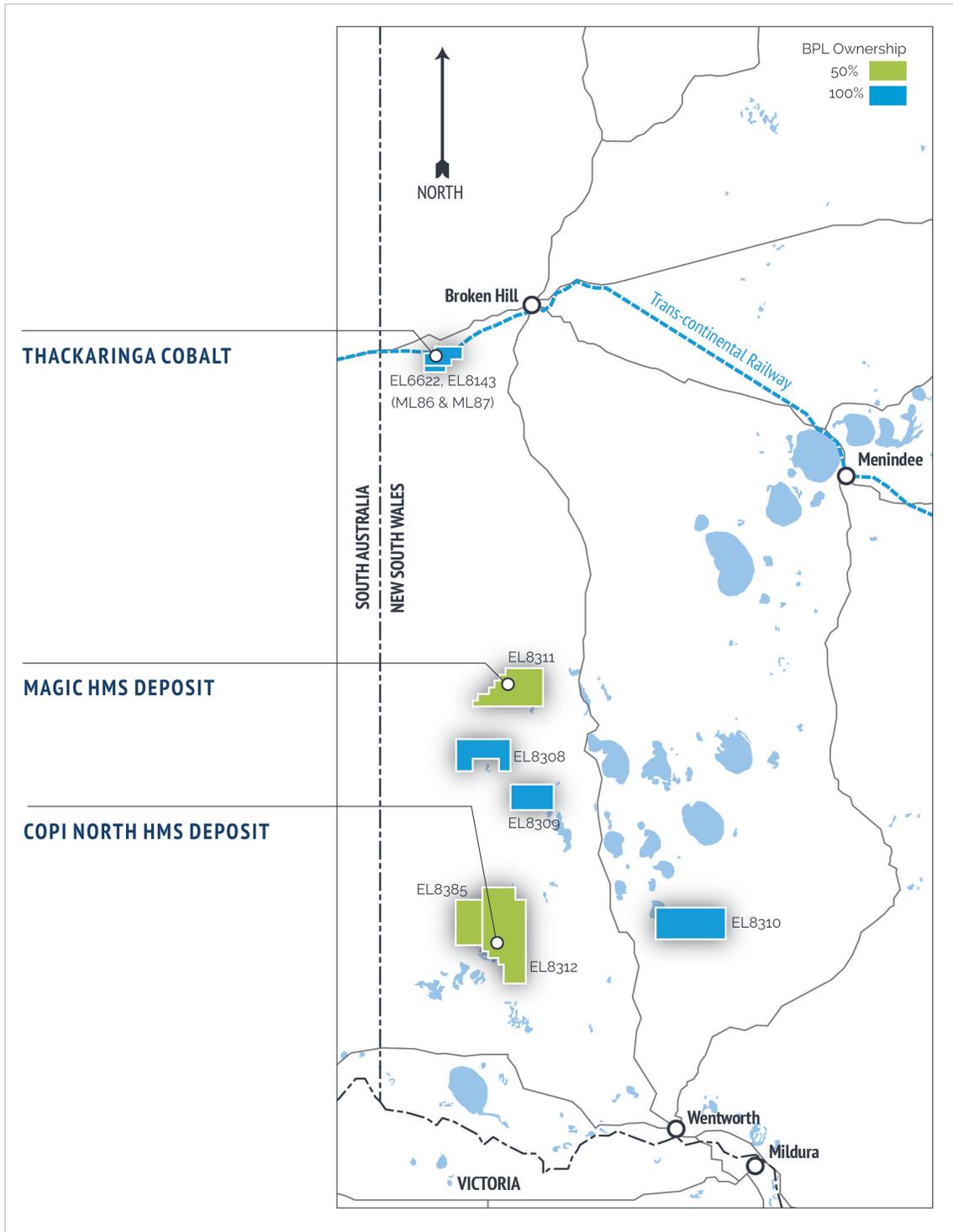
<sup>2</sup> The global Inferred Resource estimate is as released under JORC 2004, comprising the following: Railway Deposit as released 27 July 2012 under JORC 2004, Pyrite Hill Deposit as released 14 November 2011 under JORC 2004 and the Big Hill Deposit as released 12 November 2010 under JORC 2004. The Railway, Pyrite Hill and Big Hill Mineral Resources were first disclosed under JORC 2004 and have not been updated to JORC 2012 requirements. The company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements and that all material assumptions and technical parameters underpinning these mineral resource estimates in the relevant market announcement continue to apply and have not materially changed.

expected that total consumption will reach 124,000 tonnes, half of which will be used in batteries and 15% for superalloys. The report also notes that 98% of global cobalt production comes as a by-product of copper and nickel mining. These mines are owned by only a handful of producers, mostly in Africa. Glencore recently suspended its Katanga mine, reducing by 3% the world's cobalt supply. If the same company was also to shutter its Mutanda mine, then there would be a much larger 13% reduction in cobalt supply.



▪ Figure 1. Thackaringa Cobalt Project | Schematic plan illustrating surface expression of cobaltiferous deposits and associated exploration targets<sup>3</sup>.

<sup>3</sup> The Inferred Resource estimates are as released under JORC 2004, comprising the following: Railway Deposit as released 27 July 2012 under JORC 2004, Pyrite Hill Deposit as released 14 November 2011 under JORC 2004 and the Big Hill Deposit as released 12 November 2010 under JORC 2004. The Railway, Pyrite Hill and Big Hill Mineral Resources were first disclosed under JORC 2004 and have not been updated to JORC 2012 requirements. The company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements and that all material assumptions and technical parameters underpinning these mineral resource estimates in the relevant market announcement continue to apply and have not materially changed.



■ Figure 2. BPL Project locations.

## HEAVY MINERAL SANDS PROJECTS, MURRAY BASIN, NSW

BPL has a substantial portfolio of Heavy Mineral Sands Projects in the Murray Basin, NSW (Figure 2). Recent drilling at three of these tenements was funded by a joint venture with Relentless Resources Limited (RRL), and successfully defined a total resource inventory of **29.2Mt at 5.1% THM<sup>4</sup>** (Copi North & Magic Deposits). A substantial resource upgrade for the Copi North and Magic Deposits was released on **27 May 2016**, and **10 September 2015** respectively. Both resources are open along strike in both directions.

RRL has contributed a total of \$2M to earn a 50% interest in these three Heavy Mineral Sands tenements. The final \$0.5M earn in payment was received on 1 July 2016.

BPL is continuing to assess the exploration potential on its currently 100% held tenements outside of the Joint Venture, being EL8308 (Nanya North), EL8309 (Springwood) and EL8310 (Milkengay) (Figure 2). Each tenement offers excellent opportunity for the delineation of high-grade, near surface heavy mineral sand deposits based on historical exploration data and regional analysis.

BPL is targeting the establishment of a sustainable pipeline of high grade, low tonnage deposits amenable to processing through mobile plant equipment that could be deployed across the broader project area.

### Copi North Pre-feasibility Study

Initial metallurgical test work results conducted on the Copi North bulk sample are very encouraging with clean separation of heavy minerals with slimes and oversize less than 2%. Ongoing testing will provide the optimised spiral configuration and feed rates. The following photos demonstrate heavy mineral separation.

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<sup>4</sup> The global heavy mineral sands resource estimate is inclusive of Indicated & Inferred resource categories and comprises the Copi North Mineral Resource estimate (as released 27 May 2016 under JORC 2012) and the Magic Mineral Resource estimate (as released 10 September 2015 under JORC 2012). The company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements and that all material assumptions and technical parameters underpinning these mineral resource estimates in the relevant market announcements continue to apply and have not materially changed.



## **CORPORATE**

### **Cobalt Blue Holdings Ltd**

The Company incorporated a 100%-owned subsidiary named Cobalt Blue Holdings Ltd ('Cobalt Blue') on 26 August 2016, to further plans to develop the Thackaringa Cobalt Project. Following a strategic review of development options, it is proposed that Cobalt Blue will lead the future development of these assets.

### **Appointment of Company Secretary**

Ian Morgan was appointed as Company Secretary on the 13 September 2016. Ian is a qualified Company Secretary and Chartered Accountant with more than 30 years' experience in managing businesses in Australia and overseas. He has extensive company secretarial experience, including for other listed mining companies.

BPL thanks Mr Donald de Boer for his services to the Company, who resigned as Company Secretary on the 13 September 2016.

## Share Purchase Plan (SPP)

BPL raised A\$ 746,086.25 in connection with the Share Purchase Plan (SPP) announced on 24 June 2016. A total of 107 applications from eligible shareholders were received, corresponding to 9,210,907 new shares being allocated on the 19 August 2016.

## Cash Position

The Company's consolidated statement of cash flows is listed in Appendix 5B. At the end of the quarter the consolidated entity, following the Share Purchase Plan (SPP) undertaken in August had \$2,074,000 in cash.

The final JV payment of \$0.5m was received on 1 July 2016.



Anthony (Trangie) Johnston

**Chief Executive Officer**

## FOR FURTHER INFORMATION, PLEASE CONTACT

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## COMPETENT PERSON STATEMENT

The information in this report that relates to Mineral Resources and Exploration Targets is based on information compiled by Mr Anthony Johnston, BSc (Hons), who is a Member of the Australian Institute of Mining and Metallurgy and is a full time employee of the Company. Mr Johnston has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 & 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.' Mr Johnston consents to the inclusion in the announcement of the matters based on his information in the form and context that the information appears.

## ABOUT BROKEN HILL PROSPECTING LIMITED

Broken Hill Prospecting Limited ('BPL') is an Australian Exploration company focussed on the discovery and development of strategic mineral resources across two primary projects the [Thackaringa Cobalt Project](#) and their regional [Heavy Mineral Sands Project](#).

### Cobalt Project

The Thackaringa Cobalt Project is strategically located 25km south-west of Broken Hill, New South Wales, adjacent to the main transcontinental railway line. Since 2011, BPL's exploration activities have more than doubled the resource to **35.7Mt at 841ppm cobalt**<sup>5</sup>. Mineralised outcrop extends for over 10km, with less than a quarter of this trend having been drill tested. The large, near-surface deposits at Thackaringa make the project suitable for large-scale, open cut mining methods.

Cobalt is a necessary metal for the production of the latest generation, high density Lithium-ion batteries. Due to its high run-time properties, the use of cobalt has risen dramatically as portable Li-ion battery usage accelerates and electric vehicles become a reality.

The cobalt deposit at Thackaringa is contained in a pyritic rock, which adds the possibility for the co-production of sulphuric acid from any future mining activities. Sulphuric acid supply in Australia for mining and agricultural purposes is limited, and significant quantities are imported.

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<sup>5</sup> See note 2, page 2.

## Heavy Mineral Sands Project

BPL has built a substantial portfolio of Heavy Mineral Sands (HMS; titanium & zircon) Projects within in the Murray Basin, NSW. Recent drilling activities have been funded by a joint venture with Relentless Resources Limited (RRL), and have successfully defined a total resource inventory of **29.2Mt at 5.1% THM<sup>6</sup>** (Copi North & Magic Deposits). The Copi North project is currently undergoing a Pre-feasibility Study due for completion early 2017.

BPL is targeting the establishment of a sustainable pipeline of high grade, low tonnage deposits amendable to processing through mobile plant equipment that could be deployed across the broader project area.

## TENEMENT HOLDING

The interests in tenements held by Broken Hill Prospecting Limited (and fully owned subsidiaries) at the end of the quarter and the related percentage of ownership:

### Thackaringa Cobalt Project

EL 6622	100% Broken Hill Prospecting Ltd
EL 8143	100% Broken Hill Prospecting Ltd
ML 86	100% Broken Hill Prospecting Ltd
ML 87	100% Broken Hill Prospecting Ltd

### Murray Basin Heavy Mineral Sands (HMS) Project

EL 8308	100% Broken Hill Minerals Pty Ltd
EL 8309	100% Broken Hill Minerals Pty Ltd
EL 8310	100% Broken Hill Minerals Pty Ltd

### HMS Joint Venture

EL 8311	50% Broken Hill Minerals Pty Ltd   50% Relentless Resources Ltd
EL 8312	50% Broken Hill Minerals Pty Ltd   50% Relentless Resources Ltd
EL 8385	50% Broken Hill Minerals Pty Ltd   50% Relentless Resources Ltd

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<sup>6</sup> See note 4, page 5.

## 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**

Broken Hill Prospecting Limited

**ABN**

83 003 453 503

**Quarter ended ("current quarter")**

30 September 2016

<b>Consolidated statement of cash flows</b>	<b>Current quarter \$A'000</b>	<b>Year to date (3 months) \$A'000</b>
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation	(89)	(89)
(b) development	-	-
(c) production	-	-
(d) staff costs	(23)	(23)
(e) administration and corporate costs	(202)	(202)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	7	7
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Research and development refunds	-	-
1.8 Other (provide details if material)	8	8
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(299)</b>	<b>(299)</b>

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

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (3 months) \$A'000</b>
2.2	Proceeds from the disposal of:		
	(a) property, plant and equipment	-	-
	(b) tenements (see item 10)	244	244
	(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)	-	-
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>244</b>	<b>244</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of shares	746	746
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of shares, convertible notes or options	(44)	(44)
3.5	Proceeds from borrowings	35	35
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)	-	-
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>737</b>	<b>737</b>

<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	1,392	1,392
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(299)	(299)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	244	244
4.4	Net cash from / (used in) financing activities (item 3.10 above)	737	737
4.5	Effect of movement in exchange rates on cash held	-	-
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>2,074</b>	<b>2,074</b>

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

<b>5. Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	<b>Current quarter \$A'000</b>	<b>Previous quarter \$A'000</b>
5.1 Bank balances	2,074	2,074
5.2 Call deposits	-	-
5.3 Bank overdrafts	-	-
5.4 Other (provide details)	-	-
<b>5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>2,074</b>	<b>2,074</b>

**6. Payments to directors of the entity and their associates**

<b>Current quarter \$A'000</b>
------------------------------------

6.1 Aggregate amount of payments to these parties included in item 1.2

22

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

Directors' fees
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**7. Payments to related entities of the entity and their associates**

<b>Current quarter \$A'000</b>
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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

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

8. <b>Financing facilities available</b> <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.		

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9. <b>Estimated cash outflows for next quarter</b>	\$A'000
9.1 Exploration and evaluation	250
9.2 Development	-
9.3 Production	-
9.4 Staff costs	23
9.5 Administration and corporate costs	180
9.6 Other (provide details if material)	-
<b>9.7 Total estimated cash outflows</b>	<b>426</b>

10. <b>Changes in tenements (items 2.1(b) and 2.2(b) above)</b>	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	EL8311*	Exploration Licence	60%	50%
	EL8312*	Exploration Licence	60%	50%
	EL8385*	Exploration Licence	60%	50%
10.2 Interests in mining tenements and petroleum tenements acquired or increased				

\* An additional 10% of interest in tenements was granted to Relentless Resources Limited in accordance with Joint Venture Agreement signed on the 22 January 2015.

**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.



Sign here: .....

(Director/Company secretary)

Ian Morgan

31 October 2016

Date: .....

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.