



## Quarterly Report - Activities

for the quarter ended 31 December 2018

### Highlights

- **Visible gold identified in alluvial bulk sampling concentrates at Aucu gold project**
- **New copper and gold zones identified 2-4 km East of the Aucu gold deposit**
- **Coronation Dam drilling results deliver wide intervals of cobalt and nickel mineralisation**
- **Corporate restructure and rights issue completed**

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### Summary

#### *Kyrgyz Republic Aucu Gold Project (90% owned)*

During the quarter, an extensive geochemical survey identified that the core and alteration halo of the Chanach copper porphyry system extended over an 8 kilometre long zone. The survey also identified anomalous gold, copper, arsenic and base metal results to the north and east of the Aucu gold deposit. Follow up mapping and sampling identified new gold and copper zones 2-4 kilometres East of the Aucu gold deposit.

The Company undertook a bulk sampling program along a 450 metre section of the Chanach river alluvial terraces 1 kilometre downstream from the Aucu Gold deposit to assess the placer gold potential of the 16km long river system. Visible gold was detected in 62 samples out of the 65 samples collected. The samples have been submitted to the laboratory for analysis with results expected in late February.

#### *Australian Cobalt-Nickel Projects (100% owned)*

During the December quarter the final four metres composite assay results were received from a 5,000 metre program conducted at the Coronation Dam cobalt and nickel project. The assays highlighted further shallow and wide intervals of cobalt and nickel mineralisation confirming the project's prospectivity and potential to host an economic resource. A further 850 one metre assays have been collected to better define the mineralised zones. Once these results are announced the company will undertake initial resource estimations at Coronation Dam and the Ghan Well nickel- cobalt projects.

#### *Corporate*

During the quarter the Company completed a partially underwritten 2:1 renounceable rights issue, subsequently repaid a \$600,000 loan and is now debt free.

The Company appointed Mr Nicholas Ong and Mr Daniel Smith as non-executive directors. Nicholas Ong has also been appointed as Company Secretary. The Company received resignations from Chairman Jack Gardner, Executive Director, Michael Langoulant, Non-executive director Rodd Boland and Company Secretary Ian Hobson.

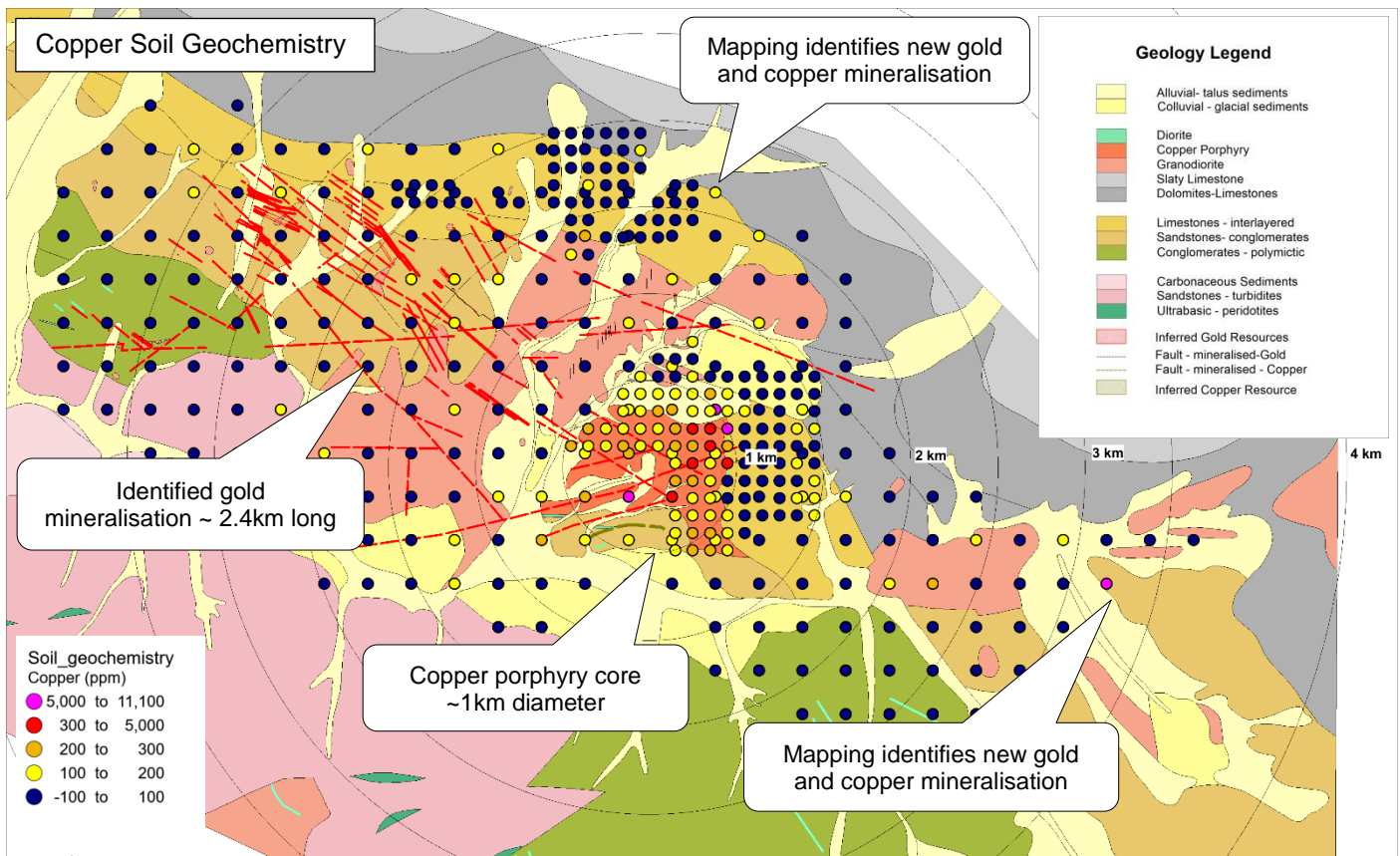
Todd Hibberd  
Managing Director  
30 January 2018

# 1 AuCu Gold Project, Kyrgyz Republic (WCN 90%)

During the quarter, the Company received results from a soil sampling program that highlighted new areas with anomalous gold and copper values (ASX release 9<sup>th</sup> December 2018). Follow up mapping and rock sampling identified extensive new gold and copper mineralisation (ASX release 14<sup>th</sup> January 2019). The company also conducted a bulk sampling program to evaluate the potential of the alluvial river terraces to host a placer gold deposit (ASX release 25<sup>th</sup> January 2019).

## 1.1 Geochemical survey results

The geochemical survey delineated the core of the copper porphyry system which has a diameter of approximately 1 kilometre. The mineralised zone around this system extends across 8 kilometres and includes the existing JORC compliant AuCu gold resource of 484,000 ounces (2.95Mt at 5 g/t gold).



**Figure 1:** Soil geochemistry (Copper) highlights core of mineralised system and hints at additional mineralised porphyry intrusions.

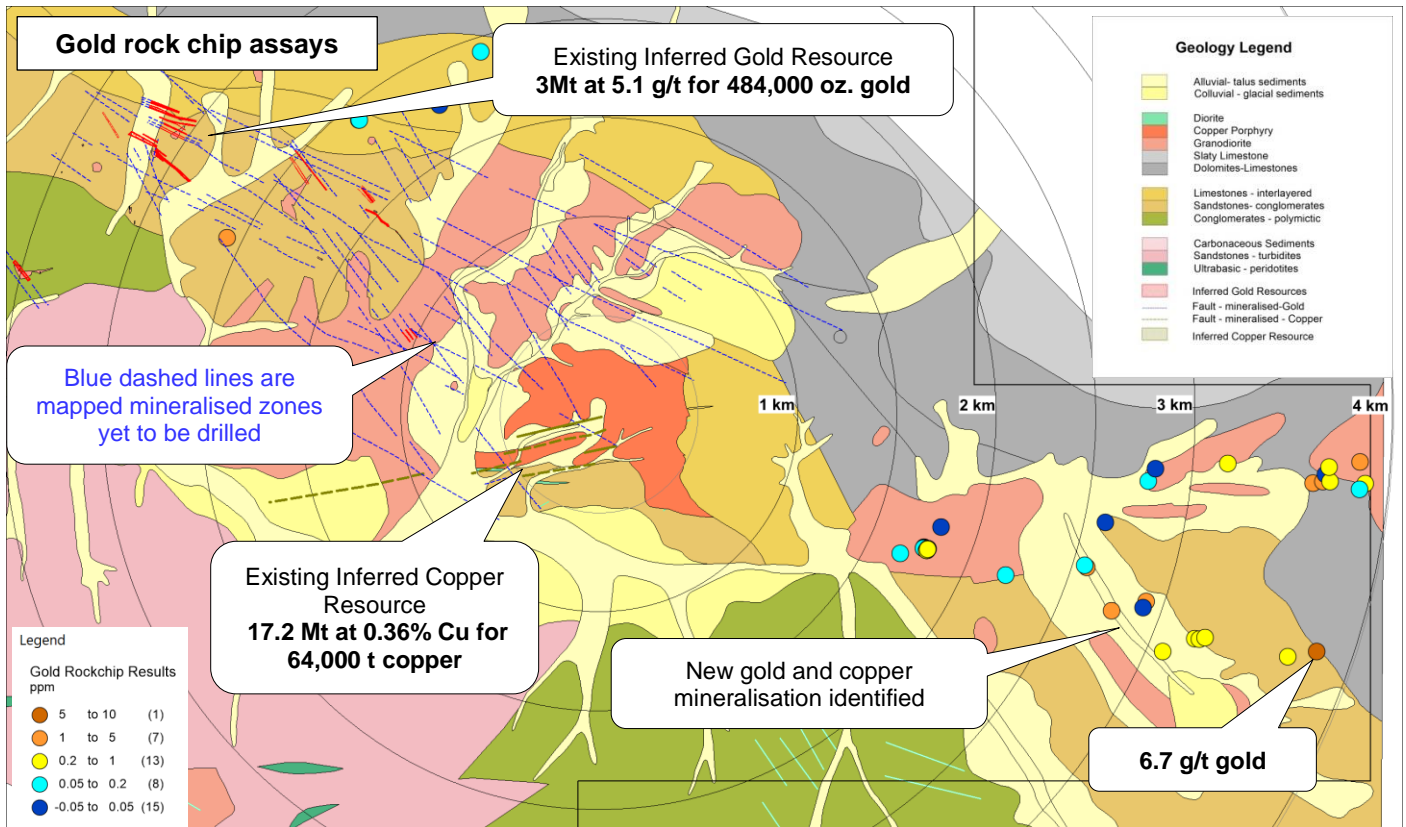
The central copper porphyry is responsible for both the outlying high grade gold mineralisation and the core copper mineralisation. In a classical copper porphyry system, metals are typically deposited in zones above and around the porphyry depending on temperature and distance from the core of the system. The typical metal zonation from the core to the periphery of the system is: Copper > Molybdenum > Tin > Tellurium > Gold > Bismuth > Arsenic > Antimony >Thallium >Lithium.

At the AuCu Gold project, the central copper porphyry is surrounded by mainly by limestone and granodiorite. Soil sampling and mapping has identified copper-magnetite skarn style mineralisation along the contact of the mineralised porphyry and the overlying limestone. The mineralisation is generated by the interaction of hot mineralised fluids with the colder limestone. Copper grades in the soil results are up to 0.7% copper.

In contrast, gold mineralisation has formed 1-4 kilometres from the core of the system at lower temperatures as the mineralised fluids have flowed out and away for the central porphyry. Mineralisation has developed strongly within sandstone due to its brittle and layered nature. There is a strong association between gold mineralisation within epithermal veins and the distribution of anomalous arsenic results in the soil samples. This relationship has enabled the identification of the new gold and copper zones described in the next section.

## 1.2 Mapping and sampling identify new mineralised zones

Mapping and rock sampling was conducted over a large area based on the results from the recent soil geochemistry sampling program (ASX release 9<sup>th</sup> December 2018). The mapping identified multiple new shear zones and assays of rock samples have identified significant gold and copper mineralisation with gold assays up to 6.7 g/t gold and copper assays up to 7.8% copper. The sampling confirms that the scale of the Aucu gold and copper system extends over at least 8 kilometres west to east and is still untested to the south.



**Figure 2:** Rock geochemistry (gold) highlights new mineralised zones identified east of the Aucu gold deposit and hints at additional mineralised porphyry intrusions.

The copper and gold results are associated with both porphyry and the overlying sandstones. Mineralisation occurs as within shear zones in both lithology's and as a layer of thermally altered magnetite rich skarn that is sandwiched between the sandstone and porphyry.

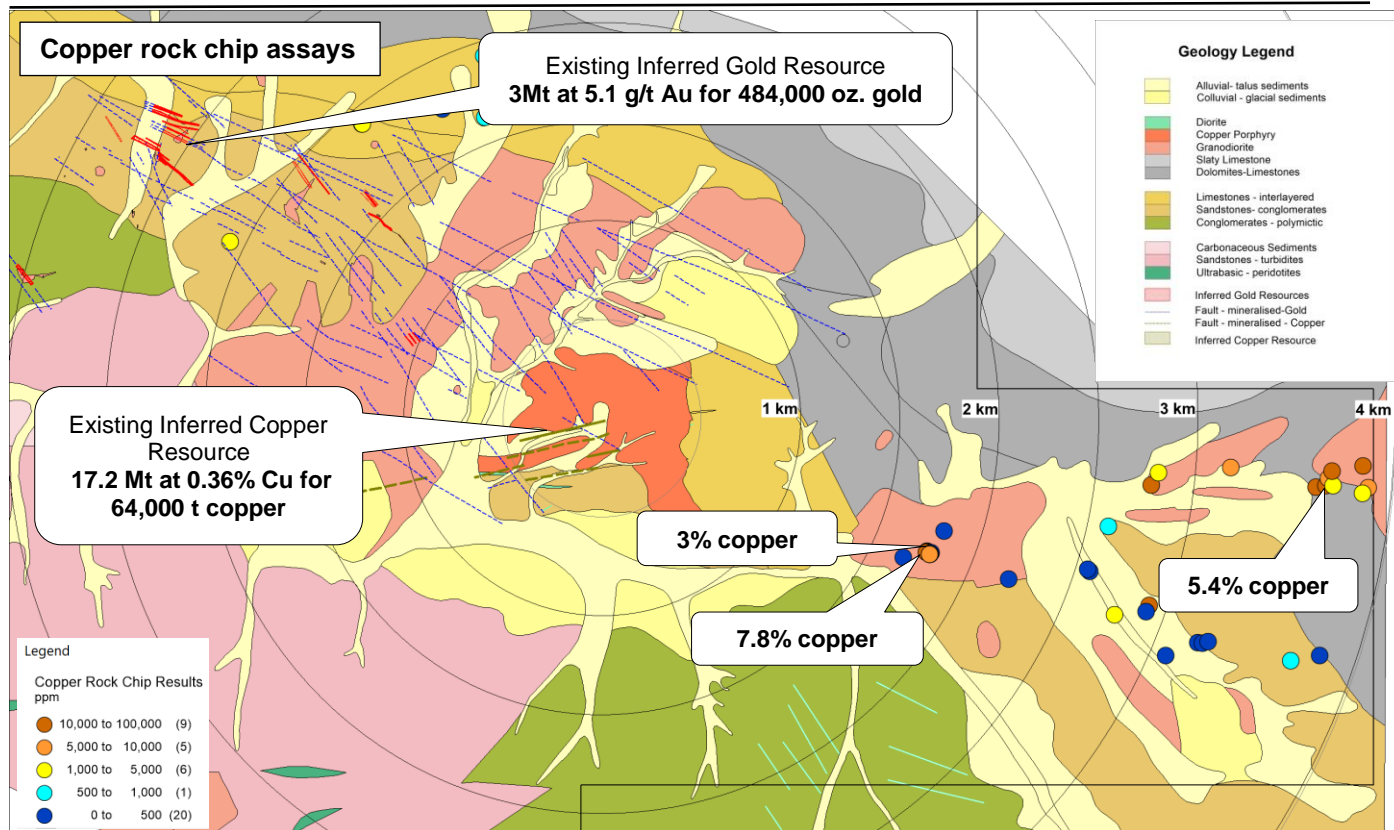
The highest copper and gold results are associated with chalcopyrite and copper oxides (malachite and azurite) usually within shear zones cutting through the sandstones and porphyries.

Moderate copper grades (1-2% Cu) and lower gold grades (0.1-0.7 g/t Au) are associated with the magnetite rich skarn. Key results are summarised in Table 1.

### Geological Interpretation

The current geological interpretation is that the whole area is underlain by a larger mineralised system with an upper zone of structurally controlled epithermal gold mineralisation within a broad copper porphyry alteration zone.

Gold mineralisation now extends at least 8 kilometres from west to east and is currently open to the west, south and north. Copper mineralisation is currently associated with central porphyry and large alteration halo with the possibility that further mineralised porphyries have been identified to the east of Aucu.



**Figure 3:** Rock geochemistry (Copper) highlights new mineralised zones identified east of the Aucu gold deposit and hints at additional mineralised porphyry intrusions.

**Table 1: Key copper and gold results**

Sample	Easting	Northing	Gold (ppm)	Copper (%)	Zinc (ppm)
CHPT18-14-02	701,575	4,624,578	6.70	0.02	42
CHPT18-15-06	700,715	4,624,831	2.11	1.21	150
CHPT18-15-08	700,546	4,642,777	1.86	5.47	8
CHPT18-15-09	700,539	4,624,783	2.99	0.21	26
CHPT18-15-10	700,413	4,625,002	1.63	0.01	9
CHPT18-16-01	700,724	4,625,437	0.13	1.54	6,551
CHPT18-17-01	701,556	4,625,426	1.54	1.44	264
CHPT18-17-02	701,605	4,625,435	1.13	1.83	734
CHPT18-17-06	701,794	4,625,534	1.03	1.80	162
CHPT18-17-07	701,636	4,625,507	0.54	1.89	884
CHT18E-01-06	699,591	4,625,098	0.09	1.48	217
CHT18E-02-12	699,606	4,625,088	0.46	3.04	740
CHPT18-01-01	696,076	4,626,666	2.18	0.14	8
CHPT18-03-03	699,606	4,625,091	0.38	7.82	188

### 1.3 Bulk Sampling Program

The Company undertook a bulk sampling program along a 450 metre section of the Chanach river alluvial terraces 1 kilometre downstream from the Aucu Gold deposit to assess the placer gold potential of the 16km long river system (figure 4).

Visible gold was detected in 62 samples out of the 65 samples collected (Figures 5-12).

Two river sediment samples were also collected at the tenement boundary next to the existing alluvial mining operation occurring on the neighbouring lease. One of the two samples contained visible gold (Figure 13). The samples have been submitted to the laboratory for analysis with results expected in late February.



**Figure 4:** Aerial photograph of the Chanach tenement showing the bulk sampling locations and the 16km extent of the river system (yellow line)



**Figure 5:** Gold particles identified in Pit18-01-01



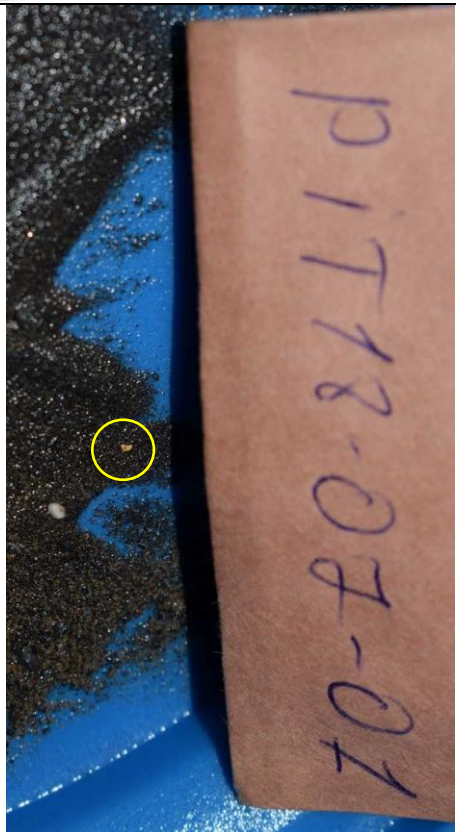
**Figure 6:** Gold particles identified in Pit18-01-02



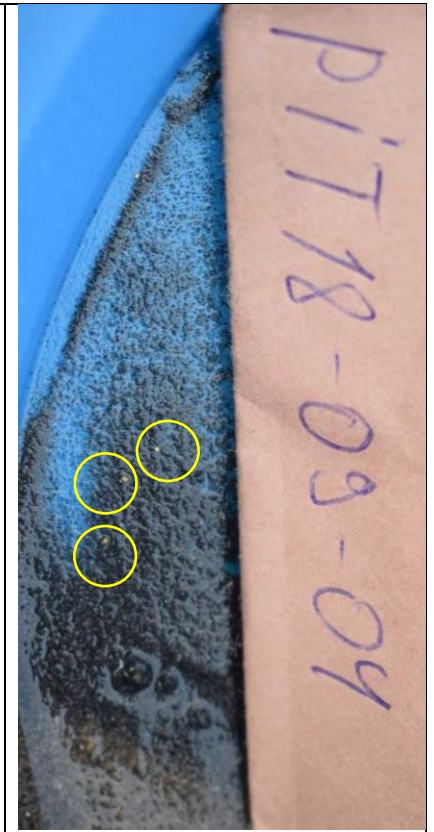
**Figure 7:** Gold particles identified in Pit18-01-04



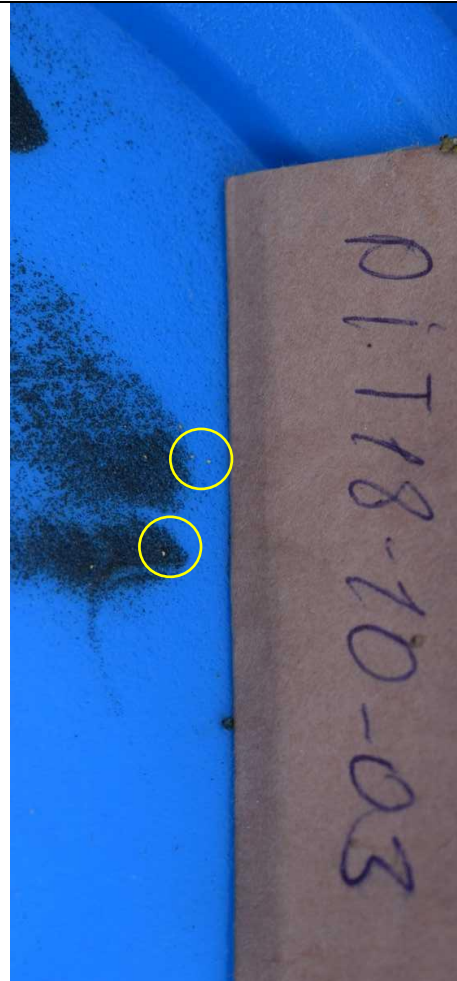
**Figure 8:** Gold particles identified in Pit18-06-03



**Figure 9:** Gold particles identified in Pit18-07-01



**Figure 10:** Gold particles identified in Pit18-09-04



**Figure 11:** Gold particles identified in Pit18-10-03



**Figure 12:** Gold particles identified in Pit18-11-04



**Figure 13:** Gold Panned from a 5kg river gravel sample near the western edge of the lease

### 1.4 Kyrgyz Exploration

Field exploration ceased in December due to heavy winter snows and sub-zero (minus 10-20 degree) temperatures. Access to the Chanach valley will reopen in March 2019 once the main roads reopen.

The exploration license application discussed in previous releases is ready to be submitted. Recent changes to the mining legislation (Sept 2018) and the subsequent updating of mining regulations which is still underway has delayed the submission due to the State department of Geology and resources declining to accept any applications until the regulations are finalised.

The Company expects to re-commence exploration activity in March.

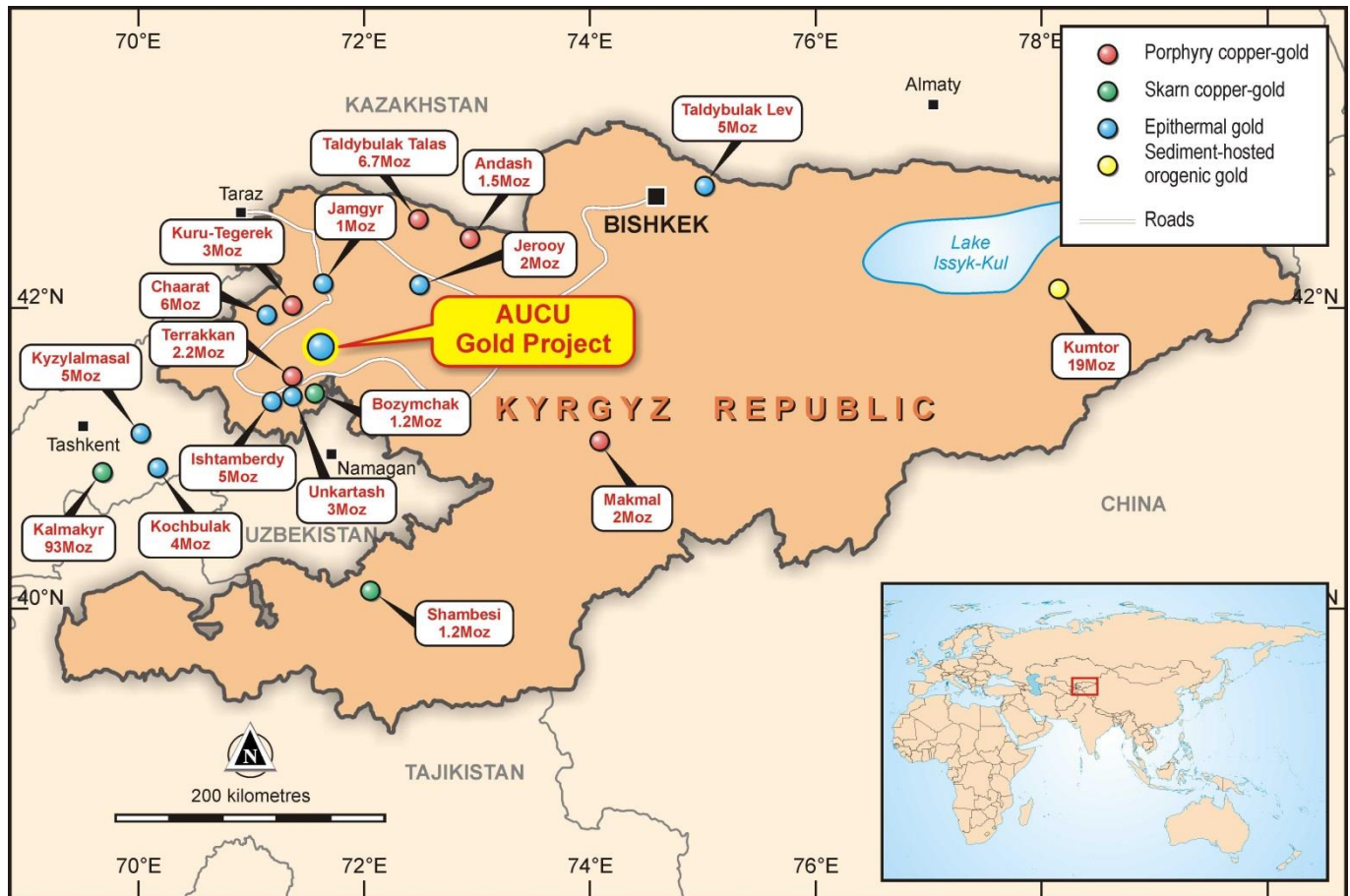


Figure 3: Location Map: Northwest Kyrgyz Republic, Central Asia

## 2 Cobalt-Nickel Projects, Western Australia (WCN 100%)

### 2.1 Coronation Dam Cobalt and Nickel Project

During the December quarter the final four metres composite assay results were received from a 5,000 metre program conducted at the Coronation Dam cobalt and nickel project (ASX release 19 Nov 2018). Results included:

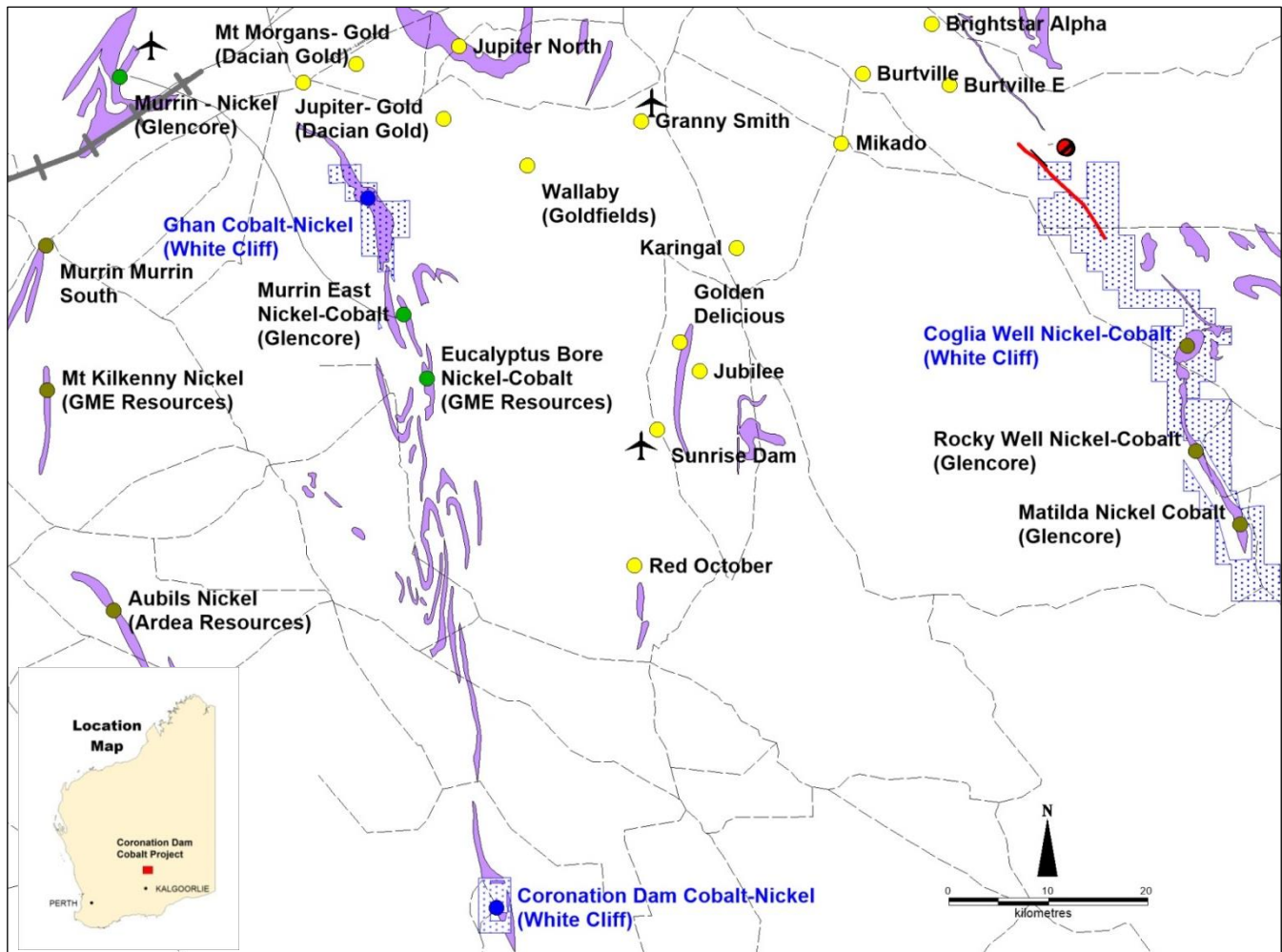
- 40 metres at 0.22% cobalt and 1.75% nickel from 8 metres
- 36 metres at 0.10% cobalt and 0.87% nickel from surface
- 16 metres at 0.11% cobalt and 0.88% nickel from 18 metres
- 20 metres at 0.06% cobalt and 0.75% nickel from 8 metres
- 21 metres at 0.06% cobalt and 0.8% nickel from surface
- 10 metres at 0.04% cobalt and 1.3% nickel from 20 metres

Mineralisation has developed in the regolith profile above an intensely weathered ultramafic unit which was originally a peridotite. The peridotite is approximately 1 kilometre wide and 5.7 kilometres long within the mining tenement

which covers 16km<sup>2</sup>. Extensive cobalt mineralisation was identified from surface, extends up to a depth of 65 metres and is approximately 550 metres wide. The orebody dips at a shallow angle to the west.

The assays highlighted further shallow and wide intervals of cobalt and nickel mineralisation confirming the project’s prospectivity and potential to host an economic resource.

A further 850 one metre assays have been collected to better define the mineralised zones. Once these results are received the company will undertake initial resource estimations at Coronation Dam and the Ghan Well nickel- cobalt projects.



**Figure 1:** Location and infrastructure map of the Coggia Well, Coronation Dam and Ghan Well cobalt projects. The area is serviced by rail, roads, towns, airports and Glencore’s nickel processing facility at Murrin Murrin

All three projects are located close to multiple operating mines serviced by substantial existing infrastructure such as roads, telecommunications, power, gas and with access to a skilled workforce. They are all within trucking distance of Glencore’s Murrin-Murrin nickel-cobalt processing plant and other proposed processing facilities that could potentially pose an option for monetising resources.

### 3 Corporate

During the quarter the Company completed a partially underwritten 2:1 renounceable rights issue, subsequently repaid a \$600,000 loan and is now debt free (ASX announcement 13 Nov 2018).

The Company appointed Mr Nicholas Ong and Mr Daniel Smith as non-executive directors. Nicholas Ong has also been appointed as Company Secretary (ASX announcement 17 Dec 2018). The Company received resignations from Chairman Jack Gardner, Executive Director, Michael Langoulant, Non-executive director Rodd Boland and Company Secretary Ian Hobson.



**4 Tenement information**

TENEMENT	PROJECT	LOCATION	OWNERSHIP	CHANGE IN QUARTER
AP590	Chanach	Kyrgyz Republic	90%	-
E38/2484	Merolia	Laverton	100%	-
E38/2552	Merolia	Laverton	100%	-
E38/2690	Merolia	Laverton	0%	100% lease expired
E38/2693	Merolia	Laverton	100%	-
E38/2847	Merolia	Laverton	100%	-
E38/2848	Merolia	Laverton	0%	100% lease expired
E38/1833	Merolia	Laverton	100%	-
E63/3033	Merolia	Laverton	100%	100% lease granted
E63/1222	Lake Percy	Dundas	100%	-
E63/1793	Lake Percy	Dundas	100%	-
E63/1716	Bremer Range	Dundas	100%	-
P63/1988	Bremer Range	Dundas	100%	-
P63/1989	Bremer Range	Dundas	100%	-
E63/1264	Bremer Range	Dundas	100%	-
E39/1479	Ghan Well	Laverton	100%	-
E39/1585	Laverton	Laverton	100%	-
E31/1101	Coronation Dam	Leonora	100%	-

## About White Cliff Minerals Limited

### Cobalt-Nickel Projects:

**Coronation Dam Cobalt Project (100%):** The project consists of one tenement (16km<sup>2</sup>) in the Wiluna-Norseman greenstone belt 90km south of the Murrin Murrin nickel-cobalt HPAL plant. The tenement contains an extensive ultramafic unit that contains zones of cobalt mineralisation associated with nickel mineralisation. The cobalt grades range from 0.01% to 0.69% cobalt and occur within the regolith profile above the ultramafic units. Nickel grade range from 0.4% to 2.2% nickel

**Coglia Well Cobalt Project (100%):** The project consists of two tenements (166km<sup>2</sup>) in the Merolia greenstone belt 50km south east of Laverton, WA. The tenements contain extensive ultramafic units that host zones of cobalt mineralisation associated with nickel mineralisation. Historical drilling has identified Cobalt grades including 16 metres at **0.16% cobalt** and 0.65% nickel.

**Ghan Well Cobalt Project (100%):** The project consists of one tenement (39km<sup>2</sup>) in the Wiluna-Norseman greenstone belt 25km southeast of the Murrin Murrin nickel-cobalt HPAL plant. The tenement contains an extensive ultramafic unit that contains zones of cobalt mineralisation associated with nickel mineralisation. The Cobalt grades range for 0.01% to 0.75% cobalt and occur within a zone of manganiferous oxides that form in the regolith profile.

**Bremer Range Cobalt Project (100%):** The project covers 127km<sup>2</sup> in the Lake Johnson Greenstone Belt prospective for shallow cobalt-nickel mineralisation. Historical drilling has identified extensive cobalt and nickel mineralisation associated with ultramafic rocks extending 15 kilometres in length and up to 1500 metres wide. The tenements are only 130 kilometres from the Ravensthorpe cobalt and nickel processing facility.

### Gold Projects:

**Kyrgyz Copper-Gold Project (90%):** The Project contains extensive porphyry related gold and copper mineralisation starting at the surface and extending over 8 kilometres. The AuCu gold deposit currently contains an Inferred Gold Mineral Resource above a cut-off grade of 1 g/t gold of **2.95 Million tonnes** grading **5.1 g/t gold** for **484,000 ounces** of contained gold. The project also contains the Chanach copper deposit which has an Inferred Copper Mineral Resource of **17.2Mt at 0.36% copper** containing **64,000 tonnes** of copper.

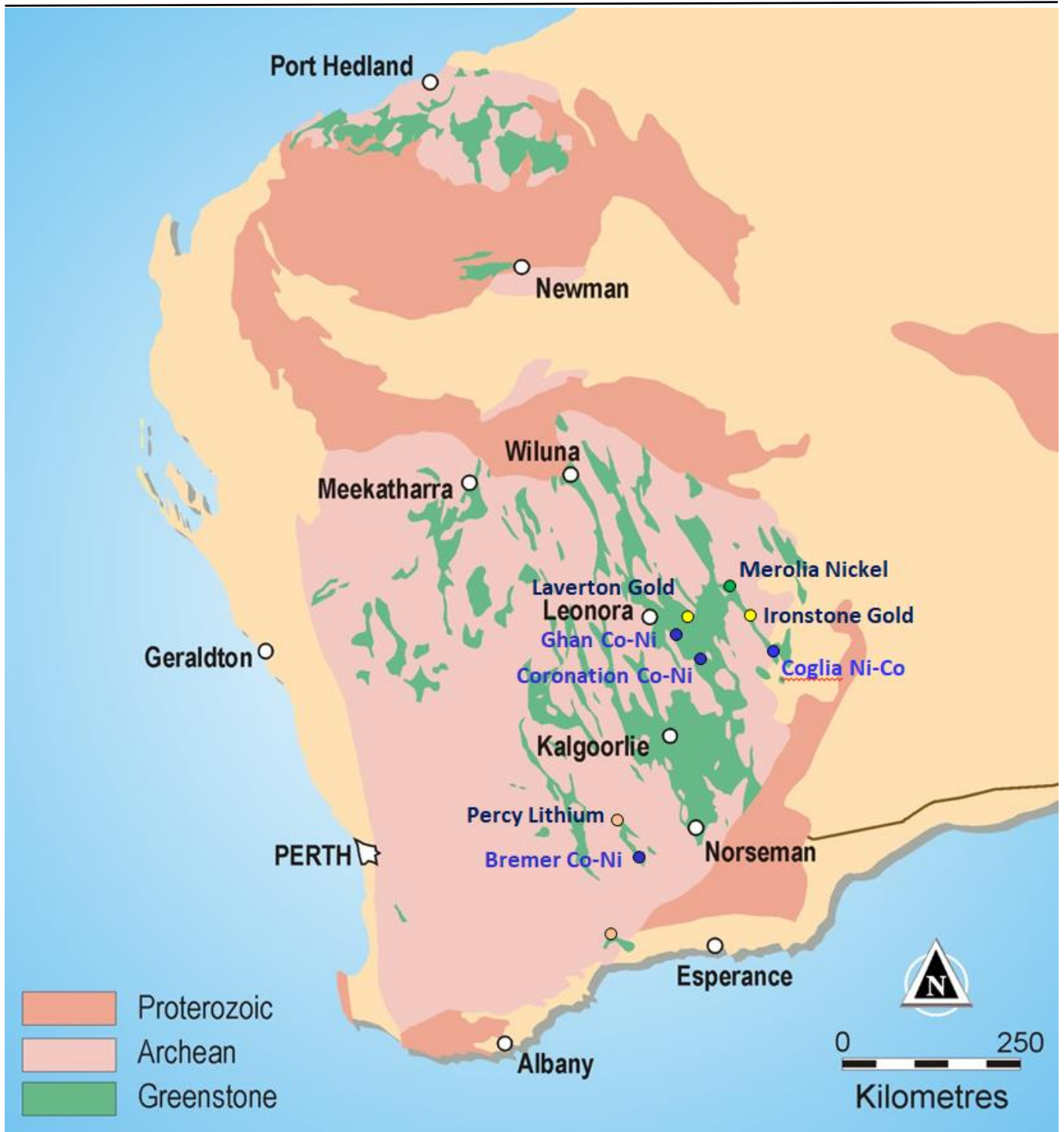
Extensive mineralisation occurs around both deposits demonstrating significant expansion potential. The project is located in the Kyrgyz Republic, 350km west-southwest of the capital city of Bishkek and covers 57km<sup>2</sup>. The Chanach copper and gold deposit is located in the western part of the Tien Shan Belt, a highly mineralised zone that extending for over 2500 km, from western Uzbekistan, through Tajikistan, Kyrgyz Republic and southern Kazakhstan to western China.

**Ironstone Gold Project (100%):** The project consists of 191km<sup>2</sup> of the Merolia Greenstone belt consisting of the Ironstone, Comet Well and Burtville prospects. The project contains extensive basalt sequences that are prospective for gold mineralisation, including the Ironstone prospect where historical drilling has identified 24m at 8.6g/t gold.

**Laverton Gold Project (100%):** The project consists of one granted tenement (22km<sup>2</sup>) in the Laverton Greenstone belt. The Red Flag prospect is located 20km southwest of Laverton in the core of the structurally complex Laverton Tectonic zone immediately north of the Mt Morgan's Gold Mine (3.5 MOZ) and 7 kilometres northwest of the Wallaby Gold Mine (7 MOZ).

The Information in this report that relates to exploration results, mineral resources or ore reserves is based on information compiled by Mr Todd Hibberd, who is a member of the Australian Institute of Mining and Metallurgy. Mr Hibberd is a full time employee of the company. Mr Hibberd has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves (the JORC Code)'. Mr Hibberd consents to the inclusion of this information in the form and context in which it appears in this report.

<sup>1</sup>The Information in this report that relates to Mineral Resources is based on information compiled by Mr Ian Glacken, who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Glacken is a full time employee of Optiro Pty Ltd. Mr Glacken has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code)'. Mr Glacken consents to the inclusion of this information in the form and context in which it appears in this report.



**Tenement Map - Australia.** A regional geology and location plan of White Cliff Minerals Limited exploration projects in the Yilgarn Craton, Western Australia

## Appendix 5B

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

**Name of entity**

WHITE CLIFF MINERALS LIMITED

**ABN**

22 126 299 125

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

December 2018

<b>Consolidated statement of cash flows</b>	<b>Current quarter \$A'000</b>	<b>Year to date (6 months) \$A'000</b>
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	-	36
1.2 Payments for		
(a) exploration & evaluation	(651)	(981)
(b) development		
(c) production		
(d) staff costs	(81)	(143)
(e) administration and corporate costs	(168)	(223)
1.3 Dividends received		
1.4 Interest received		
1.5 Interest and other costs of finance paid	(12)	(35)
1.6 Income taxes paid		
1.7 Research and development refunds		
1.8 Other –GST Paid	(47)	(47)
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(959)</b>	<b>(1,393)</b>

**2. Cash flows from investing activities**

2.1 Payments to acquire:

- (a) property, plant and equipment
- (b) tenements (see item 10)
- (c) investments

<b>Consolidated statement of cash flows</b>	<b>Current quarter \$A'000</b>	<b>Year to date (6 months) \$A'000</b>
(d) other non-current assets		
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		
2.5 Other (provide details if material)		
<b>2.6 Net cash from / (used in) investing activities</b>	<b>0</b>	<b>0</b>

<b>3. Cash flows from financing activities</b>		
3.1 Proceeds from issues of shares	1,970	1,970
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	(218)	(218)
3.5 Proceeds from borrowings		
3.6 Repayment of borrowings	(400)	(400)
3.7 Transaction costs related to loans and borrowings		
3.8 Dividends paid		
3.9 Other – share applications held in trust		
<b>3.10 Net cash from / (used in) financing activities</b>	<b>1,352</b>	<b>1,352</b>

<b>4. Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1 Cash and cash equivalents at beginning of period	13	447
4.2 Net cash from / (used in) operating activities (item 1.9 above)	(959)	(1,393)

+ See chapter 19 for defined terms.

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (6 months) \$A'000</b>
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)	1,352	1,352
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>406</b>	<b>406</b>

<b>5. Reconciliation of cash and cash equivalents</b> at the end of the quarter to the related items in the accounts	<b>Current quarter \$A'000</b>	<b>Previous quarter \$A'000</b>
5.1	Bank balances	51
5.2	Call deposits	396
5.3	Bank overdrafts	
5.4	Other (provide details)	
<b>5.5</b>	<b>Cash and cash equivalents at end of quarter</b>	<b>447</b>

**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

<b>Current quarter \$A'000</b>
89

Directors fees and consulting \$88,800
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**7. Payments to related entities of the entity and their associates**

**Current quarter  
\$A'000**

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

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**8. Financing facilities available**

*Add notes as necessary for an understanding of the position*

	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
8.1 Loan facilities	-	-
8.2 Credit standby arrangements		
8.3 Other (please specify)		

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. Estimated cash outflows for next quarter**

**\$A'000**

9.1 Exploration and evaluation

370

9.2 Development

9.3 Production

9.4 Staff costs

80

9.5 Administration and corporate costs

70

9.6 Other (provide details if material)

**9.7 Total estimated cash outflows**

**520**

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

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				
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.



Sign here: .....

Company Secretary

Date: 30 January 2019

Print name: Nicholas Ong

### 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.