

#### CAPITAL STRUCTURE:

Issued shares: 1,278 million

Listed options: None

Unlisted options: 65 million

Cash on hand: \$858,000  
(at March 2018), plus \$5,517,000  
(on 30 April 2018)

#### DIRECTORS:

Patrick Elliott,  
Non-Exec Chairman

Lindsay Owler,  
Director/CEO

Andrew Bursill,  
Director/Secretary

Malcolm Richmond,  
Non-Exec Director

#### COPPER PROJECTS

##### **Torrens, South Australia**

Copper, gold (large IOCG)

Phase: Exploration

Interest: Aeris Resources 70%,  
Argonaut 30%

Agreement Phase: Exploration

Operator: Argonaut

##### **Lumwana West, Zambia**

Copper, cobalt (shear-hosted)

Phase: Advanced exploration

Interest: Argonaut 90%,

Agreement Phase: Exploration

Operator: Argonaut

#### GOLD PROJECTS

##### **Higginsville, Western Australia**

Oxide and primary gold

Phase: Exploration

Interest: Earning up to 80%

Agreement Phase: Earn-in,  
phase one

Operator: Argonaut



# Quarterly report

FOR THE PERIOD ENDING 31 MARCH 2018

Argonaut Resources NL (*Argonaut or the Company*) (ASX: ARE) is pleased to present the following report for the period to 31 March 2018 (the Quarter).

## Highlights

### *Torrens, South Australia – Copper Approvals*

- The South Australian Minister for Aboriginal Affairs and Reconciliation approved an application by the Torrens joint venture under section 23 of the Aboriginal Heritage Act 1988.
- This was the final approval required to undertake a major drilling program at Torrens.
- The approval allows for of up to 70 deep diamond drill holes and covers the area of the Torrens gravity anomaly.

### *Geophysical Survey*

- A state-of-the-art FALCON airborne gravity and magnetic survey was flown by the Torrens JV over the Torrens exploration licence in March 2018.
- New airborne gravity data is vastly more detailed than historical, ground-based gravity data allowing for the delineation of potentially major deposits.
- Large Iron Oxide Copper-Gold (IOCG) systems, such as Torrens, have particular geophysical characteristics that are used for drill targeting.
- Final data has been received and three-dimensional processing and interpretation is underway.

### *Lumwana West, Zambia – Copper-Cobalt*

- Existing drilling by Argonaut has defined between 12,000 and 24,000t of contained cobalt at the Nyungu Central deposit.
- Potential exists for a two-stage, low capital cost, short lead-time copper-cobalt mine.
- A program of metallurgical testwork on copper-cobalt sulphide and transitional mineralisation is underway.
- Preliminary pit optimisation by RPM shows excellent deposit geometry via a very low stripping ratio of 1.5:1.
- Peak cobalt in diamond drilling is: 81.5m at 0.12% Cobalt from 183m, including 23m at 0.21% Cobalt from 218.5m in drill hole NYRD046.
- A large-scale exploration licence was granted over the Lumwana West area by the Zambian Government for a maximum term of up to 10 years.

## Corporate

### Private Placement

- Subsequent to the period, Argonaut completed a placement and raised \$5,500,000 before costs.
- Placement funds will be used for the Company's share of a major drilling program at Torrens plus metallurgical testing of Lumwana West drill core and working capital.

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## Outlook

- Shareholders can expect that a major drilling program will commence between July and September at the internationally recognised Torrens copper-gold anomaly.
- Continued tightening of mined copper supply and consequential rises in copper price are likely in the medium term.
- Cobalt prices are exceptionally high due to a sharp increase in demand from battery manufacturers.
- Cobalt supply remains susceptible to disruption due to the concentration of production in the Democratic Republic of the Congo (DRC) and the potential in the DRC for maladministration and unrest.
- World-class copper exploration assets such as Torrens and Lumwana West place Argonaut in a strong position to benefit from the current up-swing in the commodity cycle.

## Torrens, South Australia

(Argonaut 30%)

### Highlights

- Final access approval granted.
- Airborne geophysical survey completed.
- Funds raised for Argonaut's proportion of a major drilling program.

### The Torrens Anomaly

The Torrens anomaly is a coincident magnetic and gravity anomaly with a footprint larger than that of Olympic Dam. The anomaly is located at the Torrens hinge zone, a continent-scale zone of crustal weakness that appears to have been a conduit for mineralising fluids from the Earth's mantle.

The anomaly is primarily caused by very large volumes of iron in the form of magnetite and hematite. It is the hematitic material that typically carries high-grade copper sulphide mineralisation.

Drilling of the Torrens anomaly by Western Mining Corporation in the late 1970s and by the Torrens Joint Venture in 2007 and 2008 confirmed the existence of a major iron oxide copper-gold (IOCG) mineralising system beneath several hundred metres of sedimentary cover.

Confirmation of the IOCG system is by: copper assays to 1.36% Cu; presence of chalcopyrite and bornite; various diagnostic alteration minerals; and indicators such as Fluorine and rare earth elements.

More drilling is required to intercept the modelled copper-gold mineralisation. In the event of a discovery, the Torrens anomaly has the scale to host a world-class copper-gold deposit.

### Permits

#### Authority under the Aboriginal Heritage Act

On 15 February 2018, the Minister for Aboriginal Affairs and Reconciliation granted an authorisation under section 23 of the Aboriginal Heritage Act 1988. The authorisation allows for up to 70 deep diamond drill holes and covers an area of 120km<sup>2</sup> over the Torrens gravity anomaly.

Appropriately, the authorisation requires the Torrens Joint Venture to stay in close consultative contact with two aboriginal groups.

#### Operational Approval

The 'Exploration Program for Environment Protection and Rehabilitation' for ongoing exploration activities including aerial and ground gravity surveys and diamond drilling at exploration licence 5614 was approved in November 2017.

The approval permits the drilling of up to 70 deep diamond drill holes into the giant Torrens anomaly from the salt crust of Lake Torrens. The approval lasts for the term of EL5614 and any subsequent exploration licences.

Authorised drilling is subject to strict environmental controls.

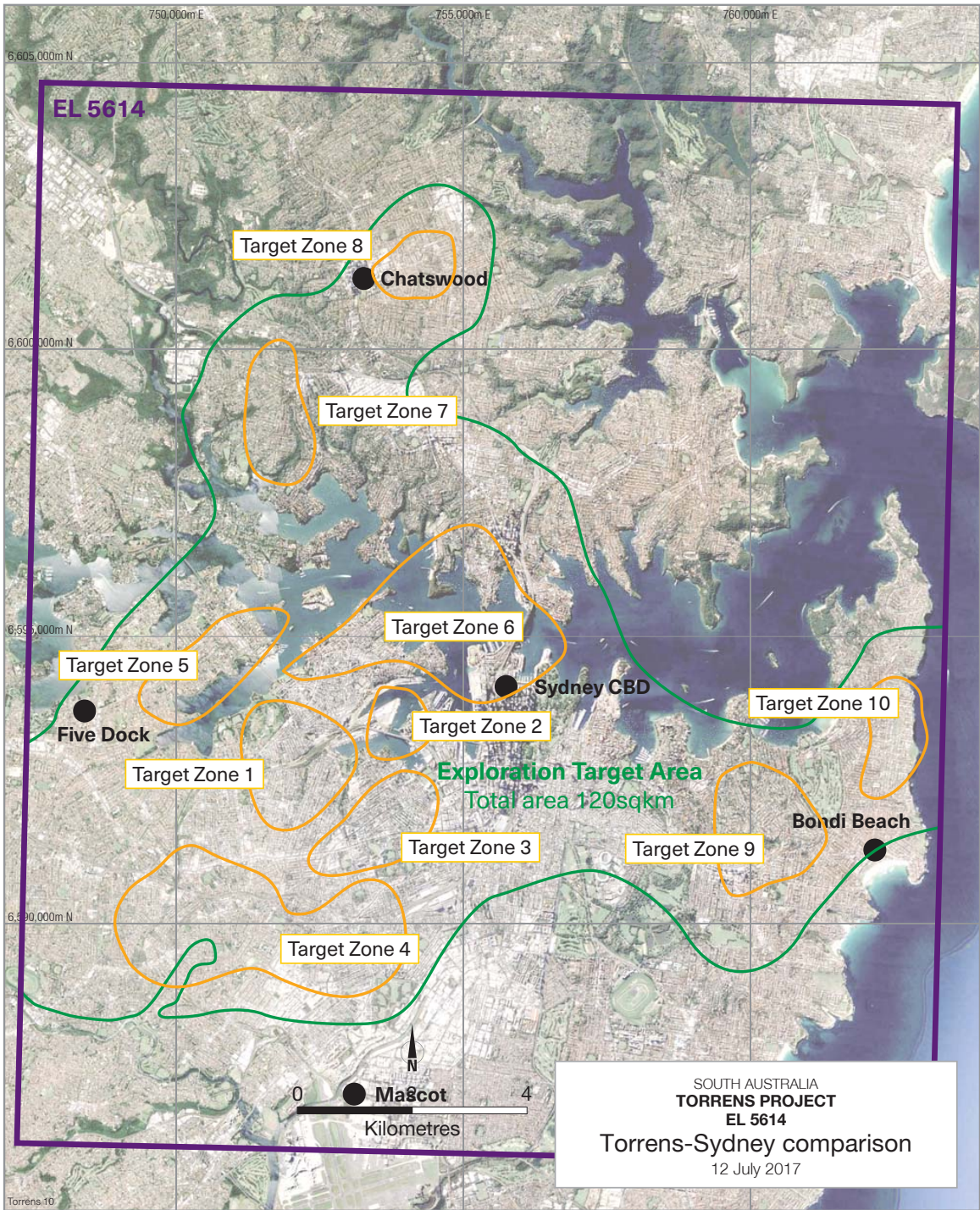


Figure 1 Torrens gravity anomaly (bouguer: green, residual: yellow) overlain on metropolitan Sydney.

### Native Title Access

In April 2017, Argonaut announced that the South Australian ERD Court granted authority to enter and undertake mining operations (exploration) within the area of EL5614.

## *Airborne Geophysical Survey*

### *Survey*

In March 2018, the Torrens JV completed an airborne geophysical survey over the entire 296 square kilometre area of exploration licence 5614, Torrens. The survey recorded gravity via a FALCON airborne gravity gradiometer system and magnetics via a high resolution, high sensitivity Scintrex magnetometer.

The survey was flown at a 200m line-spacing in north-south orientation for a total of approximately 2,000 line-kilometres. Laser scanner data was acquired for accurate terrain correction of the gravity data.

Flying conditions were good and data passed QA/QC checks.

### *Preliminary Interpretations*

Preliminary data confirms the existence of all major gravity anomalies within the broader Torrens anomaly but better resolves the boundaries and peaks of these anomalies.

The high-resolution gravity data also defines several target-zones that were not obviously prospective from historic data sets.

Geophysical targeting of Olympic Dam-style IOCG mineralisation requires three dimensional models of both gravity (subsurface rock density) and magnetics (subsurface magnetic susceptibility) to identify zones that have a high density and low magnetic susceptibility. It is rocks with these physical properties that geologists identify as having the potential to host IOCG mineralisation within the Torrens system.

Final data has now been received and three-dimensional processing and interpretation is underway.

## *Exploration Program*

A major 25 to 30-hole program of deep drilling, designed to properly test the broader anomaly and its sub-targets, is expected to commence between July and September 2018.

The Torrens joint venture technical committee is analysing technical data, including the recently flown airborne geophysics, to determine drill hole locations.

Drilling, helicopter and camp services contractors are being considered and the joint venture expects to let contracts shortly.

## *Native Title*

Since 1996, three native title groups have lodged various claims for native title rights over the area of Lake Torrens in South Australia, including over the Torrens anomaly. Historically, operators of the Torrens Project hadn't been able to secure all required agreements with native title claimants. The overlapping claims were eventually heard by the Federal Court between October 2015 and February 2016.

In August 2016, the Federal Court dismissed all three native title claims over the Torrens anomaly. All groups elected to appeal the decision to the Full Federal Court.

The Full Federal Court heard the appeals during February and March 2017. All three appeals were dismissed by a 2 to 1 majority. This decision was handed down on 16 March 2018.

Subsequent to the Quarter, the Company received notice of three applications to the High Court for special leave to appeal. The applications seek leave from the High Court to appeal against the judgment of the Full Federal Court given on 16 March 2018 and, in the event one or more appeals are granted, they seek orders to remit claims for native title to a single judge of the Federal Court for rehearing.

Argonaut notes that its authorisations to undertake drilling at exploration licence 5614, Torrens, are not affected by these applications and that drilling authorisations will remain in force regardless of the outcome.

## *The Torrens Joint Venture*

The Torrens Joint Venture is between Argonaut Resources NL and Aeris Resources Limited (ASX: AIS) and relates to the Torrens project, EL5614.

The Torrens Joint Venture is exploring for iron oxide-copper-gold (IOCG) systems in the highly prospective Stuart Shelf region of South Australia. The Torrens Project is located near the eastern margin of South Australia's Gawler Craton (Stuart Shelf), within 50 kilometres of Oz Minerals' Carrapateena copper-gold deposit and 75 kilometres from BHP Billiton's Olympic Dam mine.

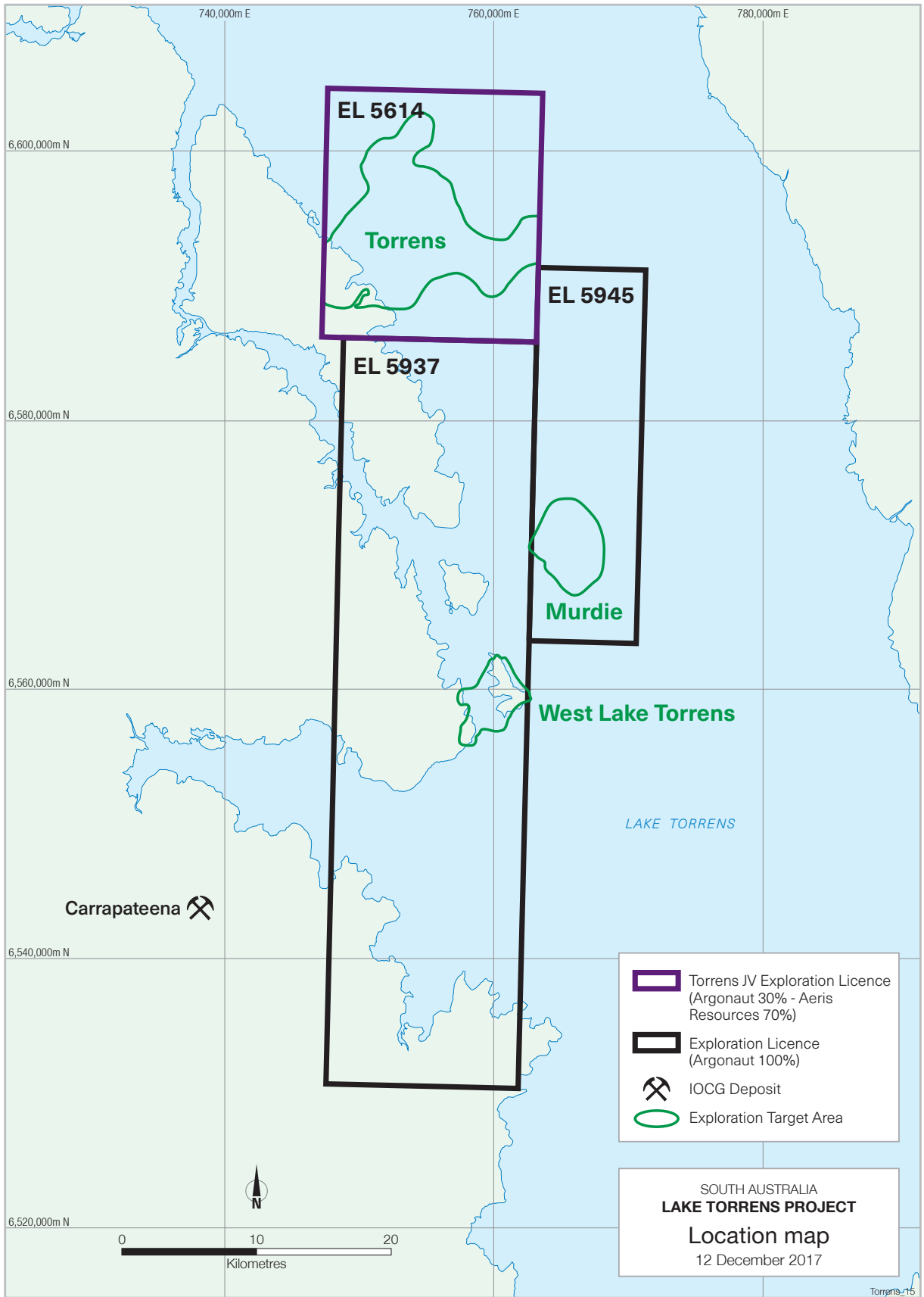


Figure 2 Lake Torrens exploration licences.

## Murdie, South Australia

(Argonaut 100%)

Argonaut Resources holds two highly prospective South Australian exploration licences, EL5937 and EL5945 (Figure 1). The licences are contiguous with the Company's Torrens project in South Australia. The licence areas cover a confirmed IOCG target in an area known as Murdie as well as a second anomaly at West Lake Torrens.

The licences cover an area of 1,015 square kilometres and are located immediately south and east of the Torrens project and east of the Carrapateena deposit (Figure 1).

The Murdie and West Lake Torrens targets constitute excellent exploration opportunities and provide Argonaut with a commanding land holding in the event of a discovery at Torrens.

## Lumwana West, Zambia

(Argonaut 90%)

### Highlights

#### Cobalt deposit

- Existing drilling by Argonaut has defined between 12,000 and 24,000t of contained cobalt at the Nyungu Central deposit (Table 1 and Figure 6).
- Planned follow-up drilling at Nyungu is likely to increase cobalt and copper tonnages.

#### Exploration Upside

- Peak cobalt in diamond drilling is: 81.5m at 0.12% Cobalt from 183m, including 23m at 0.21% Cobalt from 218.5m in drill hole NYRD046.
- Further drilling of shallow oxide and transitional zones and the northern, down-plunge extension of Nyungu Central (Figure 6) is likely to yield greater tonnages at an encouraging grade.
- Argonaut has collected soil samples over the entire Lumwana West licence area and each of these samples was analysed for a suite of elements, including cobalt. Several high-order cobalt soil anomalies have been identified for follow-up exploration.
- Peak cobalt in soil is 0.15%.

#### Metallurgical Testwork

- Potential exists for a two-stage, low capital cost, short lead-time copper-cobalt mine.
  - Stage one – dense media separation of cobalt oxide.
  - Stage two – heap leach and solvent extraction of copper and cobalt sulphides.
- Metallurgical samples have been selected from existing drill core and these samples are being exported to Australia for testwork.
- Initial testwork will involve a mineralogical study of four mineralisation types.
- Follow-up metallurgical work may include:
  - dense media separation of copper and cobalt oxide;
  - leaching of copper and copper-cobalt sulphide; and
  - conventional flotation of copper-cobalt sulphide.

## Mining Study

- Preliminary pit optimisation by RPM shows excellent deposit geometry via a very low stripping ratio (Figure 5).
- Stripping ratio of 1.5 to 1 for the optimum pit at the current copper price; and
- stripping ratio of 2.3 to 1 to a depth of >300m at 150% of the current copper price indicating the deposit has a low sensitivity to stripping ratio.
- RPM concluded the project had economic potential and warrants further studies.

## Tenure

- The Lumwana West large-scale exploration licence was recently reissued for a maximum period of 10 years.

## Cobalt deposit

The Nyungu Copper-Cobalt Deposit was drilled by Argonaut in 2011 and 2012. 48 drill holes for 9,019m were considered by RPM in its studies of Nyungu. This drilling targeted copper mineralisation, rather than cobalt, due to the metal prices at the time.

Cobalt mineralisation tends to sit at the footwall of the Nyungu Central Deposit in a relatively predictable manner (Figure 3 and 5). Cobalt grades are typically 0.1%. Wide, high grade-zones, such as 23m at 0.21% cobalt, have been intercepted.

Three cobalt domains have been defined using wireframes for estimation purposes (Figure 6). These cobalt domains sit within the envelope of copper mineralisation (Figures 3-4 and 5-6).

## Copper and Cobalt Exploration Targets

RPM have previously estimated Exploration Targets for both copper and cobalt mineralisation at Nyungu. These are shown below in Table 1.

**Table 1: Nyungu March 2017 Exploration Target**

Commodity	Tonnage Range (Mt)	Grade Range (%)	Contained Metal Range (kt)
Copper*	130 to 180	0.45 to 0.65	580 to 1,150
Cobalt^	15 to 20	0.08 to 0.12	12 to 24

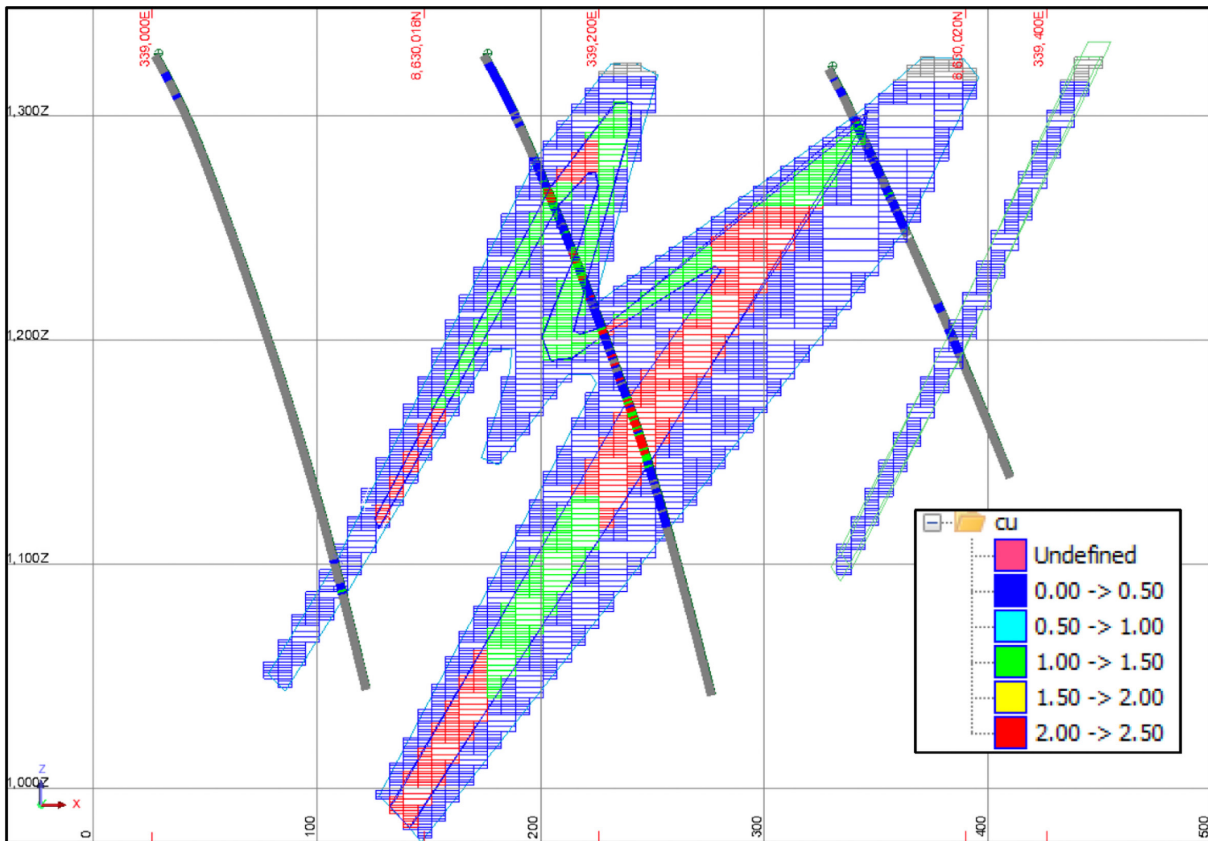
*The potential quantity and grade of the Exploration Target is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.*

\* Copper Exploration Target announced to the ASX by Argonaut on 9 April 2013.

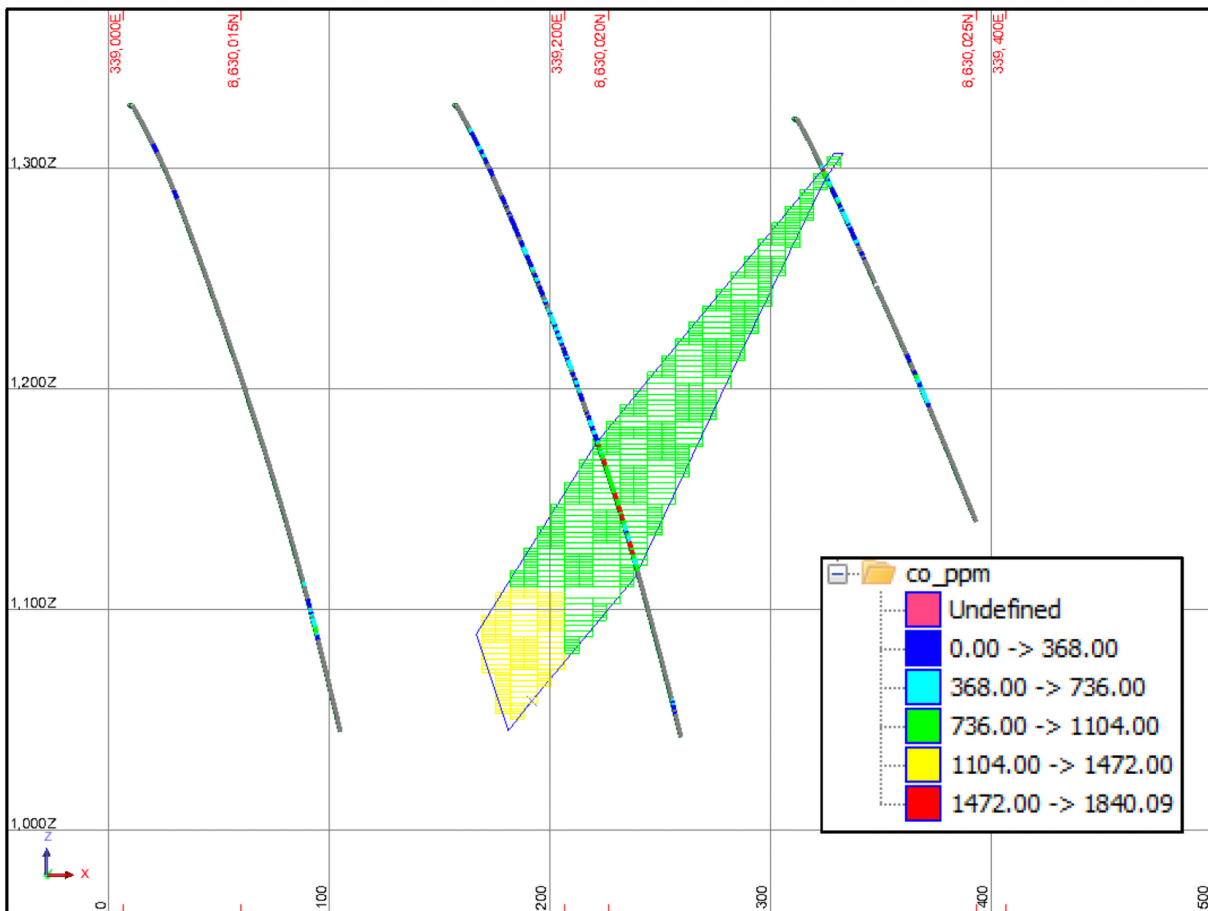
^ Cobalt Exploration Target announced to the ASX by Argonaut on 27 March 2017.

Both Exploration Targets are estimated to JORC 2012 standards.

Argonaut is planning to undertake a drilling program of at least 3,000 metres as soon as possible.



**Figure 3** Copper Exploration Target estimation cross section showing copper grade (%). Looking north.



**Figure 4** Cobalt Exploration Target estimation cross section showing cobalt grade (ppm). Looking north.



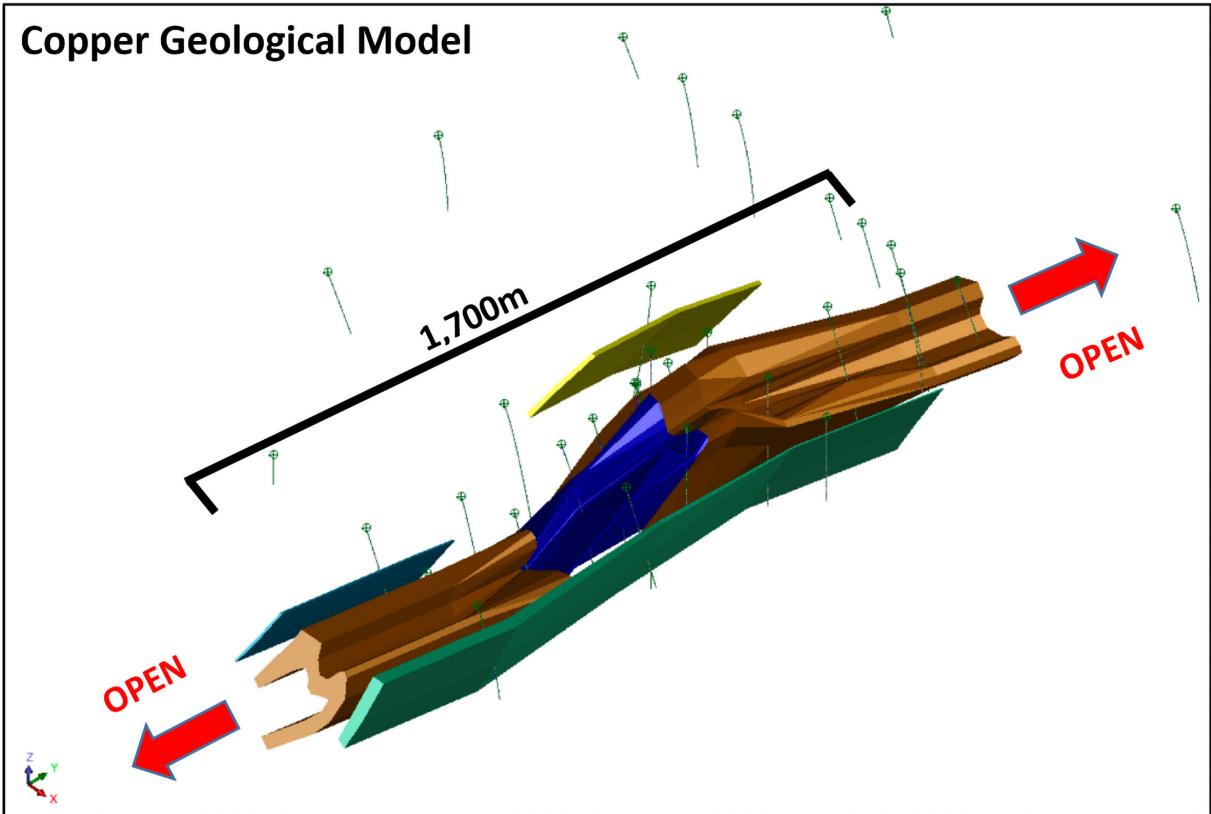


Figure 5 Nyungu Central, copper wireframes. Oblique view.

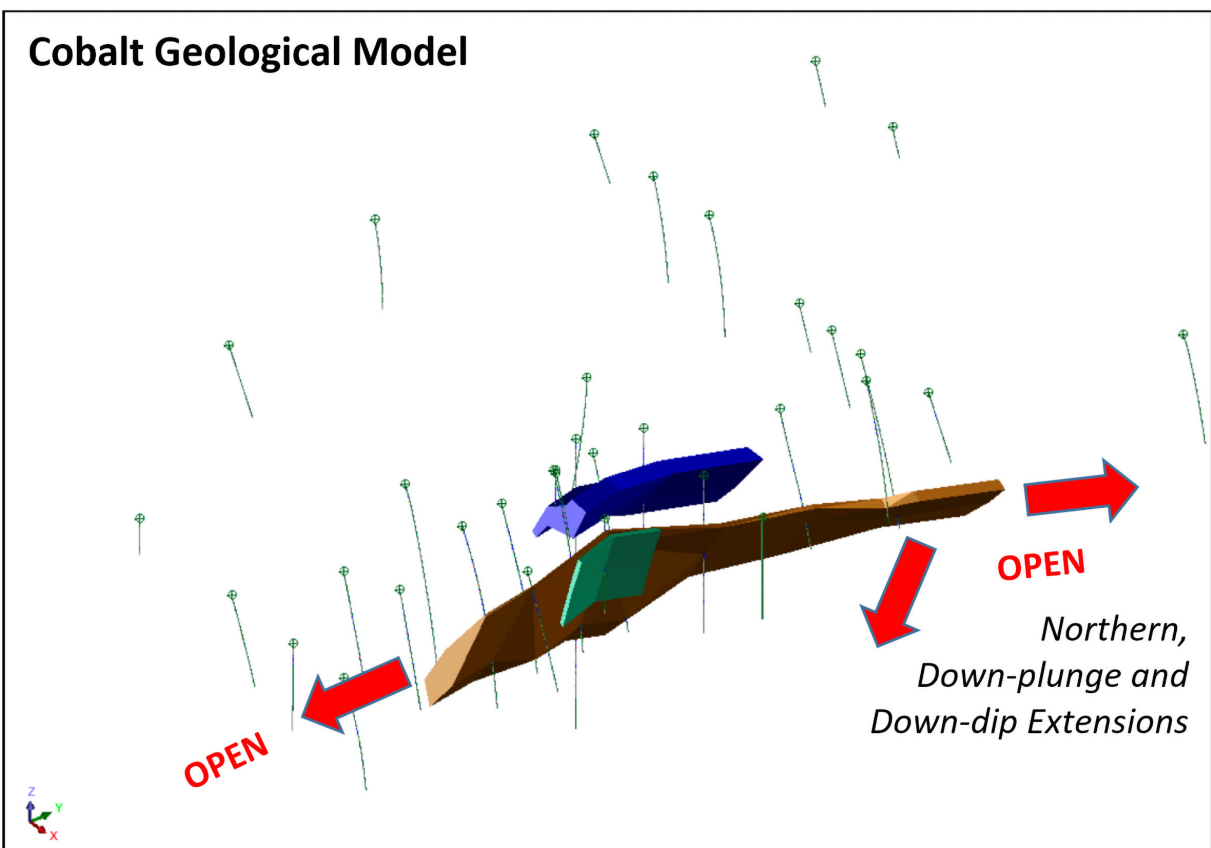


Figure 6 Nyungu Central, cobalt wireframes. Oblique view.

## Cobalt Drill Results

Highlights of previous cobalt drilling at Nyungu by Argonaut are shown in Table 2.

**Table 2: Nyungu copper-cobalt deposit - Cobalt drill intercepts**

Hole	From (m)	Interval (m)	Co (%)	Cu (%)
NYU11RD001	37	120.0	0.06	0.34
Including	104	<b>26.0</b>	<b>0.13</b>	0.28
NYU11RD010	155	72.0	0.08	0.61
Including	167	<b>38.0</b>	<b>0.10</b>	0.91
NYU11RD013	31	1.0	0.56	0.57
NYU11RD022	12	88.2	0.07	0.47
Including	42	<b>10.0</b>	<b>0.19</b>	0.61
NYRD031	236	59.9	0.07	0.50
Including	237	<b>22.0</b>	<b>0.13</b>	0.58
NYRD038	258	<b>29.0</b>	<b>0.12</b>	0.55
Including	259	<b>21.0</b>	<b>0.16</b>	0.57
NYRD044	181.5	12.2	0.10	0.18
Including	186.8	<b>6.0</b>	<b>0.16</b>	0.24
NYRD045	38.5	69.0	0.06	0.58
Including	93	8.0	0.11	0.29
NYRD046	183.4	<b>81.5</b>	<b>0.12</b>	0.71
Including	218.5	<b>23.0</b>	<b>0.21</b>	0.51
MM296	88	53.0	0.05	0.30
Including	90	<b>12.0</b>	<b>0.13</b>	0.50

## Resource Upgrade

### Cobalt Oxide

Initial drilling targeted fresh copper sulphide mineralisation i.e. copper mineralisation below the weathered (oxide and transitional) zones. Consequently, very few existing drill holes intercept mineralisation in these weathered zones.

A program of shallow drilling has the potential to significantly upgrade copper and copper-cobalt mineralisation in the oxide and transitional zones. This is particularly significant because of the favourable metallurgical properties of cobalt oxide. Much of the cobalt produced in the DRC is mined from cobalt oxide.

Argonaut plans to target these zones for drilling. This drilling will provide both resource estimation data and metallurgical sample for dense media separation and leach testwork.

### Cobalt Sulphide

The Nyungu Central deposit plunges gently to the north. Existing drill holes targeted this plunging mineralisation to approximately 300m below the surface. The cobalt grades increase down-plunge and copper grades stay roughly consistent.

The preliminary mining study, discussed below, clearly demonstrates that deeper drilling is now warranted at Nyungu Central due to the low stripping ratio, favourable deposit geometry and increased cobalt value. This drilling will increase the contained tonnages of both copper and cobalt.

## Metallurgical Testwork

Argonaut has identified the potential for a two-stage, low capital cost, short lead-time copper-cobalt mine. The high-priority processes for investigation are:

- Stage one – dense media separation of cobalt oxide.
- Stage two – heap leach and solvent extraction from copper and cobalt sulphides.

As is commonly the case, contained copper and cobalt is within three weathering zones: oxidised, transitional (mixed oxide and sulphide), and fresh (sulphide). Each of these zones presents demonstrated metallurgical opportunities for production.

Metallurgical samples have been selected from existing drill core and these samples are being exported to Australia for testwork. Initial testwork will involve a mineralogical study of the four mineralisation types. Results of this initial work will direct further testwork and infill drilling at Nyungu Central.

Follow-up metallurgical work may include:

- dense media separation of copper and cobalt oxide;
- leaching of copper and copper-cobalt sulphide; and
- conventional flotation of copper-cobalt sulphide.

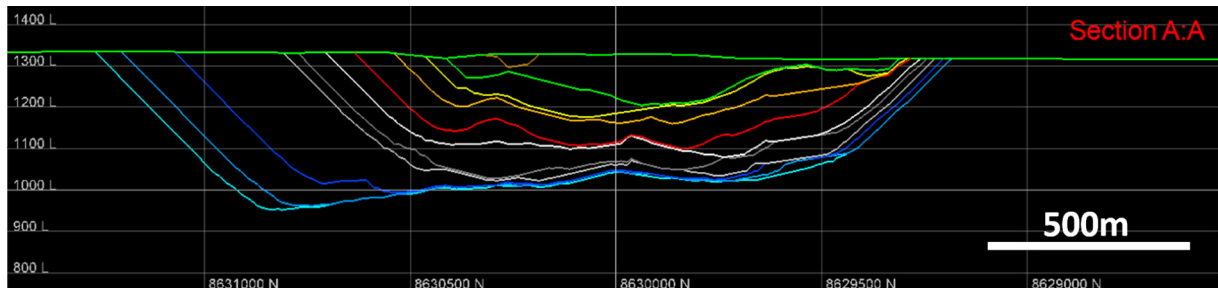
## Mining Study

RPM conducted a preliminary open pit optimisation study on the Nyungu Central and Nyungu South deposits. The modelling was conducted for copper production only using costs from similar mines. The results were highly encouraging.

Modelling shows excellent deposit geometry via a very low stripping ratio (Figure 7).

- Stripping ratio of 1.5 to 1 for the optimum pit at the current copper price; and
- Stripping ratio of 2.3 to 1 to a depth of >300m at 150% of the current copper price, indicating the deposit has a low sensitivity to stripping ratio.

RPM concluded the project had economic potential and warrants further studies.



**Figure 7** Nyungu Central long-section, looking east. Preliminary pit optimisation open pit shells. White shell has a stripping ratio of 1.5 to 1 and reflects the optimisation at the current copper price. The light blue shell has a stripping ratio of 2.3 to 1 and is economic at 150% of the current copper price.

## Exploration Upside

### Drilling

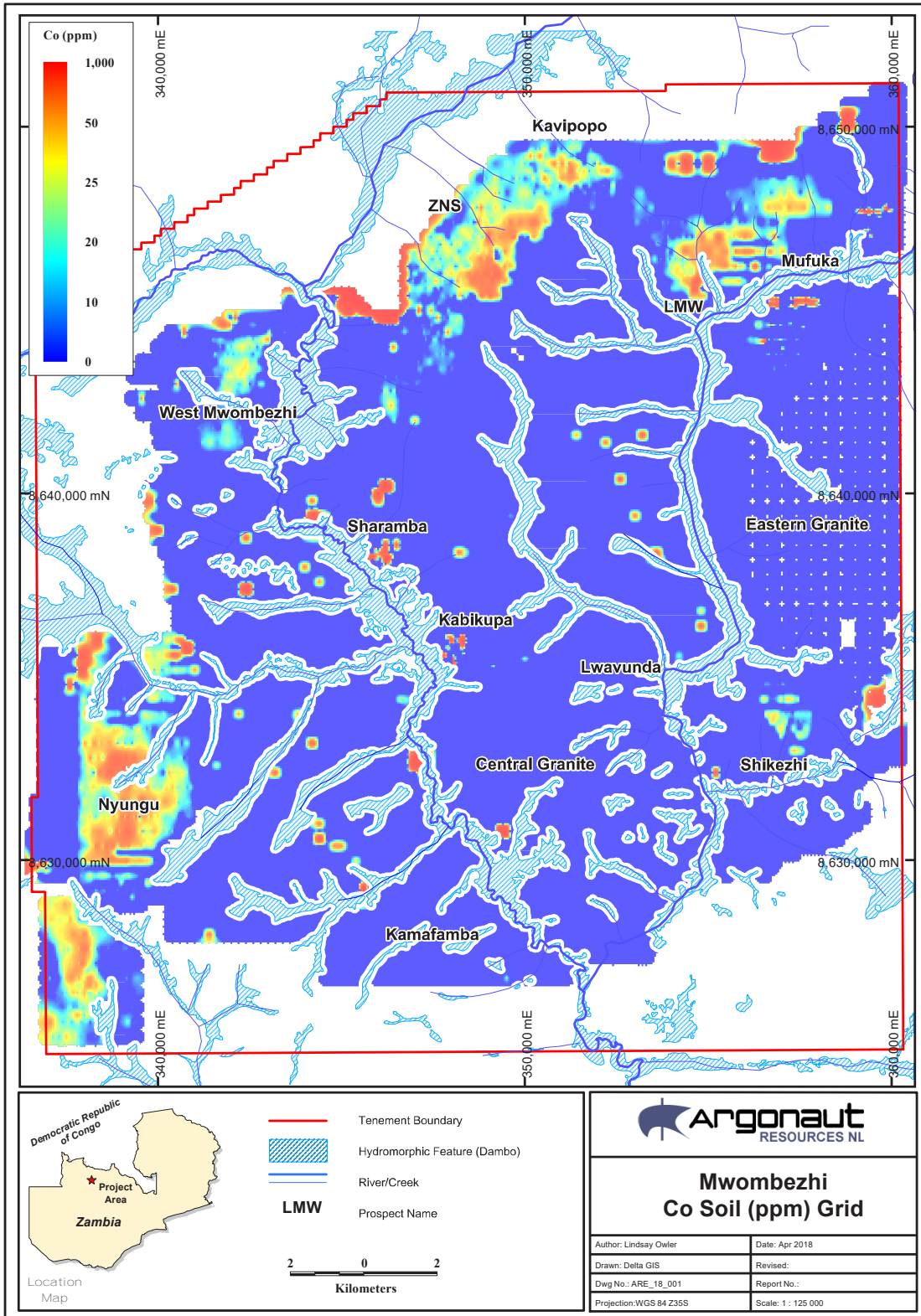
Previous drilling targeted fresh (unweathered) copper sulphides and in doing so left excellent scope to drill and define additional copper and cobalt in the oxide and transitional zones. Cobalt oxide tonnages are particularly interesting due to potential low-cost, short lead-time processing options.

There is also significant potential to increase known volumes of copper-cobalt sulphide mineralisation. Peak cobalt in existing diamond drilling is 81.5m at 0.12% Cobalt from 183m, including 23m at 0.21% Cobalt from 218.5m in drill hole NYRD046. The recently completed mining study shows that further deep drilling is warranted due to excellent deposit geometry, hence low stripping ratios at depth. Further drilling of the northern, down-plunge extension of Nyungu Central (Figure 6) is likely to yield greater tonnages at an encouraging cobalt grade.

## Regional Exploration

Argonaut has collected soil samples over the entire Lumwana West licence area and each of these samples was analysed for a suite of elements, including cobalt. Several high-order cobalt soil anomalies have been identified for follow-up exploration (Figure 8).

Peak cobalt in soil sampling is 0.15%.



**Figure 8** Cobalt soil anomalism is concentrated around the margin of the Mwombezhi Dome, near the boundary between basement rocks and overlying sedimentary rocks.

## Tenure

The Lumwana West large-scale exploration licence was recently reissued for a maximum period of 10 years. The new licence was granted on 29 December 2017 and cadastral system was recently updated to reflect the grant. The licence covers 568 square kilometres.

## Cobalt Production Impediments – why Zambia?

Recent battery-related demand for cobalt has exposed the fragile nature of cobalt supply. Over 70% of the world's cobalt is coming from the DRC, one of the world's riskiest and worst administered mining jurisdictions.

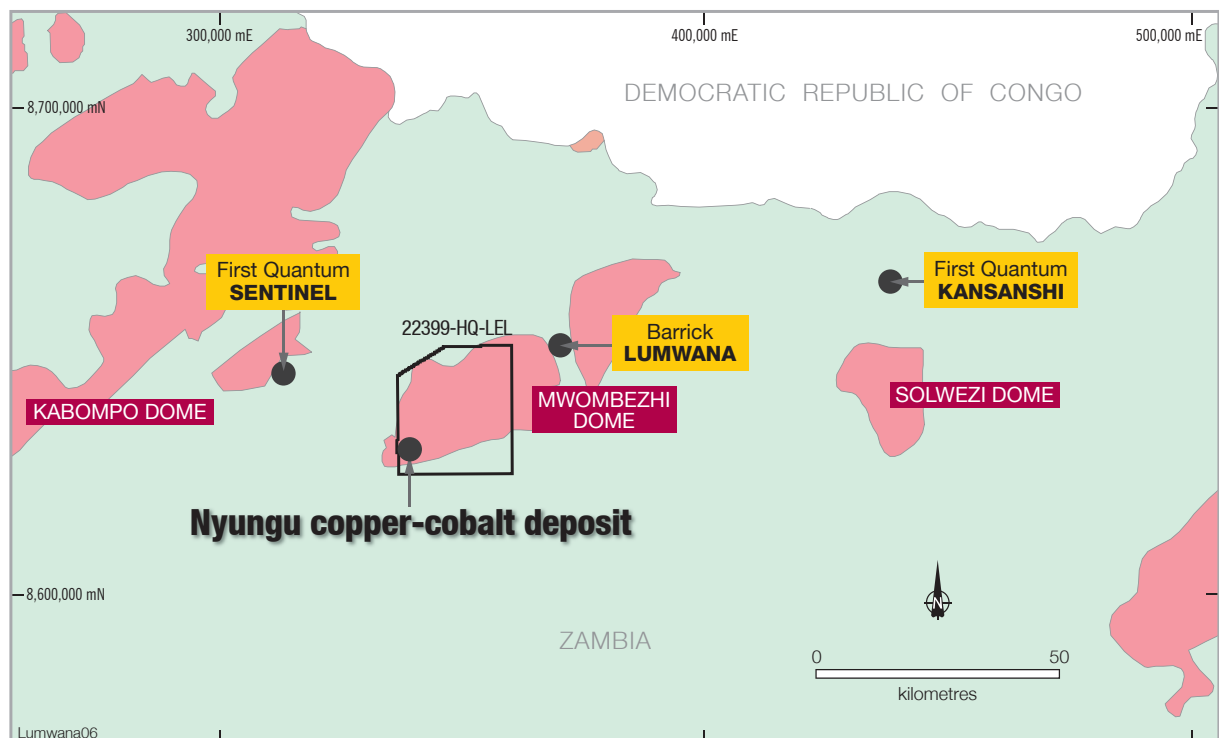
There are two main reasons why the majority of the world's cobalt supply comes from the DRC: mineral endowment and favourable metallurgy.

Southern DRC and North-western Zambia (including the Zambian Copperbelt) cover the geological domain known as the Central African Copperbelt. Deposits in both countries commonly contain cobalt.

Of the 190 countries assessed for 'ease of doing business' by the World Bank in 2017, Zambia ranked 85. DRC ranked near the bottom at 182. Zambia is a far safer and lower-risk jurisdiction that benefits from political stability, robust mining law and functioning courts.

Other countries with significant cobalt endowment include Australia (nickel-cobalt laterites) and Canada (polymetallic copper-nickel-cobalt). The main reason cobalt production lags in these countries is metallurgy. The processing of cobalt in Australia and Canada is either metallurgically complex or prohibitively expensive (or both).

Zambia represents a blend of lower political risk, mineral endowment and favourable metallurgy.



### Location



- Katanga (conglomerate, quartzite, argillite, arkose, shale, greywacke, dolomite, banded iron fm, mixitite, limestone & schist)
- Pre-Katanga (schist, gneiss & granulite) & Basement Complex (granite, gneiss, migmatite, & granite)
- Licence boundary

**Figure 9** Location of the Nyungu copper-cobalt deposit, North-western Province, Zambia.

## Alford, South Australia

(Argonaut 100%)

The Alford Project on South Australia's Yorke Peninsula lies 20km north-east of Wallaroo within the geological province known as the Olympic Domain. The tenement is prospective for iron oxide copper-gold mineralisation as found at Prominent Hill, Olympic Dam and Hillside. No field-based work was undertaken at Alford during the Quarter.

## Kroombit, Queensland

(Argonaut 100%)

No field-based work was undertaken at Kroombit during the Quarter.

### *Background*

Argonaut holds a 100% interest in the Kroombit zinc-copper deposit in Central Queensland via its interest in ML5631 and MDL2002. Mining on ML5631 is subject to a 2% net smelter royalty, payable to Aeris Resources Ltd.

On 11 June 2009 Argonaut announced a maiden resource estimation for the Kroombit deposit. The **Indicated and Inferred Resources** at Kroombit comprise:

- a **Zinc Resource of 5.2 million tonnes at 1.9% zinc and 0.15% copper** using a cut-off of 1.0% Zn, for **98,800 tonnes of zinc** and 7,800 tonnes of copper; and
- a **Copper Resource of 0.9 million tonnes at 1.0% copper** at a cut-off of 0.5% Cu for 9,000 tonnes of copper.

In addition, Exploration Results are reported comprising a defined Exploration Potential of between:

- 1 million and 1.5 million tonnes at 1.5% to 2.0% zinc, and between
- 0.5 million and 1 million tonnes at 0.7% to 1.3% copper.

## Aroona, South Australia

(Argonaut 100%)

EL5336, Aroona, is subject to a joint venture agreement with Perilya Limited. No field-based work was undertaken at Aroona during the Quarter.

## Higginsville, Western Australia

(Argonaut earning 80%)

The tenements that make-up the Higginsville project are in Western Australia's Eastern Goldfields (Figure 10). Geologically, the package sits within the Norseman-Wiluna Belt, a belt of ancient rocks endowed with gold and nickel that sits within the broader Yilgarn Craton.

Approximately 70% of Australia's historical gold production has come from the Yilgarn Craton and most of that from the Norseman-Wiluna Belt.

The Higginsville Project is located south of Kambala, west of Lake Cowan and adjacent to Higginsville where over two million ounces of gold has been historically defined.

The package of tenements at Higginsville is held by Loded Dog Prospecting Pty Ltd. Argonaut and Loded Dog Prospecting are parties to an earn-in joint venture agreement which grants Argonaut the right to earn up to 80% of the tenements in two phases. The earn-in agreement is currently in the first phase.

### *Gold Exploration*

Argonaut's goals are to explore for near-surface oxide gold in areas with historic shallow drilling results and to target deeper primary gold mineralisation at previously untested depths.

The Amorphous and Footes Find targets are located approximately 5km along existing roads from an operating mill (Figure 10) and present an excellent opportunity for a meaningful, near-term exploration outcome.

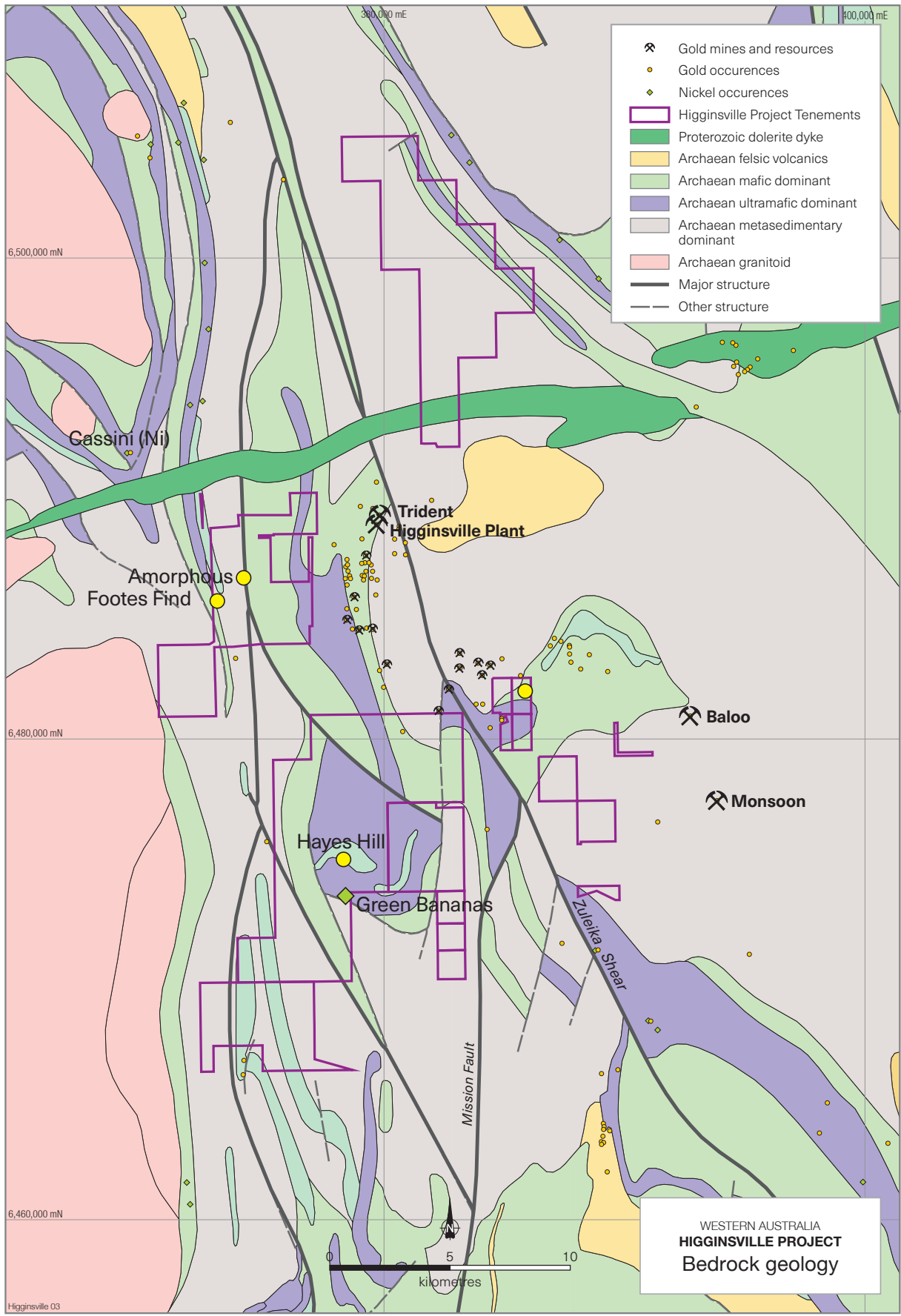


Figure 10 Higginsville tenement location.

## 2017 RC Drilling

### Amorphous

The 2017 RC drilling program has significantly increased the potential for a commercial gold deposit at Amorphous by demonstrating improved continuity of gold grades along strike (see Figure 11, 1.0g/t gold contour).

Drilling has better defined deposit geometry by targeting down-plunge extensions of primary gold mineralisation at Amorphous.

Gold mineralisation is typically hosted in an altered shear-zone within an easterly dipping gabbroic unit. Gold grades within the mineralised shear-zone are variable.

A lower than expected dip on the mineralised shear-zone improved conceptual open-pit geometry (Figure 12). The gold mineralisation envelope dips to the east at approximately 60 degrees, rather than 80 degrees as previously interpreted, thus lowering the theoretical stripping ratio.

Highlights of 2017 RC drilling at Amorphous include:

**Table 3: Amorphous gold deposit – Gold drill intercepts**

Hole	From (m)	Interval (m)	Au (g/t)
AMRC005	69	4	1.53
plus	77	11	2.76
including	81	6	4.62
and	82	3	7.47
AMRC006	44	6	2.37
including	45	3	4.38
AMRC008	56	3	1.66
AMRC009	22	2	1.28
AMRC015	64	4	2.36

### Footes Find

Drilling at the Footes Find deposit confirmed good mineralised widths and high grades. Rock-chip sampling within an historic open pit at Footes Find further confirmed high gold grades with samples reporting up to 17.25g/t gold.

Additional drilling at Footes Find is warranted to confirm continuity of grades and widths along strike.

Highlight of 2017 RC drilling at Footes Find include:

**Table 4: Footes Find gold deposit – Gold drill intercepts**

Hole	From (m)	Interval (m)	Au (g/t)
FFRC001	40	4	5.02
FFRC002	30	8	1.68
including	33	2	5.7



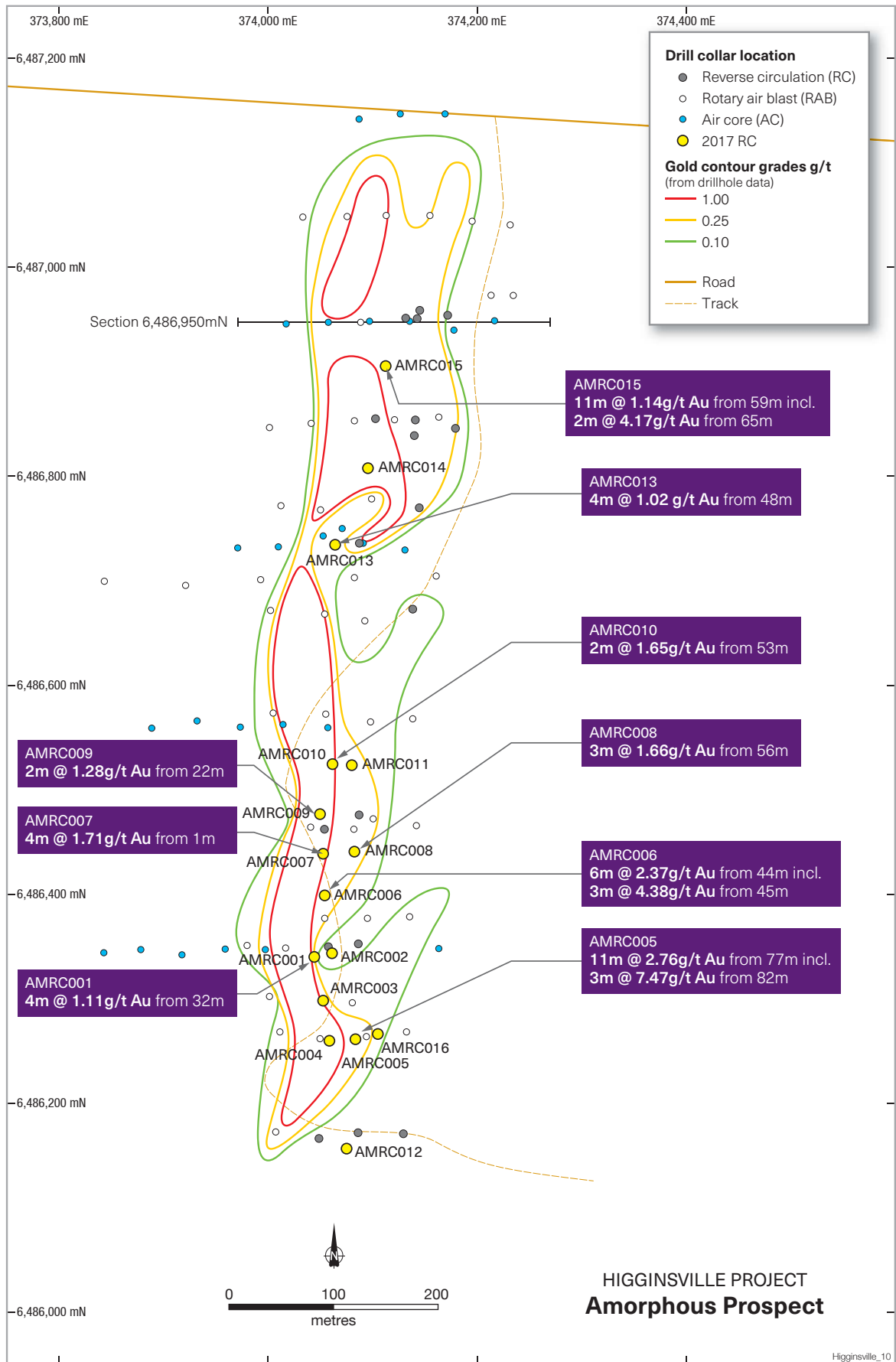
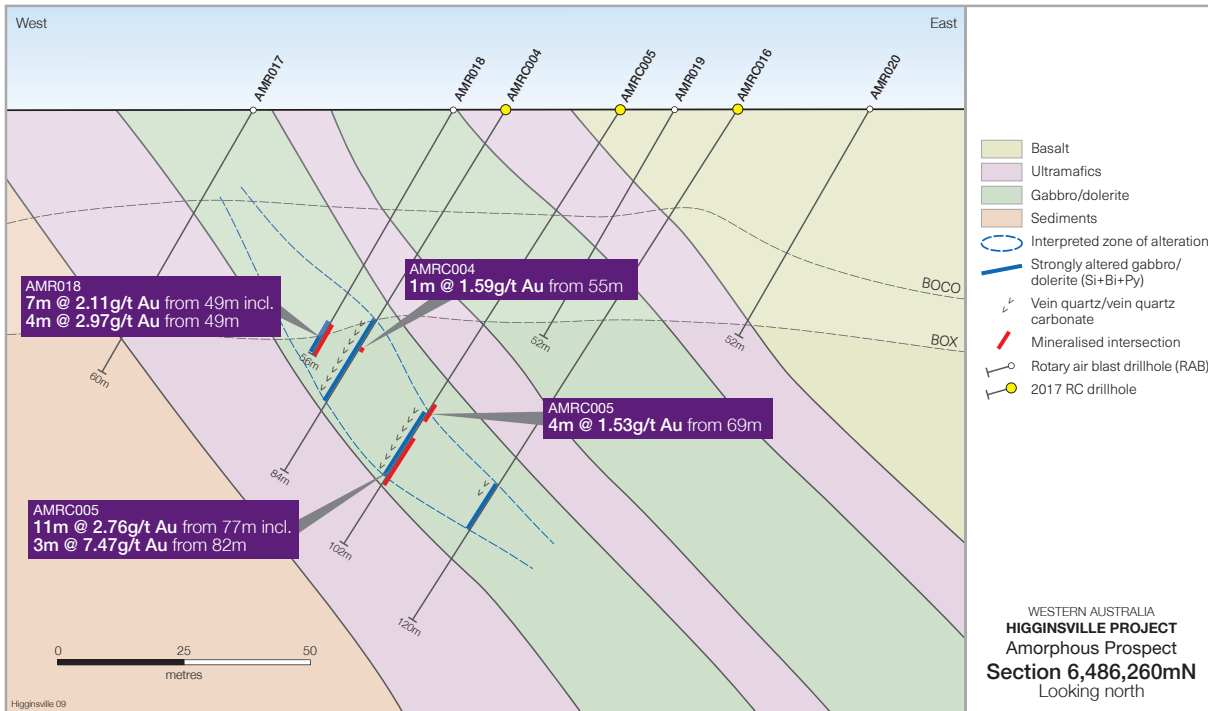


Figure 11 Amorphous Prospect showing drill collars, 2017 intercepts and gold contour grades.



**Figure 2** Amorphous Prospect – representative cross section showing interpreted geology and 2017 intercepts.

## Agreement Terms

Argonaut and Loded Dog Prospecting Pty Ltd executed the Eastern Goldfields Earn-In Joint Venture and Royalty Agreement on 7 February 2017. Under the agreement, Argonaut has the right to earn an 80% interest in the tenement package according to the following terms:

- Argonaut can earn a 51% interest in the tenement package in exchange for completing \$500,000 in exploration expenditure within two years of commencement; and
- Argonaut may earn a further 29% interest, for a total of 80%, for completing an additional \$1,500,000 in exploration expenditure within a further three years.
- Reimbursement of tenement acquisition expenses totalling \$250,000 are payable by Argonaut progressively under the agreement:
  - Reimbursement of \$100,000 is payable on execution of the definitive earn-in agreement;
  - Reimbursement of \$75,000 is payable on the first anniversary; and
  - Reimbursement of \$75,000 is payable on election to proceed to the second phase of the earn-in.
- An issue of ordinary fully paid Argonaut shares valued at \$50,000 was issued on execution of the definitive earn-in agreement.

The earn-in agreement is currently in the first phase.

# Crescent Lake, Canada

(Argonaut 100%)

On 4 March 2016, Argonaut released details of the Crescent Lake Lithium Project to the ASX. The initial acquisition included the Falcon Lake and Zigzag areas. On 8 June 2016, Argonaut announced the grant of 22 additional claims in the Crescent Lake area. These claims are 100% held by Argonaut.

On 28 February 2017, Argonaut exercised its option to acquire 100% of the Falcon Lake and Zigzag claims.

Argonaut is prepared to divest its portfolio of lithium exploration assets and is considering its options in this regard.

## About Argonaut

Argonaut is an Australian Securities Exchange listed mineral exploration and development company. Argonaut operates the Torrens Iron Oxide Copper-Gold Joint Venture with Aeris Resources Ltd in South Australia, the Lumwana West copper-cobalt project in north-western Zambia and the Higginsville Gold project in Western Australia.

### **Lindsay Owler**

Director and CEO

Argonaut Resources NL

*Sections of information contained in this report that relate to Exploration Results were compiled or supervised by Mr Lindsay Owler BSc, MAusIMM who is a Member of the Australasian Institute of Mining and Metallurgy and is a full-time employee of Argonaut Resources NL. Mr Owler holds shares and options in Argonaut Resources NL, details of which are disclosed in the Company's 2017 Annual Report. Mr Owler has sufficient experience which is relevant to the style of mineral deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the "Australasian Code for Reporting of Mineral Resources and Ore Reserves". Mr Owler consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.*

*The information regarding Resource definition and Exploration Potential for the Kroombit deposit is extracted from a report entitled 'Maiden resource estimate announced for Queensland zinc-copper project'. This report was released on 11 June 2009 and is available to view on [www.asx.com.au](http://www.asx.com.au). The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources or Ore Reserves that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.*

# Tenement Schedule

**Table 1 – Summary of mining tenements**

South Australian Mineral Exploration Licences						
Tenement	Granted	Expiry	Area (km <sup>2</sup> )	Locality	Licensee	Interest
EL 5998	21/05/2017	20/05/2019	33	Campfire Bore	Coombedown Resources Pty Ltd	10% <sup>1</sup>
EL 5212 <sup>3</sup>	05/11/2012	04/11/2017	481	Alford	Kelaray Pty Ltd	100%
EL 5336	04/06/2013	03/06/2018	27	Myrtle Springs	Kelaray Pty Ltd	100%
EL 5614	18/08/2014	17/08/2019	295	Lake Torrens	Kelaray Pty Ltd	30%
EL 5732	18/10/2015	17/10/2020	104	Sandstone	Coombedown Resources Pty Ltd	10% <sup>1</sup>
EL 5798	02/06/2016	01/06/2018	997	Lake Blanche area	Kelaray Pty Ltd	100%
EL 5796	02/06/2016	01/06/2018	997	Petermorra Creek area	Kelaray Pty Ltd	100%
EL 5937	30/03/2017	29/03/2019	794	West Lake Torrens	Kelaray Pty Ltd	100%
EL5945	20/04/2017	19/04/2019	221	Murdie	Kelaray Pty Ltd	100%

Queensland Mining Lease						
Tenement	Granted	Expiry	Area (km <sup>2</sup> )	Locality	Licensee	Interest
ML 5631	16/05/1974	31/05/2026	0.32	Kroombit	Kelaray Pty Ltd	100%

Queensland Mineral Development Licence						
Tenement	Granted	Expiry	Area (km <sup>2</sup> )	Locality	Licensee	Interest
MDL 2002	03/08/2016	02/08/2021	0.64	Kroombit	Kelaray Pty Ltd	100%

Zambian Large Scale Exploration Licence Application						
Tenement	Applied	Expiry	Area (km <sup>2</sup> )	Locality	Licensee	Interest
22399-HQ-LEL4	29/12/2017	28/12/2021	568	North Western Province	Mwombezhi Resources Ltd	90%

Ontario Unpatented Mining Claims						
Tenement	Granted	Expiry	Area (km <sup>2</sup> )	Locality	Licensee	Interest
4244211 <sup>2</sup>	27/10/2008	27/10/2019	1.94	Crescent Lake - Zigzag	Canadian Orebodies Inc.	100%
4244212 <sup>2</sup>	27/10/2008	27/10/2019	2.56	Crescent Lake - Zigzag	Canadian Orebodies Inc.	100%
4244213 <sup>2</sup>	27/10/2008	27/10/2019	2.56	Crescent Lake - Zigzag	Canadian Orebodies Inc.	100%
4252421 <sup>2</sup>	09/12/2009	09/12/2018	2.56	Crescent Lake - Zigzag	Canadian Orebodies Inc.	100%
4213186 <sup>2</sup>	24/09/2009	24/09/2019	2.56	Crescent Lake - Zigzag	Canadian Orebodies Inc.	100%
4213187 <sup>2</sup>	24/09/2009	24/09/2019	2.24	Crescent Lake - Zigzag	Canadian Orebodies Inc.	100%
4229526 <sup>2</sup>	24/09/2009	24/09/2019	1.93	Crescent Lake - Zigzag	Canadian Orebodies Inc.	100%
4252441 <sup>2</sup>	09/12/2009	09/12/2018	1.33	Crescent Lake - Falcon Lake	Canadian Orebodies Inc.	100%
4252442 <sup>2</sup>	09/12/2009	09/12/2018	0.64	Crescent Lake - Falcon Lake	Canadian Orebodies Inc.	100%
4250593 <sup>2</sup>	17/07/2009	17/07/2018	2.56	Crescent Lake - Falcon Lake	Canadian Orebodies Inc.	100%
4250594 <sup>2</sup>	17/07/2009	17/07/2018	2.56	Crescent Lake - Falcon Lake	Canadian Orebodies Inc.	100%
4250595 <sup>2</sup>	17/07/2009	17/07/2018	2.56	Crescent Lake - Falcon Lake	Canadian Orebodies Inc.	100%
4276304 <sup>2</sup>	22/03/2016	22/03/2019	2.53	Greenbush Lake	Canadian Orebodies Inc.	100%
4276305 <sup>2</sup>	22/03/2016	22/03/2019	2.39	Greenbush Lake	Canadian Orebodies Inc.	100%
4276306 <sup>2</sup>	22/03/2016	22/03/2019	2.56	Greenbush Lake	Canadian Orebodies Inc.	100%
4282315	01/04/2016	01/04/2019	2.55	Crescent Lake - North Jackfish	Sunrise Canada Inc.	100%
4282316	01/04/2016	01/04/2019	2.55	Crescent Lake - North Jackfish	Sunrise Canada Inc.	100%
4282317	01/04/2016	01/04/2019	2.52	Crescent Lake - North Jackfish	Sunrise Canada Inc.	100%
4282318	01/04/2016	01/04/2019	2.52	Crescent Lake - North Jackfish	Sunrise Canada Inc.	100%
4282319	01/04/2016	01/04/2019	2.52	Crescent Lake - North Jackfish	Sunrise Canada Inc.	100%
4282320	01/04/2016	01/04/2019	2.55	Crescent Lake - North Jackfish	Sunrise Canada Inc.	100%
4282321	01/04/2016	01/04/2019	2.55	Crescent Lake - North Jackfish	Sunrise Canada Inc.	100%
4282322	01/04/2016	01/04/2019	2.55	Crescent Lake - North Jackfish	Sunrise Canada Inc.	100%
4282323	01/04/2016	01/04/2019	2.51	Crescent Lake - North Jackfish	Sunrise Canada Inc.	100%
4282324	01/04/2016	01/04/2019	2.55	Crescent Lake - North Jackfish	Sunrise Canada Inc.	100%
4282325	01/04/2016	01/04/2019	2.55	Crescent Lake - North Jackfish	Sunrise Canada Inc.	100%
4282326	01/04/2016	01/04/2019	2.51	Crescent Lake - North Jackfish	Sunrise Canada Inc.	100%

**Ontario Unpatented Mining Claims**

Tenement	Granted	Expiry	Area (km <sup>2</sup> )	Locality	Licensee	Interest
4282327	01/04/2016	01/04/2019	2.4	Crescent Lake - North Jackfish	Sunrise Canada Inc.	100%
4282328	01/04/2016	01/04/2019	2.55	Crescent Lake - North Jackfish	Sunrise Canada Inc.	100%
4282329	01/04/2016	01/04/2019	2.53	Crescent Lake - North Jackfish	Sunrise Canada Inc.	100%
4282330	01/04/2016	01/04/2019	2.42	Crescent Lake - North Jackfish	Sunrise Canada Inc.	100%
4282331	01/04/2016	01/04/2019	1.47	Crescent Lake - North Jackfish	Sunrise Canada Inc.	100%
4282332	01/04/2016	01/04/2019	2.3	Crescent Lake - North Jackfish	Sunrise Canada Inc.	100%
4282333	01/04/2016	01/04/2019	2.51	Crescent Lake - North Jackfish	Sunrise Canada Inc.	100%
4282334	01/04/2016	01/04/2019	2.59	Crescent Lake - North Jackfish	Sunrise Canada Inc.	100%
4282335	01/04/2016	01/04/2019	2.52	Crescent Lake - North Jackfish	Sunrise Canada Inc.	100%
4282336	01/04/2016	01/04/2019	2.49	Crescent Lake - North Jackfish	Sunrise Canada Inc.	100%
4279256	15/04/2016	15/04/2019	2.53	Superb Lake	Sunrise Canada Inc.	100%
4279257	15/04/2016	15/04/2019	2.55	Superb Lake	Sunrise Canada Inc.	100%
4279258	15/04/2016	15/04/2019	2.55	Superb Lake	Sunrise Canada Inc.	100%
4279259	15/04/2016	15/04/2019	2.55	Superb Lake	Sunrise Canada Inc.	100%
4279260	15/04/2016	15/04/2019	2.55	Superb Lake	Sunrise Canada Inc.	100%
4279261	15/04/2016	15/04/2019	2.57	Superb Lake	Sunrise Canada Inc.	100%
4279262	15/04/2016	15/04/2019	2.56	Superb Lake	Sunrise Canada Inc.	100%
4279263	15/04/2016	15/04/2019	2.55	Superb Lake	Sunrise Canada Inc.	100%
4279264	15/04/2016	15/04/2019	2.55	Superb Lake	Sunrise Canada Inc.	100%
4279265	15/04/2016	15/04/2019	2.55	Superb Lake	Sunrise Canada Inc.	100%

Western Australian Mineral Exploration Licences						
Tenement	Granted	Expiry	Area (km <sup>2</sup> )	Locality	Licensee	Interest
E28/2513 <sup>2</sup>	06/07/2016	05/07/2021	64	Torquata	Loded Dog Prospecting Pty Ltd	100%
E15/1484 <sup>2</sup>	18/07/2016	17/07/2021	12	Nawock-Hayes Hill	Loded Dog Prospecting Pty Ltd	100%
P63/2071 <sup>2</sup>	24/04/2017	23/04/2021	1.37	Hayes Hill	Loded Dog Prospecting Pty Ltd	100%
P63/2072 <sup>2</sup>	24/04/2017	23/04/2021	1.27	Hayes Hill	Loded Dog Prospecting Pty Ltd	100%
P63/2073 <sup>2</sup>	24/04/2017	23/04/2021	1.54	Hayes Hill	Loded Dog Prospecting Pty Ltd	100%
E15/1509 <sup>2</sup>	03/05/2017	02/05/2022	3	Eundynie	Loded Dog Prospecting Pty Ltd	100%
E 15/1510 <sup>2</sup>	08/05/2017	07/05/2022	3	Eundynie	Loded Dog Prospecting Pty Ltd	100%
E 63/1773 <sup>2</sup>	08/05/2017	07/05/2022	21	Hayes Hill	Loded Dog Prospecting Pty Ltd	100%
E15/1523 <sup>2</sup>	08/05/2017	07/05/2022	42	Higginsville	Loded Dog Prospecting Pty Ltd	100%
E 15/1540 <sup>2</sup>	17/05/2017	16/05/2022	9	Higginsville	Loded Dog Prospecting Pty Ltd	100%
P15/6029 <sup>2</sup>	04/07/2017	03/07/2021	1.2	Higginsville	Loded Dog Prospecting Pty Ltd	100%
P15/6030 <sup>2</sup>	25/05/2017	24/05/2021	1.2	Higginsville	Loded Dog Prospecting Pty Ltd	100%
P15/6031 <sup>2</sup>	25/05/2017	24/05/2021	1.2	Higginsville	Loded Dog Prospecting Pty Ltd	100%
P15/6032 <sup>2</sup>	25/05/2017	24/05/2021	1.2	Higginsville	Loded Dog Prospecting Pty Ltd	100%
E15/1489 <sup>2</sup>	14/08/2017	13/08/2022	52	Higginsville	Loded Dog Prospecting Pty Ltd	100%
P63/2077 <sup>2</sup>	26/10/2017	25/10/2021	0.7	Hayes Hill	Loded Dog Prospecting Pty Ltd	100%
E15/1588 <sup>2</sup>	1/12/2017	30/11/2022	61	Higginsville	Loded Dog Prospecting Pty Ltd	100%

**Table 2 – Summary of mining tenements acquired in Quarter**

No tenements were acquired in the March 2018 Quarter.

**Table 3 – Summary of mining tenements surrendered in Quarter**

No tenements were surrendered in the March 2018 Quarter.

<sup>1</sup> Kelaray holds a 33% interest in Coombedown Resources Pty. Ltd.

<sup>2</sup> Under option agreement

<sup>3</sup> Renewal application

## 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

Argonaut Resources NL

### ABN

97 008 084 848

### Quarter ended ("current quarter")

31 March 2018

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (9 months) \$A'000
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers		
1.2 Payments for		
(a) exploration & evaluation	(215)	(682)
(b) development		
(c) production		
(d) staff costs (including exploration staff)	(171)	(512)
(e) administration and corporate costs	(217)	(903)
1.3 Dividends received (see note 3)		
1.4 Interest received	4	10
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)		
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(599)</b>	<b>(2,087)</b>
<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) property, plant and equipment	(3)	(6)
(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 (9 months) \$A'000</b>
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)		
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>(3)</b>	<b>(6)</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of shares	552	3,027
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	(15)	(138)
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)		
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>537</b>	<b>2,889</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	923	62
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(599)	(2,087)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(3)	(6)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	537	2,889
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>858</b>	<b>858</b>

<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	858	951
5.2 Call deposits	-	-
5.3 Bank overdrafts	-	-
5.4 Other (credit card)	-	(28)
<b>5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>858</b>	<b>923</b>

<b>6. Payments to directors of the entity and their associates</b>	<b>Current quarter \$A'000</b>
6.1 Aggregate amount of payments to these parties included in item 1.2	121
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	

Remuneration and fees paid to Directors and their related entities.

<b>7. Payments to related entities of the entity and their associates</b>	<b>Current quarter \$A'000</b>
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

<b>8. Financing facilities available</b> <i>Add notes as necessary for an understanding of the position</i>	<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)	-	-
8.4 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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<b>9. Estimated cash outflows for next quarter</b>	<b>\$A'000</b>
9.1 Exploration and evaluation	300
9.2 Development	-
9.3 Production	-
9.4 Staff costs	167
9.5 Administration and corporate costs	106
9.6 Other (provide details if material)	-
<b>9.7 Total estimated cash outflows *</b>	<b>573</b>

Note that the company has successfully raised capital of \$5.5 million (before costs) post 31 March 2018. Refer to ASX announcement dated 23 April 2018 for further details.

<b>10. Changes in tenements (items 2.1(b) and 2.2(b) above)</b>	<b>Tenement reference and location</b>	<b>Nature of interest</b>	<b>Interest at beginning of quarter</b>	<b>Interest at end of quarter</b>
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.

[electronic lodgement]

Sign here: .....

Date: 30 April 2018

Director/Company secretary

Print name: **Andrew Bursill****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.