

Second Quarter Activities Report

For the three months ending 31 December 2017

All major projects progressing

- Grant of Eyre Peninsula Graphite Project Mining Tenements.
 - Acquisition of Carbon Allotropes online graphite and graphene marketplace.
 - Appointment of graphene expert Dr Mohammad Choucair as CEO.
 - Copper footprint at Blue Hills significantly expanded through discovery and tenement acquisition.
 - Completion of heavily oversubscribed SPP – company now well funded.
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Commenting on the second quarter activities Greg English, Executive Chairman of Archer Exploration, said, “Archer has made considerable progress during the Quarter in the development of the Company’s graphite and graphene business. The long-awaited grant of the Eyre Peninsula Graphite Project Mining Tenements is a key step in the development of this exciting Project. The mining tenements allow for the mining and processing of approximately 10,000 tonnes per annum of ultra-high-quality graphite and up to 100 tpa of graphene”.

“Archer has been exploring opportunities to expand our graphite business and during the Quarter we acquired the Carbon Allotropes online graphite and graphene marketplace and appointed Dr Mohammad Choucair as CEO. The acquisition of Carbon Allotropes is a key step in Archer’s strategy to vertically integrate our graphite operations. It will add a key sales platform for our proposed graphite and graphene manufacturing operations.” said Mr English.

“Dr Choucair is a world-renowned graphene expert and was the first person in the world to directly synthesise graphene (the thinnest material known) in gram-scale quantities as a bulk powder – now a common goal amongst researchers. The appointment of Dr Choucair as CEO will allow Archer to expedite the development of the Company’s graphite and graphene business” said Mr English.

“Infill rock chip and soil sampling completed at the Blue Hills Copper Prospect confirms the extent of the Hood, Hawkeye and Katniss prospects. The latest results continue to reinforce the copper potential at Blue Hills, indicating good continuity. New copper mineralisation discovered to the south east suggests further continuity along strike and under cover” said Mr English.

“During the Quarter Archer announced that it raised \$3.0 million from a heavily over-subscribed Share Purchase Plan (SPP). The Company is now well funded and able to pursue its strategy of developing an advanced material technology business.” Mr English concluded.

Quarterly Activities to 31 December 2017

Archer Exploration Limited (ASX: AXE) (**Archer** or **Company**) is pleased to report on its activities for the three-month period ending 31 December 2017 (**Quarter**).

Advanced materials business

The appointment of Dr Mohammad Choucair as CEO and the purchase of the Carbon Allotropes online graphite/graphene market place has provided Archer with the opportunity to expedite the development of a graphene and advanced materials business. To this end, the Company's vision is to use advanced materials for the betterment of society, in the areas of:

- Reliable energy.
- Quantum technologies.
- Human health.

Archer has identified opportunities in these market segments and is currently pursuing opportunities to develop suitable technologies. Each of these markets have been targeted due to their large market size and because of the competitive advantages we have in each of these sectors.

Eyre Peninsula Graphite Project

On 8 December 2017, Archer announced that the South Australian Government had granted to Pirie Resources Pty Ltd (Pirie), a wholly owned subsidiary of Archer, the following mining tenements (together the **Mining Tenements**):

- Campoona Mining Lease, the site of the proposed Campoona Shaft graphite mine (ML 6470). ML 6470 covers an area of approximately 68ha and includes the Campoona Shaft graphite deposit.
- Sugarloaf Graphite Processing Facility Miscellaneous Purposes Licence (MPL 150). MPL 150 allows for the processing of graphite and graphene at nearby Sugarloaf (including treatment plant, site office, power station, workshop, water supply and tailings storage facility).
- The Pindari Borefield Miscellaneous Purposes Licence (MPL 151) which allows the Company to source saline processing water from the nearby Pindari Borefield.

The Mining Tenements collectively allow for the mining and processing of approximately 10,000 tonnes per annum of ultra-high-quality graphite and up to 100 tpa of graphene.

The grant of the Mining Tenements is a very significant milestone for Archer in the development of the Campoona Shaft graphite deposit. The Mining Tenements form part of the Company's 100% owned Eyre Peninsula Graphite Project (**EPGP**), located approximately 20km from Cleve, South Australia.

The next stage in the development of the EPGP is for Archer to complete a program for environment protection and rehabilitation (PEPR) and gain all other outstanding approvals before mining activities can commence. Under the South Australian Mining Act, the PEPR must be lodged with the SA Government within 12 months of the grant of the Mining Tenements.



Figure 1: Dr Mohammad Choucair and the Hon, Tom Koutsantonis, SA Minister for Minerals and Energy, after announcement of the grant of the mining tenements.

Carbon Allotropes

During the Quarter Archer completed the purchase of 100% ownership of Carbon Allotropes, an online graphite and graphene market place that sells graphene and graphite products to international and domestic customers.

Carbon Allotropes is a natural extension to Archer's Eyre Peninsula Graphite Project providing a critical distribution capability. Expected benefits from the combined group include:

- Enhanced service offering – Carbon Allotropes online graphite and graphene sales and consulting services are highly complementary to Archer, and will benefit from Archer's development of the Eyre Peninsula Graphite Project.
- Cross-sell and up-sell opportunities – to new and existing, global graphite and graphene customers.
- Strengthened competitive position by combining distribution, production and supply.
- Accelerated growth in the graphite and graphene space – increased synergies and opportunities for Archer and Carbon Allotropes in fast growing international and domestic markets.

Carbon Allotropes' clients are synergistic with Archer's potential clients and include multinational companies, research institutions and development networks in Australia, Europe, the US and Asia. The business invoices approximately 25 clients per year, being a mix of large corporate and e-commerce businesses.

Archer's proposed integrated graphite mine and graphite / graphene processing facility and Carbon Allotropes' businesses are highly aligned in relation to target clients, creating an opportunity for rapid growth both domestically and internationally.

Both Archer and Carbon Allotropes are focussed on supplying graphite and graphene based products and will serve the same type of customers. Carbon Allotropes' registered consumers and clients will benefit from Archer's development of the EPGP in South Australia which will allow Archer to supply high-quality graphite and graphene products. Archer will benefit from Carbon Allotropes' expertise in attracting and engaging with consumers and generating leads.

Archer believes that, in time, there will be substantial product and revenue synergies, along with efficiencies from combining and strengthening the two companies.

Appointment of Dr Mohammad Choucair as CEO

The Carbon Allotropes business was founded and operated by Dr Mohammad Choucair who was appointed as Archer Chief Executive Officer (effective 1 December 2017). Dr Choucair is responsible for continuing Carbon Allotropes' growth and the development of Archer's Eyre Peninsula Graphite Project.

Highlights of Dr Choucair's work and experience, include:

- Dr Choucair was the first person in the world to directly synthesise graphene. This work was a paradigm shift because until then, graphene could only be isolated from graphite. The result was a repeatable, simple, and an economical way to scale the production of graphene.
- The development of a nanoscale device as part of a quantum computer that could be capable of indirectly addressing problems associated to human health and the environment. He invented the carbon material that formed the basis of the device.
- Dr Choucair has also been actively involved in the enhancement of lithium ion battery storage devices and demonstrated some of the first examples of graphene application in batteries. The graphene synthesised during his PhD research improved the performance of new-age lithium ion batteries, which led to enormous interest in energy storage devices that use bulk, solid forms of graphene.
- Dr Choucair has synthesised a novel class of metal-decorated fullerenes ('fullerides') that are capable of reversible hydrogen storage with potential applications in hydrogen fuel cells and industrial catalysis.
- 2011 winner of the coveted Cornforth Medal from the Royal Australian Chemical Institute and recognised by Virgin Australia as one of the Top Australian Stars of 2016.
- Dr Choucair is currently serving a 2-year mandate as Councillor on the World Economic Forum's Global Future Council for Advanced Materials. The Council is tasked with developing innovative ideas, frameworks, processes and recommendations for the effective, value based governance of emerging technologies.

ARC Graphene Research Hub

In mid-2017, Archer entered into an agreement with the Australian Research Council Research Hub for Graphene Enabled Industry Transformation (ARC Graphene Research Hub) for the development of scalable graphene production processes for the Company's numerous graphite deposits.

The Graphene Hub's work for Archer continued during the Quarter. Archer intends to meet with The University of Adelaide and re-focus the efforts of the Graphene Hub's work for the Company on areas of interest identified by Dr Choucair. The appointment of Dr Choucair as CEO will allow Archer to specify projects and develop associated IP that is consistent with our future strategy.

Blue Hills Copper

The Blue Hills Copper Prospect is a large copper anomaly covering an area of 25km², located approximately 40km north of Burra, SA. During the Quarter, Archer completed an infill soil sampling survey as part of an ongoing program to assess the geometry, grade characteristics and extent of the copper mineralisation at Blue Hills. The infill sampling effectively reduced the soil sample point spacing at the key target areas to 50m x 50m (from 100m x 100m or wider).

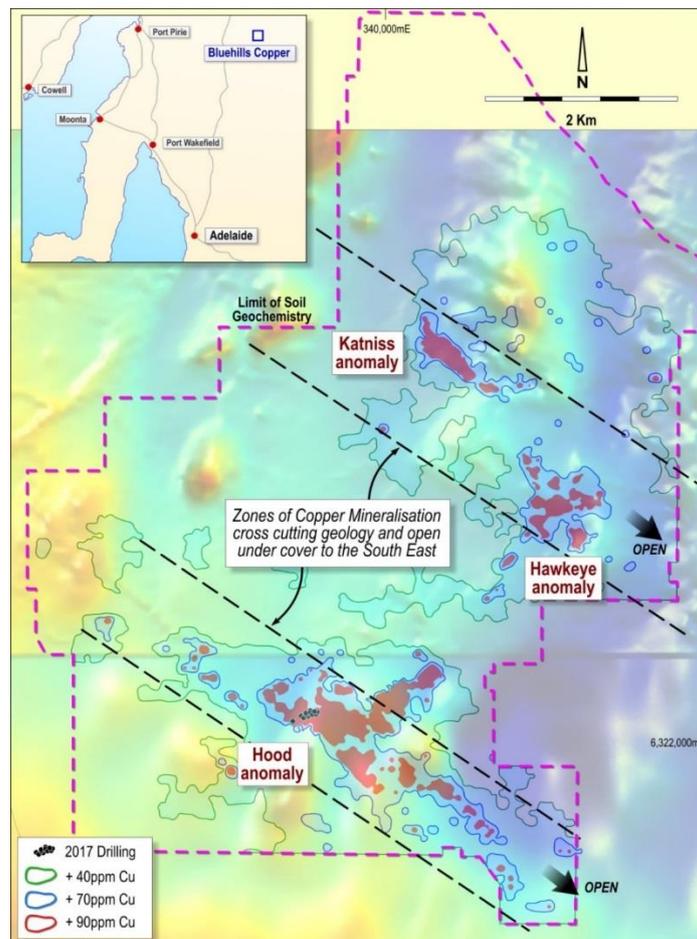


Figure 2: Blue Hills copper mineralisation contours overlain on magnetic image.

Over 4,700 samples were collected over a 40km² area encompassing the three large copper anomalies, namely Hood, Hawkeye and Katniss. The results from the infill survey confirm that these three anomalies are situated on two large, parallel copper mineralised corridors that cross cut the geographical area (Figure 2).

The high-grade copper mineralisation appears to cross several geological formations, rather than being constrained to one formation. The Hood anomaly features in one corridor whereas the Katniss and Hawkeye anomalies are in the other. These NW – SE mineralised corridors represent a large target area for future copper exploration (Figure 3). The fact that these anomalies cross different geological units suggests that they are associated late parallel cross-cutting features.

The latest results support the Company's model that cross-cutting structures provide pathways for the mineralised fluids from the larger 25km² intrusive body. The soil anomalies at Hood and Hawkeye are open to the south east within Archer's tenement area. The Company has recently completed an electro-magnetic survey over the anomalies. This data will then be processed and combined with the existing drill and soil sampling data, to identify possible future drill targets.

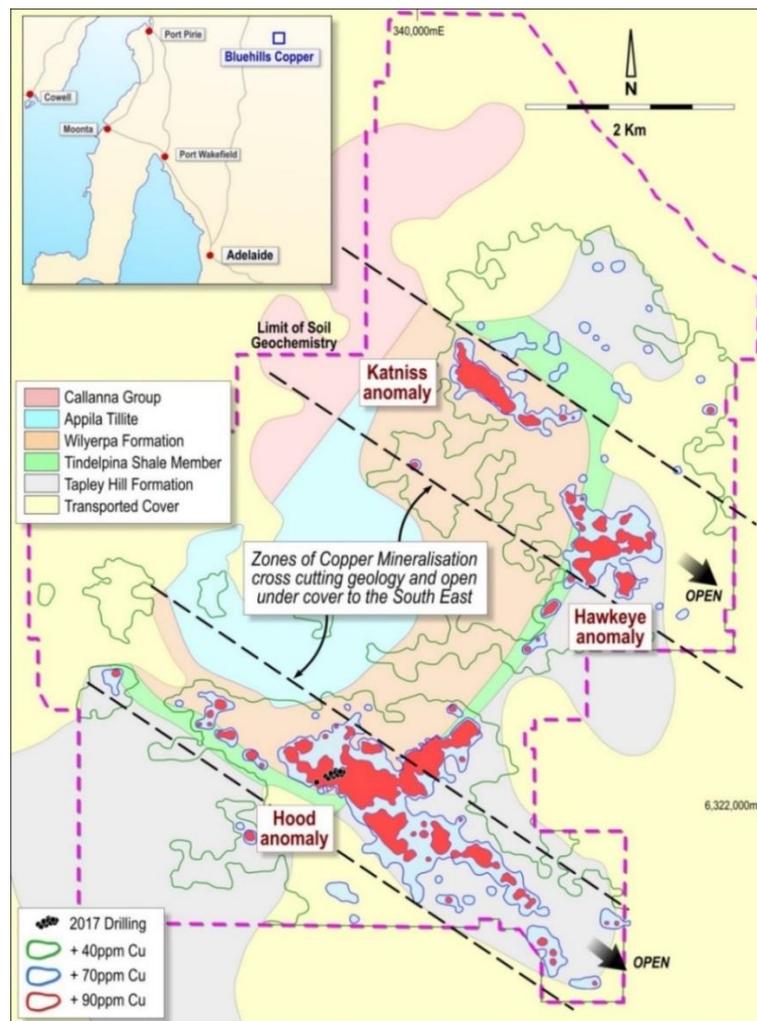


Figure 3: Blue Hills location map showing copper mineralisation and areal extent of Blue Hills magnetic anomaly.

North Broken Hill Cobalt Project

Background

The North Broken Hill Project (Figure 4) is located approximately 20km north of Broken Hill and is situated along strike from Cobalt Blue Ltd's (ASX:COB) Thackaringa Cobalt Project.

The North Broken Hill tenements collectively cover a large area of approximately 450km² and early exploration work has focussed on visiting previously identified cobalt outcrops and the discovery of new regional cobalt, copper and gold targets.

Exploration to date at North Broken Hill has been highly successful with Archer identifying four large targets areas at Purnamoota, Himalaya, Yancowinna and Golden King West (Figure 4).

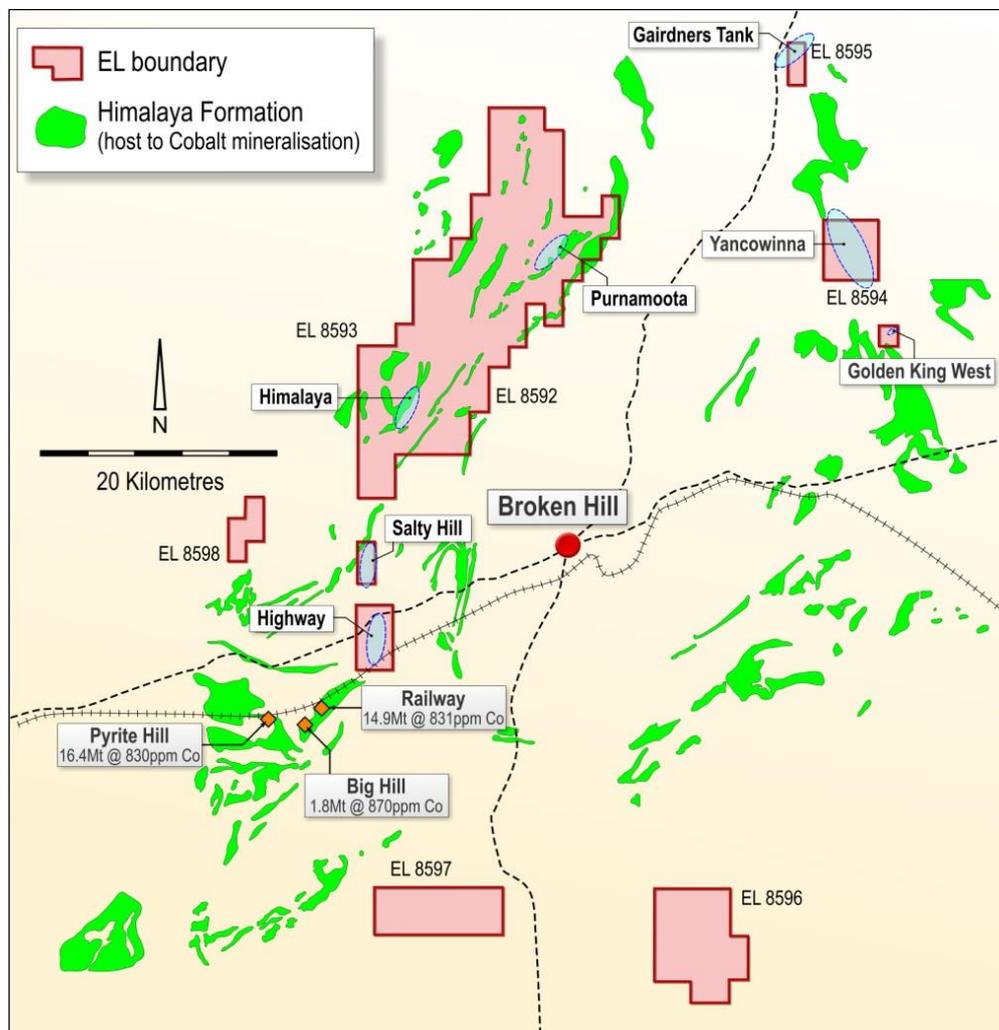


Figure 4: Location of reconnaissance targets within the Broken Hill tenements

Previous rock chip sampling and mapping by Archer has identified high grade cobalt at all four prospects with additional high-grade copper also discovered at Purnamoota, Yancowinna and Golden King (Table 1).

The North Broken Hill tenement area is divided into nine distinct areas (Figure 4) however, Archer has only explored seven of these areas with the southern tenements EL 8596 and EL 8597 yet to be explored. Results from the seven areas explored to date have been exceptional with mineralisation identified across large areas.

The exploration results to date, including the latest results reported during the Quarter, are summarised below:

Name	Style of mineralisation	Strike length	Peak grade
Purnamoota	Great Eastern	1km	0.15%Co and 3.45% Cu
Himalaya	Himalaya	3km	0.16%Co
Yancowinna	Great Eastern	1.5km	0.13% Co and 1.1% Cu
Golden King West	Great Eastern	300m	0.15% Co and 0.6% Cu
Highway	Great Eastern	unknown	0.1% Co and 29.4% Cu
Salty Hill	Great Eastern	unknown	0.09% Co and 7.5% Cu
Gairdner's Tank	Great Eastern	unknown	0.06% Co

Table 1: Summary of exploration results

Work completed during the Quarter

Exploration during the Quarter was focussed on the following areas:

- *Highway prospect*: located approximately 10km northwest of Cobalt Blue's Thackaringa Project. Reconnaissance rock chip sampling by Archer reported grades of up to 0.1% (1,000ppm) cobalt and up to 29.4% copper (Figure 5).

The mineralisation at Highway appears to be associated with retrograde schist zones within a granite, with the extent of the mineralised zone yet to be determined as the mineralised horizon disappears under shallow cover. Archer intends to revisit the area as part of a more advanced future exploration program.

- *Salty Hill prospect*: located approximately 15km northwest of the Thackaringa Project. Sampling at Salty Hill identified clusters of cobalt rocks grading up to 900ppm (0.09%) cobalt. In addition to cobalt at Salty Hill Archer intends to test the magnetic high located in the southwest corner of the tenement (Figure 6).
- Extensions to the previously discovered *Purnamoota prospect*: Sampling to the northeast of the previously discovered Purnamoota prospect has identified additional mineralisation and has increased the known area of Purnamoota. The latest rock chip sampling has identified rocks, reporting up to 0.15% cobalt.

Archer has so far mapped Purnamoota over a 1km strike length and the Company intends to revisit this prospect and conduct infill rock chip and soil surveys to better define the extent and grade of the mineralised zone.

- Gairdner's Tank prospect:** located approximately 40km northwest of Broken Hill. Cobalt mineralisation was identified at Gairdner's Tank with a maximum cobalt rock chip value of 600ppm cobalt and 0.24% copper reported. Archer intends to revisit Gairdner's Tank once the exploration work at EL 8596 and EL 8597 is completed however, Gairdner's Tank is not a high priority target at this stage.

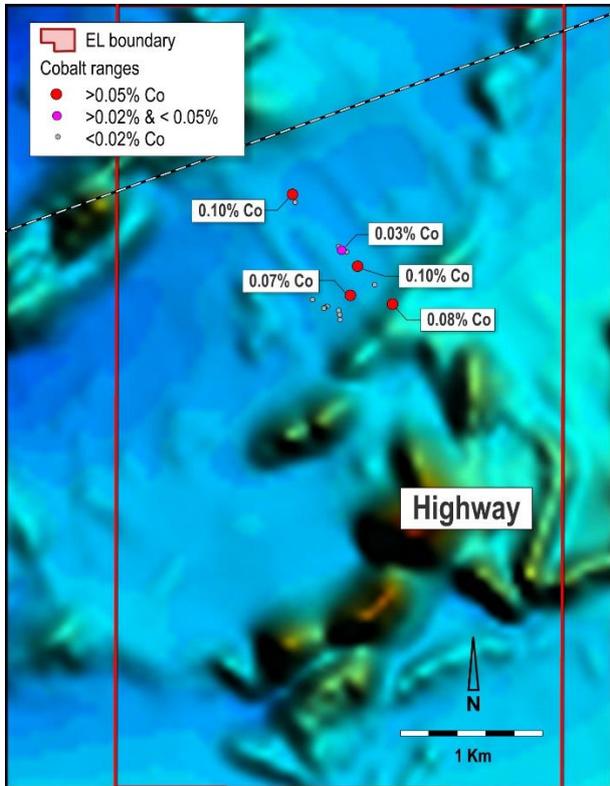


Figure 5: Cobalt results from rock chip sampling at Highway over magnetic image

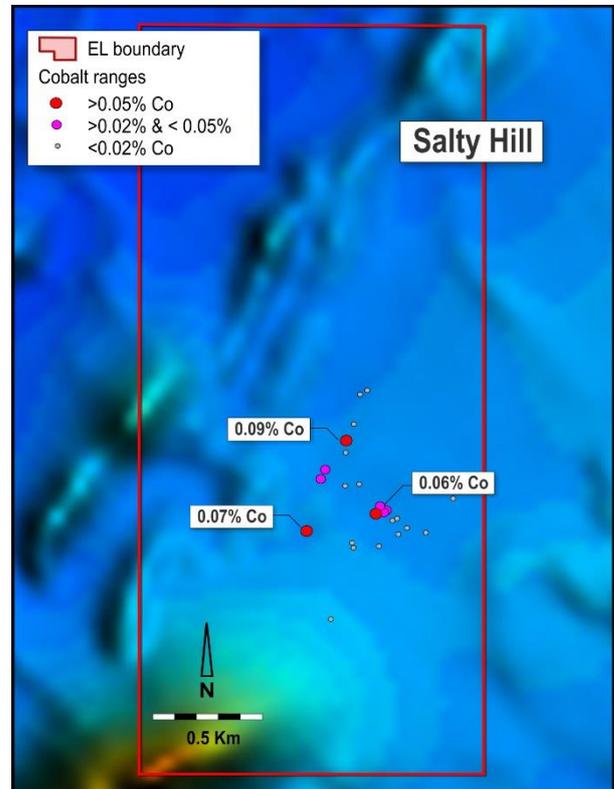


Figure 6: Cobalt results from rock chip sampling at Salty over magnetic image

Exploration around Broken Hill has traditionally focussed on the discovery of silver lead zinc with historic explorers determined to find repetitions of the Broken Hill orebody. However, in recent years explorers, including Archer, have become aware of the potential for the area to host copper mineralisation. For example, at Purnamoota Archer has identified an anomaly that extends for a 1km and contains copper up to 3.45%, whilst Yancowinna has a strike length of 1.5km. Both Purnamoota and Yancowinna extend under cover and Archer believes there is potential to extend the dimensions of these prospects with further exploration.

Yarcowie Cobalt Project

The Yarcowie Project is located approximately 20km east of the Tesla 100MW battery array at Jamestown, South Australia. The Yarcowie tenement area crosses the Barrier Highway and is within close proximity to existing rail, power, gas and other significant infrastructure.

On 8 November 2017 Archer announced the results from the maiden reconnaissance sampling program at Yarcowie. Rock chips were collected over a large area at Yarcowie with high grades ranging from 0.36% (3,600ppm) to 0.94% (9,400ppm) cobalt. Following the success of this first program, Archer undertook further exploration work involving geological

mapping and the collection of rock chips in proximity to the site of the previous rock chip sampling.

Archer announced on 6 December 2017 that cobalt mineralisation at Yarcowie was mapped over a length of 1km and a width of approximately 500 metres (Figure 7). Encouragingly, cobalt was discovered 1km to the southeast of the original cobalt discoveries suggesting that the mineralisation is more extensive than originally anticipated.

The vein sets that host the manganese and cobalt mineralisation were originally thought to be conformable to the geology (i.e. orientated in the same direction), however the discovery of cobalt over a larger area suggests that the mineralisation is in fact at right angles to the stratigraphy. This feature will require further exploration to better understand the structure, topographical features and geology that controls the cobalt mineralisation.

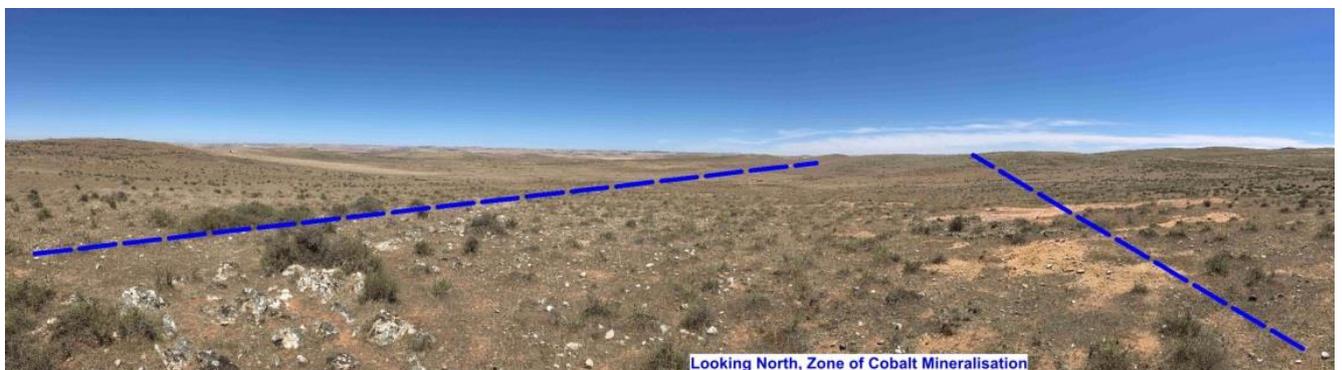


Figure 7: Standing at site of Sample Hill271117_15 (0.15% cobalt) looking north along conceptual mineralised corridor

Archer will continue to assess these latest results and plans to undertake further exploration in the first half of 2018 and report these results as they come to hand. The data from the rock chip sampling will be integrated with available geophysical data to identify additional exploration target areas.

Ketchowla and Jamison Tank Manganese Projects

The Ketchowla Cobalt Manganese Project is located approximately 45km north of Burra, SA. Ketchowla is an outcropping fold structure that has been mapped over 20km and comprises the K1 to K9 prospects. Drilling by Archer in 2017 at K1 intersected near surface copper, cobalt and manganese mineralisation.

Jamison Tank is located adjacent to the proposed site of the Sugarloaf Graphite/Graphene Processing facility with part of the project area located within the property owned by Archer. Most of the Jamieson Tank Project is located within Archer's Waddikee tenement area and was original drilled by Monax Mining Limited.

During the Quarter Archer submitted manganese samples from each of Jamison Tank and Ketchowla for metallurgical test work to determine the ability to be able to extract manganese, cobalt other minerals from the samples. The Company received a draft report on this test work in early January and is waiting to receive the final report.

Leigh Creek Magnesia Project

Archer's Leigh Creek Magnesia Projects hosts the world's largest cryptocrystalline magnesite deposits. Discussions with potential offtake partners continued during the Quarter. No further magnesite exploration or metallurgical test work is planned for the next quarter.

Other Projects

No work was undertaken on any of the following projects during the Quarter:

- Spring Creek: the decision was made to relinquish this tenement.
- Beltana: a site visit was completed during the Quarter however, no exploration work was undertaken during the Quarter.
- Yanyarrie: no exploration work was undertaken during the Quarter.
- Collaby Hill: this tenement was relinquished during the Quarter.
- Leigh Creek PELA: no work was undertaken during the Quarter.

Corporate

Cash balance

The Company's cash balance at the end of the Quarter was \$3,331,000.

General meetings

The Company's Annual General Meeting (AGM) was held on 3 November 2017 and all resolutions were passed on a show of hands.

The Company held a General Meeting of shareholders at 10:00am (Adelaide time) on Wednesday, 24 January 2018 for the purpose of ratifying the issue of the SPP Options. This resolution was approved by shareholders.

Share Purchase Plan

During the Quarter Archer completed a Share Purchase Plan (**SPP**) whereby eligible shareholders were offered the opportunity to apply for new shares at a price of 7.5 cents per new shares. Shareholders who were allotted shares under the SPP were also eligible to apply for free options (**SPP Options**) for every two shares allotted under the SPP. The SPP Options have an exercise price of \$0.075 and expiry date of 28 February 2019.

The SPP was originally capped at \$2.25 million but was subsequently heavily oversubscribed and was closed early. The Company received valid applications for \$6,445,500 from 648 shareholders resulting in the Archer board raising the cap from \$2.25 million to \$3.0 million. SPP applications were scaled back with applicants receiving approximately 46.54% of the number of SPP shares for which they applied.

The follow-on SPP Options offer was closed on 12 January 2018 with Archer receiving applications for 18,639,125 SPP Options which were then allotted to shareholders on 22 January 2018.

Issued Capital

Time	Shares on issue	Options on issue	Performance Rights on issue
Start of Quarter	137,194,306	5,000,000 (Rix Options) ⁽¹⁾	1,500,000
New issues during Quarter	40,000,376 ⁽²⁾	Nil	3,000,000 ⁽³⁾
Forfeited/cancelled during the Quarter	Nil	Nil	Nil
End of Quarter	177,194,682	5,000,000 (Rix Options)	4,500,000
On issue at 24 January 2018	177,194,682	5,000,000 (Rix Options) 18,639,125 ⁽⁴⁾ (SPP Options)	4,500,000

Notes

- (1) Options issued to Paul Rix, a director, exercise price of \$0.15, expiry date of 31 January 2019 and subject to satisfaction of certain vesting conditions.
- (2) Ordinary shares issued to eligible shareholders under the SPP.
- (3) Performance Rights issued to Dr Mohammad Choucair as consideration for the purchase of the Carbon Allotropes business (refer ASX announcement 30/10/17).
- (4) SPP Options were allotted on 22/01/18.

For further information, please contact:

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List of Archer tenements

Tenement	Location	Commodity
South Australia		
EL 5920	Carappee Hill	Graphite
EL 5804 ⁽¹⁾	Wildhorse Plains	Graphite
EL 5815	Waddikee	Graphite
EL 5383	Mt Messenger	Graphite
EL 5791	Cockabidnie	Graphite
EL 5434	North Cowell	Graphite
EL 6019	Witchelina	Magnesite
EL 5730	Termination Hill	Magnesite
EL 5433	Burra North	Base Metals
EL 5794	Blue Hills	Copper / Gold
EL 5769	Napoleons Hat	Copper / Gold
EL 4869	Beltana	Barite
PELA 567	Beltana	Petroleum
EL 5870	Carpie Puntha	Graphite
EL 5909	Yanyarrie	Barite
EL 5935	Whyte Yarcowie	Cobalt / Copper
EL 6000	Pine Creek	Copper / Gold
New South Wales		
EL 8592	Morris's Blow	Cobalt / Copper
EL 8593	Broken Hill	Cobalt / Copper
EL 8594	Broken Hill	Cobalt / Copper
EL 8595	Broken Hill	Cobalt / Copper
EL 8596	Kanbarra	Cobalt / Copper
EL 8597	Kanbarra	Cobalt / Copper
EL 8598	Kanbarra	Cobalt / Copper
Tenements relinquished during, or after end, of Quarter		
EL 5553	Collaby Hill	Magnesite
EL 5540	Spring Creek ⁽²⁾	Copper
Tenements acquired during, or after end, of Quarter		
EL 6029	Altimeter	Copper / Gold
ML 6470	Campoona Shaft	Graphite mining
MPL 150	Sugarloaf	Graphite and graphene processing
MPL 151	Pindari	Process water for Sugarloaf

(1) All tenements are 100% held by wholly owned subsidiaries of Archer, except for EL 5804 where Archer has the right to explore for all minerals except for uranium.

(2) On 22/01/18 Archer submitted a form to relinquish this tenement however, this form is yet to be processed by SA Government.

Competent Person Statement

The exploration results reported herein, insofar as they relate to mineralisation, are based on information compiled by Mr. Wade Bollenhagen, Exploration Manager who is an employee of Archer Exploration Limited.

Mr. Bollenhagen is a Member of the Australasian Institute of Mining and Metallurgy who has more than twenty years' experience in the field of activity being reported. Mr Bollenhagen has sufficient experience which is relevant to the style of mineralisation and type of deposit 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" relating to the reporting of Exploration Results. Mr. Bollenhagen consents to the inclusion in the report of matters based on his information in the form and context in which it appears.