

Archer September 2014 Quarterly Activities Report



ASX Code: AXE

Directors

Greg English
Chairman

Gerard Anderson
Managing Director

Tom Phillips AM
Director (Non-Executive)

Alice McCleary
Director (Non-Executive)

Company Secretary

Damien Connor

Shares on Issue

84.3 million

Unlisted Securities on Issue

2.3 million Performance Rights

Key focus

Eyre Peninsula Graphite Project (includes Campoona, Sugarloaf and Waddikee)
Additional portfolio opportunities: magnesite, manganese, copper and gold.



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SEPTEMBER 2014 QUARTER HIGHLIGHTS

GRAPHITE

- Campoona Mine Lease Proposal (MLP) studies are 75% complete with submission to government planned in Q3 FY 2015.
- Samples of final Campoona concentrate are being evaluated by a number of companies with a view to either off-take or project investment opportunities.
- Archer purchased the Waddikee Tenement from Monax Mining Limited.
- The Company announced a combined graphite resource of 8.55Mt grading 9.0% Cg at a 5% Cg lower cut-off grade which is the largest JORC 2012 graphite resource in Australia and gives Archer a range of flake sizes suitable for a wide spread of end graphite users.
- Testing of Wilclo South and Francis samples recovered large, medium and fine flake graphite at commercial grades.
- Excellent progress continues to be made in graphene research indicating specific possible commercial opportunities available for Archer's graphite.

LEIGH CREEK MAGNESITE

- Ernst & Young is undertaking a strategic review of the Leigh Creek Magnesite Project. They finalised a detailed Information Memorandum and commenced the process of divestment and/or joint venture.
- Archer and MDL settled the outstanding legal dispute relating to Mt Hutton. No further legal issues remain.
- As part of the settlement Archer collected 97 archive boxes of technical reports on the magnesite deposits including the full Extractive Licence Application for Mt Hutton.

SPRING CREEK COPPER

- Preparations have been made to request access to the historic high grade copper mine (+10% Cu) for the purpose of diamond drill testing.

FINANCIAL

- Cash in bank on 30th September 2014 of \$4.048 million.
- \$1,080,000 was spent on exploration and project evaluation during the quarter.



Summary of September 2014 Quarter Exploration Activities

1. Campoona Mine Lease Proposal

Studies required to support the upcoming mining lease application and program for environmental protection and rehabilitation (PEPR) progressed throughout the Quarter. Refinements to the process design and inclusion of Pindari groundwater extended the estimated timeline for this submission by a few months. As at 30 September the MLP was approximately 75% completed.

Table 1. MLP Progress

Task	Work undertaken to date	Work in progress
Ecology	Spring & Winter baseline surveys	✓ Completed
	Impact assessment	✓ Completed
Air quality	Project reviewed & GAP analysis	✓ Completed
Hydrogeology	Desktop study completed	✓ Completed
Geochemistry	Draft report completed	✓ Further AMD testing underway
Socio-Economic & Community Consultation	Stakeholder engagement plan	✓ 7 x bi-monthly newsletters
	Community newsletters	✓ 7x CCC Meetings completed
	Bi-Monthly CCC meetings	✓ Community open day 17 th October
Surface Water	Desktop study	✓ Completed
Visual Amenity	Fieldwork completed	✓ Nearing completion
Tailings Management	Tailings workshop	✓ Tailings Option Assessment
	Detailed characterisation of tailings	✓ Characterisation almost complete
	Design	✓ Awaiting characterization studies
Mine Closure Plan	Information review & gap analysis	✓ Mine plan tendered and awarded
MLP & PEPR	Kick-off meeting Table of Contents	✓ Awaiting final mine plan and tailings review
Regulator Liaison	Meetings with government stakeholders undertaken	✓ Regular meetings
Permitting Review	Draft Permit Register completed in February 2014	✓ Completed
Cultural Heritage	Desktop cultural heritage study	✓ Completed
Noise	Review of various project documents and gap analysis	✓ Completed
Traffic	Desktop traffic study	✓ Completed

Completion of the Mine Lease Proposal (MLP) is dependent on finalization of the tailings assessment and the final Mine Plan and Mine Closure Plan. The MLP is now expected to be completed early in Q3 financial year 2015.



2. EYRE PENINSULA PROJECT JORC 2012 RESOURCE

On 6th August 2014 (following completion of the Waddikee transaction), Archer announced a combined JORC 2012 graphite resource at the Eyre Peninsula Project of 8.55Mt @ 9.0% Cg. This is Australia's largest JORC 2012 graphite resource. The Eyre Peninsula Project encompasses Campoona, Sugarloaf and Wilclo South areas. The result is based on a 5% lower cut-off grade and utilises the JORC 2012 definition of 'reasonable prospects of eventual recovery'.

Global JORC 2012 Graphite Resources (5% Cg cut-off)

Area	Resource Category	Tonnes (Mt)	Graphitic Carbon %	Contained Graphite (t)
Campoona Shaft	Measured	0.32	12.7	40,600
	Indicated	0.78	8.2	64,000
	Inferred	0.55	8.5	46,800
Central Campoona	Indicated	0.22	12.3	27,100
	Inferred	0.30	10.3	30,900
Wilclo South	Inferred	6.38	8.8	561,400
Combined	Total Resource	8.55	9.0	770,800

3. EYRE PENINSULA GRAPHITE

Eyre Peninsula Graphite Metallurgy

Metallurgy testwork on a bulk Campoona composite sample progressed into pilot investigations during the Quarter. Results from programs have provided the basis for a simplified flowsheet and establishment process criteria for plant design and subsequent updating of the scoping study. Focus has moved from small scale tests to investigation and piloting of the individual unit process operations ahead of advancing the Campoona Feasibility study. Systematic testing of the composite sample from of the starter pit zone at the Campoona Shaft deposit was taken through ore preparation and bulk rougher and scavenger flotation.

Pilot scale testwork has shown that coarse milling of the ore is not required before primary beneficiation. The highly weathered ore can be slurried into pulp for flotation feed by blunging in a modified twin-shaft, inclined-trough mixing machine. The consumption of power and wear materials is much lower than an equivalent milling operation. Early rejection of coarse barren gangue mineral is enabled during flotation of the slurried ore allowing selection of proportionately smaller equipment.



A 600 kg portion of this composite sample was treated in a campaign of flotation to yield approximately 230 kg of rougher concentrate. This bulk sample will be used for grinding testwork at a scale useful for mill selection, media specification and estimation of power demand as well as providing bulk sample for comparative locked-cycle flotation tests.

The use of Pindari saline ground water instead of scheme supply for ore treatment purposes has been shown to yield equivalent flotation performance while lowering operating costs.

Optimization of pulp conditions for recleaner flotation was completed in small batch tests on the composite sample during the quarter. Froth optimization will be conducted in the next quarter before embarking on a systematic program of bulk locked-cycle flotation testing which will provide definitive design criteria for feasibility study purposes.

Testwork on thickened tails slurry was conducted which allowed confirmation of the concept design of the storage facility for scoping study purposes. Beaching and drying characteristics of the tailings were found to suit the topography and climate of the storage location immediately adjacent to the Sugarloaf process plant site.

The metallurgical input into the Campoona scoping study indicated the benefits of the simplified process flowsheet and using lower cost ground water. Various aspects of the process steps will be further investigated through the testwork programs to finalise the process design criteria.

Initial sighter tests were commenced on two grab samples from the Wilclo South graphite deposit. These samples were collected from existing drill intervals from upper and lower levels of the same graphitic horizon. The small batch tests consisting of flotation and gravity methods, has inferred that more than 50% of the contained graphite could be recovered into marketable flake product. This preliminary response showed consistently high graphite recovery into flake concentrate streams across all size fractions from +75 microns to above 300 microns. Further testwork is ongoing to confirm that the potential grade of the concentrate in the range of 90-95%. Definitive metallurgical testwork will be conducted on representative samples following additional resource drilling.

Archer has provided samples of final Campoona graphite concentrates to a number of international companies for them to conduct detailed testing as a possible pre-cursor to entering into either off-take agreements or taking a direct equity stake in the project. One company distributed the sample to a number of affiliates to conduct detail assessment including the manufacture of graphene materials and testing of these graphene products into high-tech electronic componentry. Testing should be concluded in the coming months.

Potable Water Supply Agreement

Archer and SA Water have agreed the terms of a Potable Water Supply Contract to supply the Sugarloaf processing facility with a potable water allowance of 40 megalitres per annum which can be increased to 80 megalitres per annum should the need arise. The Supply Agreement should be completed during the December Quarter.

With the water supply from Pindari, Archer will only need potable water for final concentrate washing.



4. GRAPHITE/GRAPHENE RESEARCH & DEVELOPMENT

The joint graphene research funded by Archer Exploration through the University of Adelaide has generated excellent first outcomes. The \$200,000 research funding over two years helps support a graphene research team at the School of Chemical Engineering under Professor Dusan Lotic.

The research has demonstrated that a wide number of graphene and intercalated graphite products from raw Campoona graphite and from Campoona medium-grade (92% C) graphite concentrates and Sugarloaf drill samples.

Archer's research is focused on the development of scalable production of graphene from its South Australian graphite deposits and graphene's broad industrial, environmental and agricultural applications.

Key outcomes thus far include:

- Graphite samples from Archer's Campoona and Sugarloaf graphite deposits have been characterized to determine mineral composition, graphitic carbon concentration and impurities as inputs into optimising processing conditions for the production of graphite concentrates and graphene based products.
- One area of research focus is in the modification of Sugarloaf graphite and Sugarloaf derived graphene as a mechanism for the capture and slow release of nitrogen, phosphorus and potassium (NPK) and other trace elements. The research is entering into the Proof of Concept stage where raw graphite and/or purified and non-purified graphite and graphene is infused with NPK and tested to determine its ability to act as a slow release fertilizer.

5. PURCHASE OF WADDIKEE EL4662 FROM MONAX MINING LIMITED

On the 19th June 2014 Archer announced that it had completed due diligence under the Sale and Purchase Agreement with Monax Mining Limited ("Monax") and the Company indicated it would proceed with the purchase of Monax's Waddikee Exploration Licence EL4662. The purchase of EL4662 was completed on the 23rd July 2014.



6. LEIGH CREEK MAGNESITE

Archer settled all disputes with Magnesium Developments Limited on the 13th September 2014 relating to the Leigh Creek magnesite deposits. This removed all impediments to progress of the Leigh Creek Magnesite project (Project).

The execution of the settlement agreement allows Archer to actively explore avenues to realize the value inherent in such a world class deposit. To that end, Archer appointed Ernst & Young to undertake a strategic review of the Project with the intent of either establishing a joint venture to co-develop the project or to look to divestment.

Settlement of the dispute brings to a close a period of over 12 months where the disputation has prevented Archer from advancing its plans for the deposits. On settlement Archer collected 97 archive boxes of technical reports on the magnesite deposits including the full Extractive Licence Application for Mt Hutton.

7. SPRING CREEK COPPER

The historic Spring Copper mine occurs on ELA 2014/025 (formerly EL 4249) which is held by Pirie Resource Pty Ltd, a wholly owned subsidiary of Archer Exploration Limited.

Copper mining ceased in 1918 when the mine de-watering pump failed and the mine flooded. The government of the day determined that the operator had 12 months to reactivate the mine or face forfeiture. The mine was handed to SA Water in 1919 and established as the source of water for the town of Wilmington. Water is currently pumped from the mine workings at the Main Shaft (Figure 1).

Archer plans to drill test the copper mineralisation to determine if economic copper exists in the breccia zone which was historically mined at grades of +10% Cu (Figure 1).

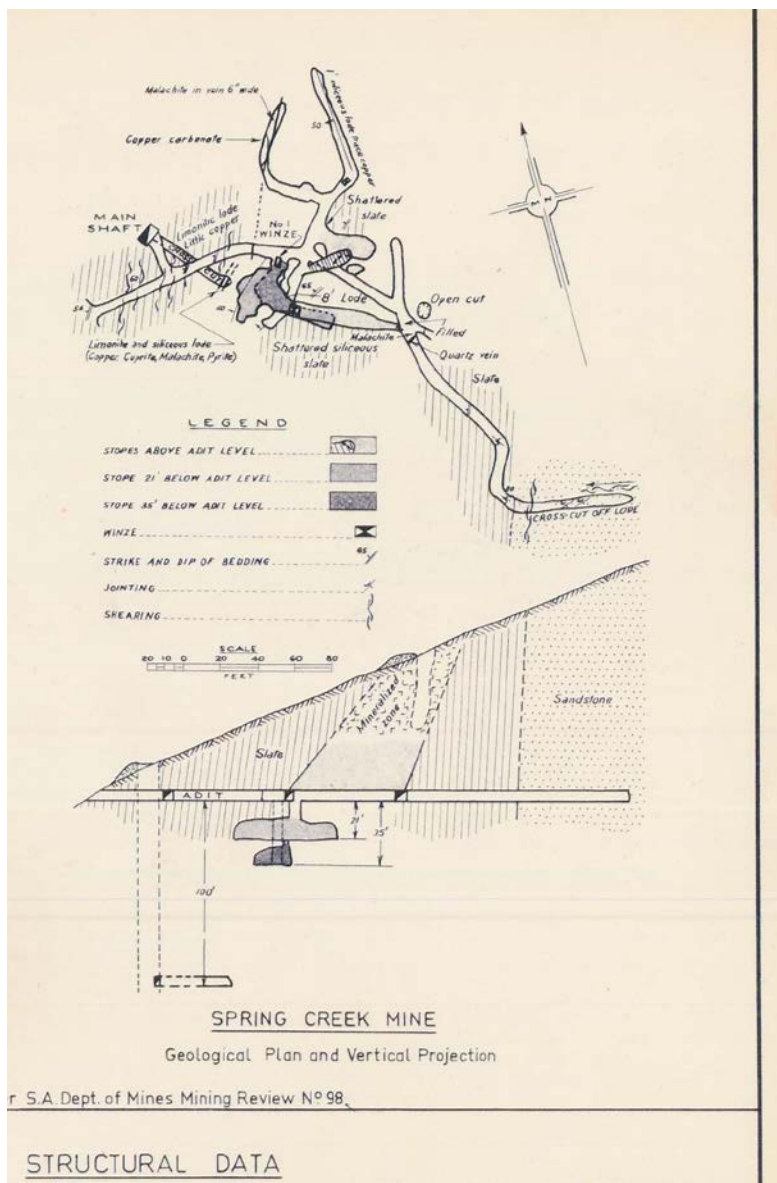


Figure 1. Schematic of Spring Creek Mine in plan and section, showing mine workings.



Plate 1. View of the Spring Creek main drive showing malachite development.

The breccia zone of interest (Plate 2) is approximately 70m in width and runs east - west cross cutting the local stratigraphy. The breccias zone is parallel to a regional fault system located 200m north. Copper carbonate (mostly malachite with minor azurite) occurs throughout the breccias.

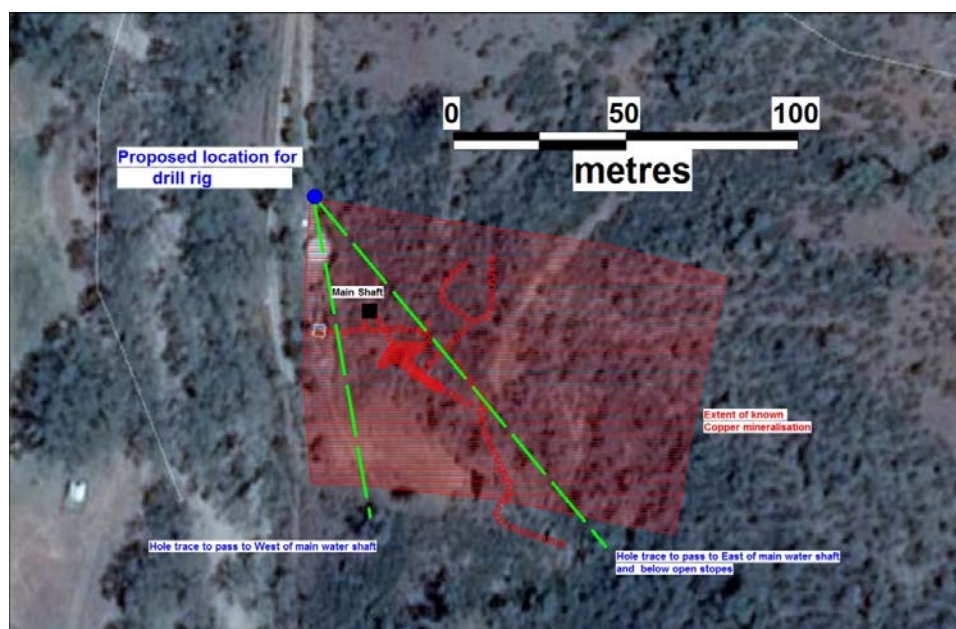


Plate 2. Proposed location of holes and their azimuths around the underground workings

The proposed diamond holes are designed to test the tenor of copper across the breccia zone.



8. FINANCIAL

The Company's cash balance at the end of the quarter was \$4.048 million.

\$1,080,000 was spent during the quarter on exploration and development activities.

At the start of August, Damien Connor was appointed to the role of Chief Financial Officer and Company Secretary following the retirement of Craig Gooden. Damien has been employed in the resources sector since 2005 and also provides company secretarial and chief financial officer services to two other ASX listed entities.

9. ACTIVITIES FOR DECEMBER QUARTER 2014

Drilling of the seven graphite prospects and the Wilclo South graphite deposit will be undertaken in two stages; Stage 1 being in Q4 calendar 2014 drilling targets not under cropping and Stage 2 early in 2015 following harvest.

Marketing of Campoona Shaft graphite concentrates will continue. Up-scale testing will continue to refine the treatment process flowsheet.

The detailed mine design for Campoona Shaft will be completed for inclusion in the MLP.

Community consultation will continue right up to the point of submission of the Mining Lease Application and PEPR. The Community Consultative Committee ("CCC") meets every 2 months and Community Newsletters are distributed prior to each CCC meeting. The first Community Open Day is planned and successfully executed on 17th October 2014.

Critical studies to support the Mining Lease Application will continue throughout the December quarter with the submission of the MLP now scheduled for early in calendar 2015.

Ernst & Young will manage the progress the strategy for the Leigh Creek magnesite deposits.



10. SUMMARY OF ACTIVITIES BY TENEMENT

The Company's interest in tenements is as follows:

Commodity	Project	Tenement	Work undertaken during the quarter
Graphite	Carappee Hill	EL4861	See report
Graphite	Wildhorse Plains	EL4693*	See report
Graphite	Waddikee	EL4662	See report
Graphite	Mt Shannon	EL4673	No work undertaken in the quarter
Graphite	Mt Messenger	EL5383	No work undertaken in the quarter
Graphite	Cleve West	EL4893	No work undertaken in the quarter
Graphite & Copper	North Cowell	EL4277	No work undertaken in the quarter
Magnesite	Witchelina	EL4729	See report
Magnesite	Termination Hill	EL4567	See report
Magnesite	Collaby Hill	ELA 2014/055	See report
Copper	Worlds End	EL4230	No work undertaken in the quarter
Copper	Wilmington/Spring Creek	EL4249	See report
Copper	Australia Plains	EL4482	No work undertaken in the quarter
Gold	Napoleans Hat	EL4668	No work undertaken in the quarter
Manganese	North Burra	EL4266	No work undertaken in the quarter
Barite/REE	Eudunda	EL4840	No work undertaken in the quarter
Barite	Ediacara	EL4869	No work undertaken in the quarter
Coal / gas	Ediacara	PELA 567	No work undertaken in the quarter

* Archer has the rights to all minerals other than uranium

All tenements are owned 100% other than EL 4693 where Archer has 100% of the rights to all minerals excluding uranium.

For further information please contact:

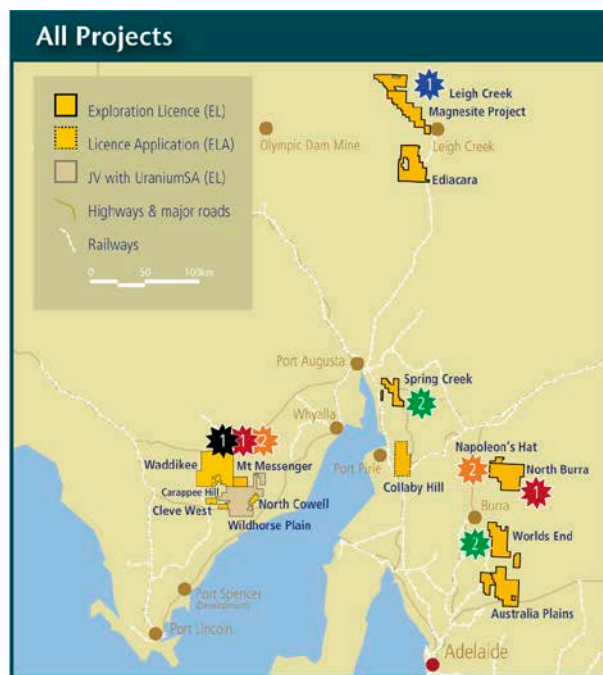
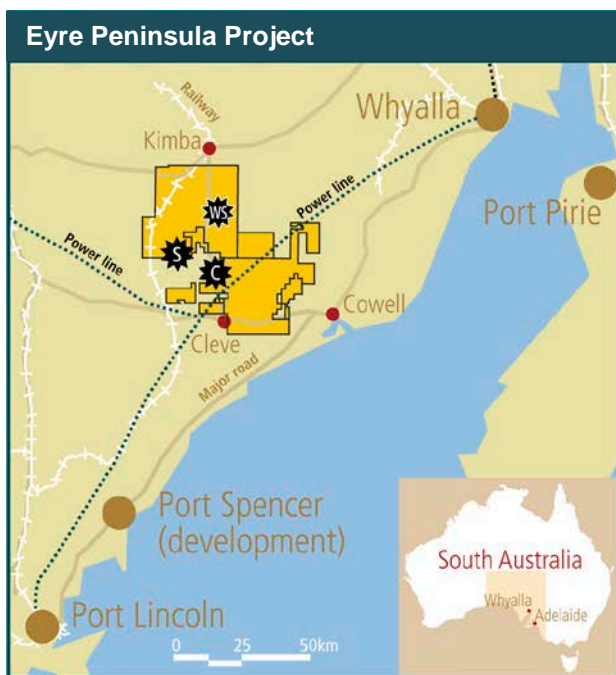
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Archer Exploration Limited is an Australian Stock Exchange listed company with 100% ownership of 16 tenements all in South Australia. Archer also has the rights to all minerals other than uranium on EL4693 covering a further 816 km². Archer's flagship project is the Eyre Peninsula Project which is located within reach of established and major developing infrastructure. Archer plans to submit a Mining Lease Proposal to the South Australian Government for approval in the first quarter of calendar 2015.



Advanced Graphite Projects

- Campoona
- Sugarloaf
- Wilclo South

Priority 1 and 2 targets:

- Graphite
- Magnesite
- Manganese
- Copper
- Gold



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The exploration results reported herein, insofar as they relate to mineralisation, are based on information compiled by Mr. Wade Bollenhagen, Exploration Manager of Archer Exploration Limited. Mr. Bollenhagen is a Member of the Australasian Institute of Mining and Metallurgy who has more than eighteen 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.

The information in this report that relates to the Campoona Shaft and Central Campoona JORC 2012 Mineral Resource estimation has been prepared by Mr. B. Knell who is a Member of the AusIMM and peer reviewed by Dr. C. Gee who is also a Member of the AusIMM (CP). Mr. Knell is a full time employee of Mining Plus Pty Ltd and Dr. Gee is a full time employee of Mining Plus Pty Ltd., both have more than five years' experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Knell has consented in writing to the inclusion in this announcement of the Mineral Resource estimation information in the form and context in which it appears. This information was prepared and first disclosed under the JORC Code 2012.