

29<sup>th</sup> October 2013

## Quarterly Activities Report Period ended 30<sup>th</sup> September 2013

### HIGHLIGHTS FOR THE QUARTER

#### CAMPOONA METALLURGY

- 12 kilograms of concentrates for marketing purposes have been produced and are pending re-cleaning.
- The production of the marketing concentrates and the re-cleaning was delayed due to key personnel involved in the metallurgical evaluation becoming unavailable for extended periods.
- Marketing efforts for Campoona concentrates has commenced and samples are being prepared for assessment.
- High grade graphite concentrate grades from bench-scale testing are repeatable for all three geological horizons of the deposit, representing from surface to the base of current drill coverage at 100 metres depth.
- Outstanding fine crystalline natural graphite concentrate grading 95 – 98% C achieved from mechanical cell flotation. Recleaning of concentrates has enabled concentrates grading to 99.4% C.
- Further improvements in recovered grades are likely as various upgrading techniques still remain to be tested.

#### CAMPOONA LAND PURCHASE

- Archer entered into a legally binding Heads of Agreement for the purchase of land at Campoona Shaft ("Campoona Property") which hosts the Company's Campoona Shaft Graphite Project.

#### MINING LEASE PROPOSAL AND PEPR

- A winter ecological survey was completed for both Campoona and Sugarloaf during the period. Archer has completed spring and winter surveys required as part of the future Mining Lease Proposal and PEPR.
- A Community Consultation Plan was completed and consultation commenced.

#### PERSONNEL

- The Managing Director's contract was renewed for a three-year term from 1 July 2013.
- Campoona Project moving to marketing phase. Dr David Lock to move from full-time to consultancy role.

## FINANCIAL

- Cash in bank on 30<sup>th</sup> September 2013 of \$7.8 million.
- \$565,000 was spent on exploration and project evaluation during the quarter.

## Summary of the September 2013 Quarter Exploration Activities

### 1. CAMPOONA METALLURGY

Emphasis was placed on laboratory testing aimed at improving recoveries while holding concentrates at the 95% - >97% purity level so that there is potential for further improvements focussed on increasing the grade of the concentrate consistently into the realm of >98% C. This had already been achieved in preliminary testing, trialled on the Upper Claystone ores.

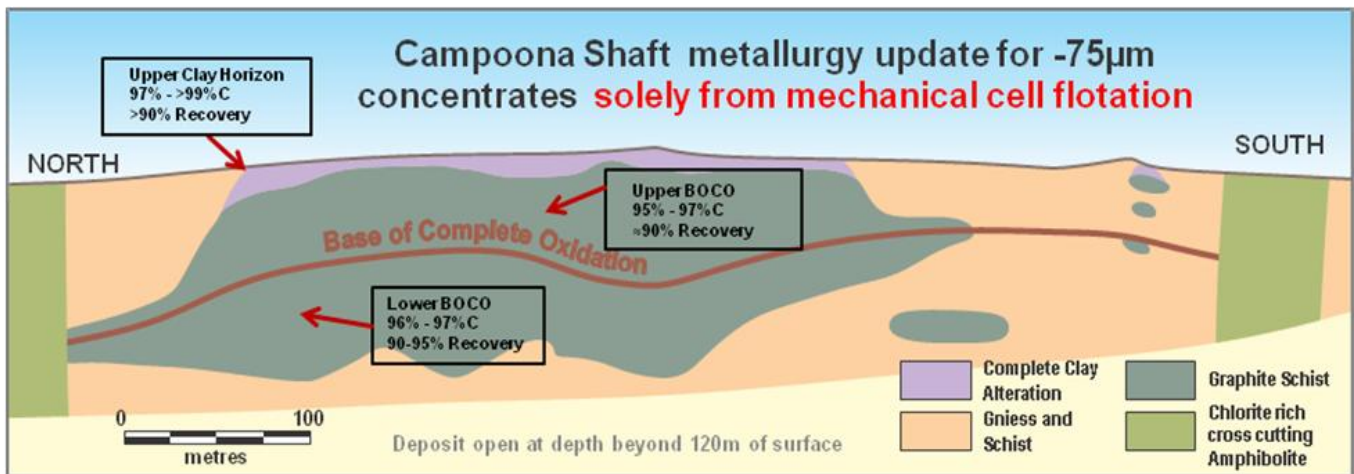


Figure 1. Summary of Campoona Bench-scale tests by geologic horizon.

Following bench-scale testing Archer moved to important bulk flotation testing during July 2013 on larger ore samples. The bulk flotation testing completed to 30 September delivered concentrates grading up to 99.4% C once the bulk material had been re-cleaned. Re-cleaning did not involve acid treatment. These results are considered as outstanding. Further grade improvements are expected once these concentrates are lightly acid cleaned and these results will be reported when they come to hand.

The results of the initial bulk floats provided the impetus to conduct further bulk floats to provide sufficient sample for initial market assessment by selected potential customers and also potential equity partners. It was expected that such tests would be concluded during September. In events outside of Archer's control, two key personnel involved in the flotation process became unavailable for periods of four and six weeks delaying completion. Despite the delay 12 kilograms of concentrates were produced and are awaiting re-cleaning.



**Plate 1. Exceptionally pure bulk flotation concentrates**

In the metallurgical laboratory testing trials, ore body assessment testing demonstrates that high purity fine graphite concentrates can be produced from the all three geologic horizons using traditional bench flotation processing methods. The same processing method (and equipment) applies to all zones in the ore body. The ore is easily crushed with early and low-cost liberation of graphite. Exceptionally high purity levels can be achieved for the graphite product – levels which come with higher market pricing.

The target for Archer is to build a facility capable of providing finely crystalline graphite concentrates grading >97% C and then depending on specific customer requirements to undertake post-recovery purification to deliver products ranging to >99% C.

## **2. CAMPOONA LAND PURCHASE**

During the quarter Archer executed a legally binding Heads of Agreement which covers the sale and purchase of land at Campoona (“Campoona Property”) located approximately 15km north of the township of Cleve on South Australia’s Eyre Peninsula. The land comprising the Campoona Property is to be excised from the existing pastoral property and settlement of the sale and purchase will occur once the requisite government approvals are received for the sub-division of the land.

Ownership of the land will provide the Company with operational flexibility as well as providing greater certainty in the upcoming government approvals process for the establishment of mine and processing operations.



Figure 2. Campoona Shaft approximate land purchase

### 3. PERSONNEL

The Board renewed to Managing Director's contract for a 3 year term commencing on 1 July 2013.

With Campoona moving to the marketing stage Dr Lock will move from full-time salaried position to a consultancy role from 1 December 2013. Dr Lock will continue to manage the metallurgical evaluation and plant design process for Archer. The move enables David to resume his longstanding career of consulting in the broader industrial minerals sector.

## **4. MINING LEASE PROPOSAL AND PEPR**

Advances were made during the quarter on activities contributing to the Mining Lease Proposal (MLP).

- The winter ecological survey was completed across several landowner properties around the Campoona Graphite Project including at the proposed Sugarloaf processing facility.
- An initial focus group meeting was held with members of the Cleve and surrounding community to provide focussed input into a broader community and stakeholder consultation plan.
- The first of a series of regular newsletters providing information on the Company's plans to develop a mine and processing facility near Cleve was prepared for circulation.
- Community Consultation Committee invitations were circulated in preparation for the first meeting in October.
- Baseline hydro-geological studies commenced.

## **5. FINANCIAL**

The Company's cash balance at the end of the quarter was \$7.8 million.

## **6. TENEMENTS**

The ELA made for ground adjacent to Worlds End (EL 4230) in the previous quarter, was cancelled. Additional historic information indicates that the copper and polymetallic mineralisation is likely to occur on EL 4230.

## **6. ACTIVITIES FOR DECEMBER QUARTER**

Bulk flotation tests of Campoona ores will continue to recover sufficient concentrate for market assessment. Market assessment will continue in the December Quarter.

Archer is scheduled to present at the Industrial Minerals Graphite and Graphene Conference in New York on 25-26 November.

Archer is planning to complete geotechnical drilling at Campoona Shaft commencing after the 2013 harvest to provide geotechnical information required for definitive pit design work.

Community consultation will continue right up to the point of submission of the Mining Lease Application and PEPR.

Exploration activities will include ongoing field mapping and sampling activities in the epithermal field of Wildhorse Plain EL 4693 and on gold exploration in the Burra area.

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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 nineteen 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 2004 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.



Archer Exploration Tenement Position 30<sup>th</sup> September 2013