ASX Release 29 April 2016

Archer March 2016 Quarterly Activities Report

ASX Code: AXE

Directors

Greg English
Executive Chairman

Gerard Anderson
Managing Director

Tom Phillips AM
Director (Non-Executive)

Alice McCleary
Director (Non-Executive)

Paul Rix
Director (Non-Executive)

Company Secretary
Damien Connor

Shares on Issue
84.7 million

Unlisted Securities on Issue
1.3 million Performance Rights

Key focus
Leigh Creek Magnesite
Eyre Peninsula Graphite (includes Campoona, Sugarloaf and Waddikee)
Additional portfolio opportunities: magnesite, manganese, copper and gold

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MARCH 2016 QUARTER HIGHLIGHTS

Graphite

- Campoona Mining Lease Proposal amended to include small-scale start-up operation to allow for product accreditation phase and the incorporation of the production of graphene
- MLP available for lodging May 2016
- Archer agreed to the Terms and Conditions for the grant of an Exploration Licence covering ELA 2015/00215 Cockabidnie which covers extensions to Central Campoona graphite deposit and Sugarloaf carbon deposit.
- LIB battery test program completed awaiting reporting

Graphene

- 240 grams of >99.9% graphene prepared to supply samples to prospective customers. The pure graphene has outstanding electrical properties making the graphene ideal for use in high-tech applications including supercapacitors.
- Archer is in discussions aimed at commencing near-term scaled graphene production

Leigh Creek Magnesite

- Discussions continued with third parties regarding access to infrastructure required for the development of the Leigh Creek Magnesite project.
- A JORC 2012 Mineral Resource was announced for the Mount Hutton Central Project Area in April.

Corporate

- Experienced magnesia professional Paul Rix appointed to the Archer Board as a non-Executive Director.
- Resignation of Managing Director.

Financial

- Archer successful in its application for participation in the Federal Government's Exploration and Development Incentive Scheme.
- Cash in bank on 31st March 2016 of $0.531 million.

Summary of March 2016 Quarter Exploration Activities

1. Graphite Mining Lease Proposal

The Draft Mining Lease Proposal (MLP) covering the establishment of the Campoona Shaft mine, the mineral processing facility at Sugarloaf and process and potable water supplies was submitted to regulators on 14th May 2015 for review.

During the period further feedback was received from the various regulators and that feedback incorporated into the preparation of the Final MLP. The pegging and application processes for the Mineral Claim and two miscellaneous purpose licences have been completed and the applications await submission.

All of the studies supporting the MLP were carried out assuming a 140,000tpa ore treatment rate, that is, the maximum rate which has greatest impacts and aspects for the community and environment. The studies highlight the small operational footprint and the low impact on the community and environment whilst at the same time providing significant benefits for the local community and region.

Whilst the MLP covered the likelihood of commencing at a lower production rates and expanding throughput in response to marketing opportunities, the Company will modify the MLP prior to final submission to expressly include an initial small-scale operation. The initial small-scale phase will limit the capital requirement during the product accreditation phase and importantly will include the ability to convert some or all of the graphite produced into very high purity graphene.

2. Graphene Research & Commercialisation Trials

During the Quarter the Company commissioned the University of Adelaide to produce 0.24Kgs of graphene powder from high grade Campoona graphite concentrates as a precursor to supplying various interested parties with samples for testing.

On the 15th March 2016 Archer received a report entitled "*Characterization of graphite from Archer Exploration deposits and their study for development of advanced graphite products*" (ARI Ref: A135498).

Aim: To make large quantity of graphene for potential clients and evaluate the exfoliation processability of supplied graphite, the purity and quality of obtained graphene.

Material transfer: Graphene powder (approx. 240 g) from provided Archer graphite (99%, HF leached).

Methods and methodology: Graphene from concentrated graphite (>99%) supplied from Archer and other graphite samples used as control was prepared by the direct liquid phase mechanical exfoliation method developed by the University of Adelaide.

Characterization Results

Graphene powder particle size:

Majority of graphene particles measured were between 20-30 µm in size as confirmed with SEM (Fig. 1c). Surface weighted mean (D[3,2]) and volume weighted mean (D[4,3]) values were 17.4 and 29.6 µm, respectively (Fig. 1b). The large sizes of prepared graphene are a result of stacking of single or few layer of graphene during the drying process. Individual graphene nanosheets can be obtained by dispersing the powder in water or organic solvent solutions. It is highly recommended to advise the client to perform dispersion of graphene powder depending on their application.

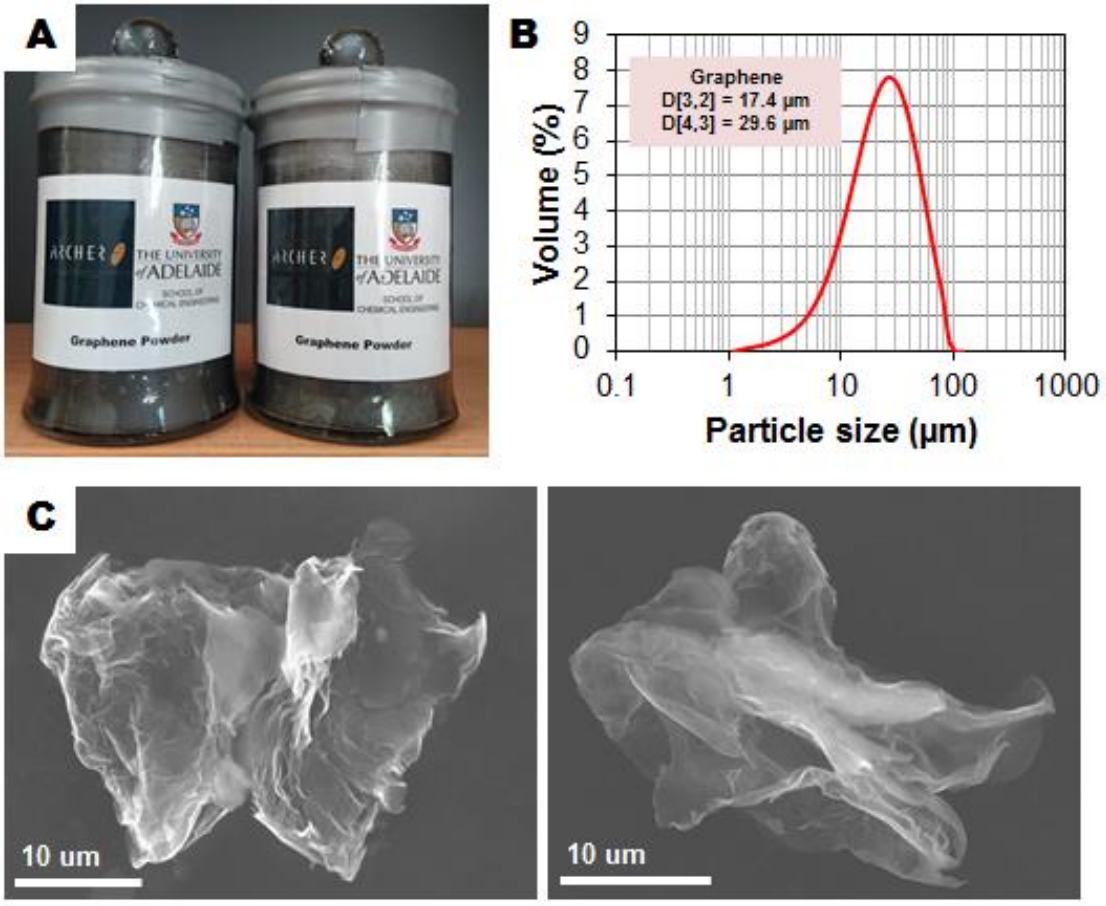

Figure 1. Summary of characterization results a) Photograph of prepared graphene powder in glass bottles (Total = 240g), b) typical particle size distribution of graphene particles, and c) high resolution SEM images of graphene sheets.

Raman characterization

Typical characteristic peaks were observed for both graphite and graphene in the Raman spectra. For graphene, the D band showed a slightly greater disorder in the sheets (0.14) compared to graphite (0.08, control) and the 2D band is more broadly curved and shifted to the left (19.02 cm^{-1}) indicating successful transformation of graphite to graphene and graphene

properties of exfoliated material (Fig. 2).

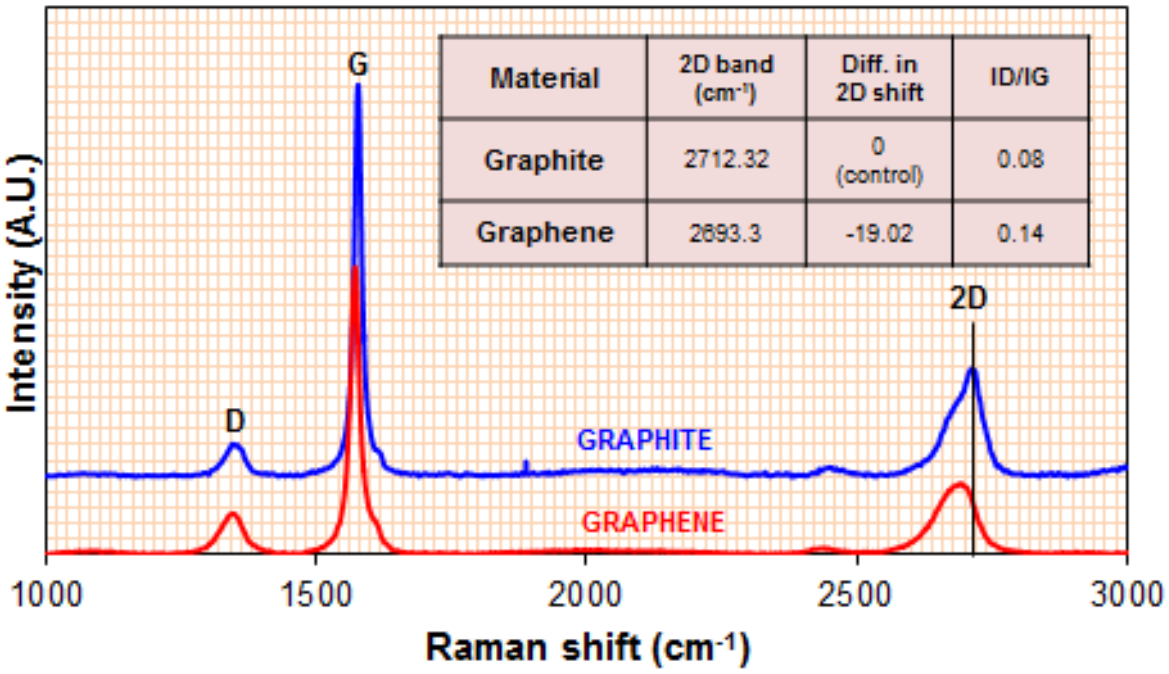

Figure 2. Raman data of graphite and prepared graphene showing typical D, G and 2D bands. Shift of 2D peak confirms the transformation of graphite into graphene.

Gravimetric characterizations

TGA graph shows that the prepared graphene powder is stable until 800°C before combustion occurs (Fig. 3) confirming high purity of prepared graphene material.

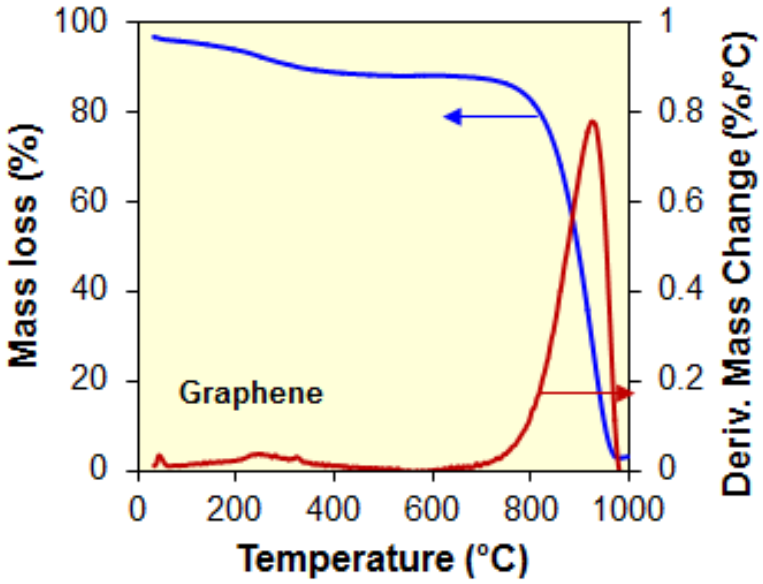

Figure 3. TGA of graphene powder combusted in air at a rate of 20°C/min confirming purity of prepared material

Conductivity measurements

Conductivity measurements performed on the bulk material prepared from the graphene powder is presented in Table 1 showing excellent conductivity properties and applicability of the prepared graphene for thin conductive coating, making electrode materials, super capacitors antennas, electrical shielding protection, wearable electronics, etc.

Table 1. Summary of conductivity measurements of graphene discs measured with a Jandel 4-point probe.

Preparation of graphene disc

- Mass of powder = 200 mg (approx.)
- Outer diameter = 13 mm
- 2 ton pressure applied
- Thickness = 0.088 ± 0.02 cm
- Number of disc pressed = 4
- Spots measured on disc = 5
- Avg. 3 measurements per spot for each disc

Sheet resistance **[4.5324 x V/I (ohms/square)]**	0.0674 ± 0.03
Bulk resistivity for a wafer **[sheet resist. x thickness (ohm.cm)]**	0.0059 ± 0.03
Electrical conductance **[1/electrical resistance (S/cm)]**	169.08 ±1

Next Steps

Archer has received interest from several third parties seeking graphene samples for testing for their special application requirements.

Archer and the University of Adelaide are in discussions aiming to agree the terms and conditions of a Heads of Agreement covering the commercialisation of graphene prodcution initially at small scale then ramping production to at least 30 tonnes per month.

SUGARLOAF "CARBON"

Previous testing has shown Sugarloaf carbon when added to soils greatly improves soil wettability and aids moisture retention. Laboratory-scale plant trails showed plots prepared with Sugarloaf carbon resulted in an over 40% increase in root development and over 30% increase in plant shoot length when compared with the same soil with no carbon addition.

Archer has worked with expert agronomists to design the next stage of testing centering on plant trails at the Waite Campus where all stages of the plant growth cycle can be monitored and soil tests undertaken to understand how the carbon reduces or eliminates the propensity for soils to become water repellant.

ELA 2015/00215 (Cockabidnie)

Archer successfully applied for ground formerly covered by EL3609 Cockabidnie which had been relinquished and become available for mining. The Company was offered ELA 2015/00215 and has accepted the conditions covering the grant of an Exploration Licence. Grant is pending.

The principal exploration target is a several kilometre extension of the Sugarloaf carbon deposit. Importantly the ELA also covers known extensions to the Central Campoona graphite deposit that is planned to be mined following the Campoona Shaft mine.

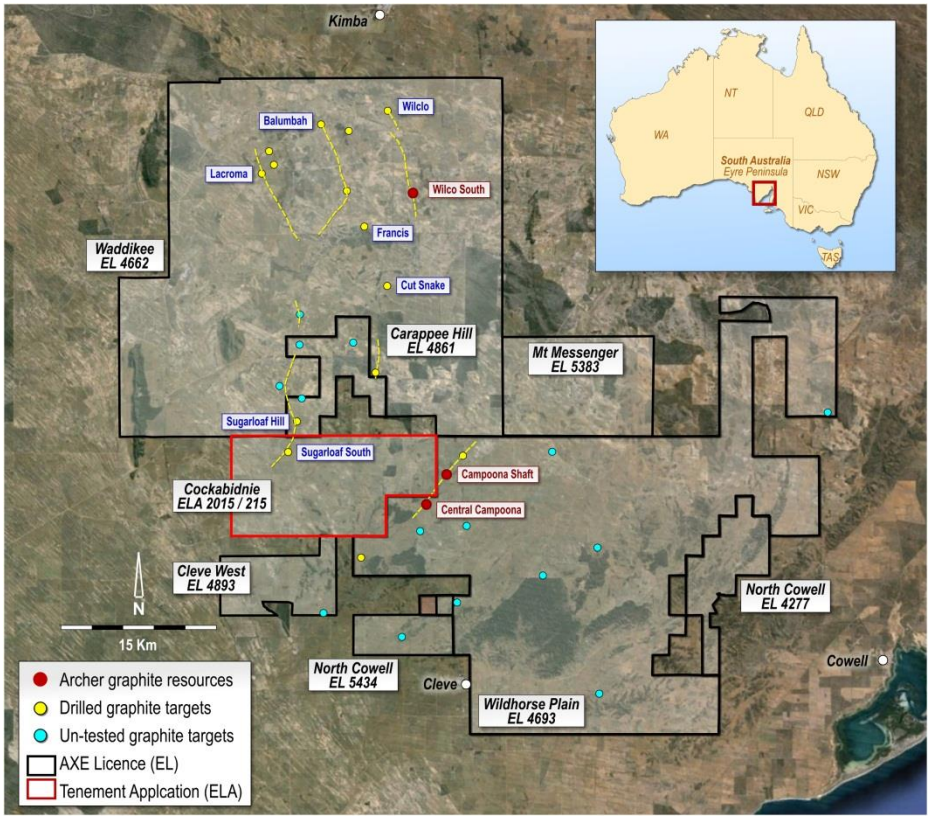

Figure 4. Location of ELA 2015/215 Cockabidnie and Archers graphite projects

3. Leigh Creek Magnesite

During the Quarter, Archer continued the magnesite test work that was commenced late 2015 and continued negotiations with third parties regarding infrastructure access and discussions with government regarding the development of Archer's Leigh Creek Magnesite Project.

Archer has been in negotiations with several parties regarding access to the infrastructure required to develop the magnesite project. The existing infrastructure is open to third party access meaning that Archer should be able to develop the project without having to construct expensive infrastructure such as rail.

On 21 March 2016 Archer announced the results of a Project Study which examined possible open pit mining and processing options and provided a strong case for undertaking a bulk trial as a prerequisite to firming up mining and processing plans. The Study provides strong impetus for the Project and Archer will use it as a basis for further evaluation towards potential development and discussions with third parties in seeking access to rail, calciners and associated infrastructure.

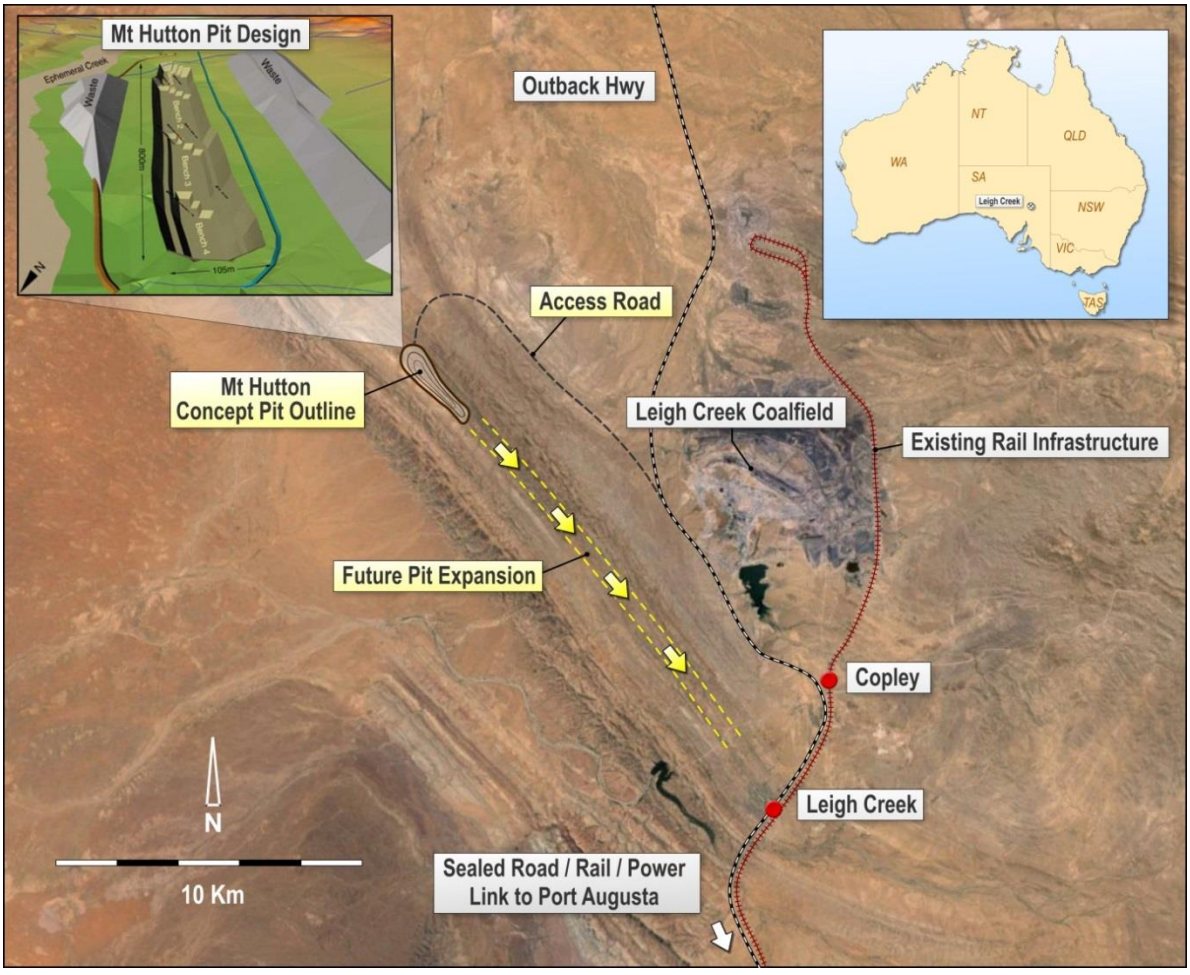

Figure 5: Leigh Creek Magnesite Project conceptual development layout

On 12 April 2016 (after the end of the March Quarter) Archer announced that the Mount Hutton Central Mineral Resource had been upgraded to JORC 2012 standard. Archer has elected to upgrade its reporting for Mount Hutton Central from JORC 2004 to JORC 2012 standard in preparation for the next phase of the continuing development of the Leigh Creek Magnesite Project. The JORC 2012 Mineral Resource at Mount Hutton Central is reported below as:

	JORC 2012 Mineral Resource		
Classification	**Tonnes (kt)**	**Mg (%)**	**MgO (%)**
Measured	12,059	24.2	40.1
Indicated	5,460	24.3	40.3
Total	**17,523**	**24.2**	**40.2**

Table 2: Mount Hutton Central Mineral Resource

On 20 April 2016 (after the end of the March Quarter) Archer announced that it had executed an MOU with a public unlisted company for the mining and supply of magnesite from leigh Creek on a long term basis. The MOU will allow Archer to accelerate the development of the Leigh Creek Magnesite Project.

4. Corporate

Appointment of new director

During the Quarter Archer announced the appointment of Mr Paul Rix as a non-executive director of Archer. Mr Rix is an experienced mining professional with more than 30 years' experience in the marketing of industrial minerals and products. From 2003 – 2013, Mr Rix worked for Queensland Magnesia Pty Ltd (QMAG) as General Manager Marketing where he was responsible for the development and implementation of QMAG's long-term marketing strategy, focusing on diversification of magnesia products and markets whilst maintaining high plant utilisation. His magnesia marketing responsibilities stretched across six continents and more than 30 countries.

In addition to considerable magnesite experience, Mr Rix has provided graphite marketing services in Australia and has successfully negotiated offtake agreements with graphite customers.

He will initially assist Archer in identifying magnesia markets and customers as well as supporting development of Archer's SA graphite and magnesite projects.

Resignation of Managing Director

On 6 April 2016, Archer announced the resignation of Gerard Anderson as Managing Director of the Company effective 30 June 2016, when his contract ends. Gerard has been a director of the Company since July 2008 and held the position of Managing Director at Archer since October

2010 and during that period has made a significant contribution to positioning the company for future growth.

5. Financial

During the Quarter Archer announced that the company had been successful in its application for participation in the Federal Government's Exploration and Development Incentive Scheme (EDI) and that EDI credits will be issued to shareholders by Archer on Friday, 13 May 2016. To be eligible, shareholders must be on the Company's share register by Wednesday, 13 April 2016 (Record Date). The EDI credits will be applied by the ATO to income tax assessed for the year ended 30 June 2016

The Company's cash balance at the end of the quarter was $531,000.

6. Activities for June Quarter 2016

Complete the agreement covering commercial production of graphene.

Report on further battery testing conducted by CSIRO.

Complete Leigh Creek Magnesite Project infrastructure access agreements with third parties and make preparations for trial mining planned for end of 2016.

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 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.

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.

7. Summary of activities by tenement

Commodity	Tenement Name	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 Shannan	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	Cockabidnie	ELA 2015/00215	See report
Graphite/Copper	North Cowell	EL5434	No work undertaken in the quarter
Magnesite	Witchelina	EL4729	See report
Magnesite	Termination Hill	EL4567	See report
Magnesite	Collaby Hill	EL 5553	No work undertaken in the quarter
Copper	Worlds End	EL4230	No work undertaken in the quarter
Copper	Spring Creek	EL5540	No work undertaken in the quarter
Gold	Wonna	EL4668	No work undertaken in the quarter
Manganese	North Burra	EL4266	No work undertaken in the quarter
Barite	Ediacara	EL4869	No work undertaken in the quarter
Gold & Copper	Blue Hills	ELA 2015/233	No work undertaken in the quarter
Coal / gas	Ediacara	PELA 567	No work undertaken in the quarter

For further information, please contact:

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