

# **ARCHER EXPLORATION LIMITED**

### **2015 Annual General Meeting**

13<sup>th</sup> November 2015

Gerard Anderson Managing Director



## **Presentation outline**

- 1. Company overview
- 2. Archer graphite
- 3. Campoona Shaft Mining Lease Proposal (MLP)
- 4. Future ores Waddikee flake
- 5. Sugarloaf carbon
- 6. Pure graphene
- 7. Archer Graphite summary
- 8. Leigh Creek magnesite
- 9. Spring Creek copper
- 10. Mt James barite
- 11. Key Milestones FY2016

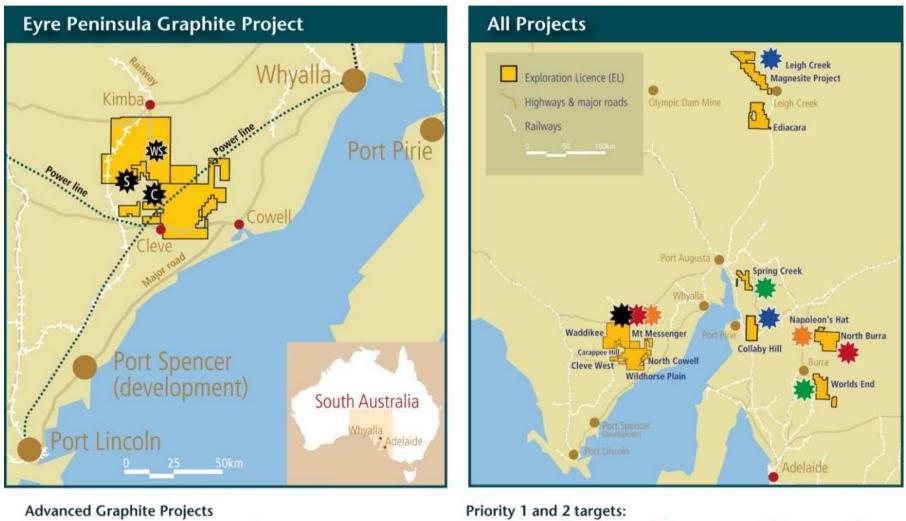
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🗰 Graphite 🐺 Magnesite 🗰 Manganese 🤻 Copper 🌞 Gold

# 1. Company overview

100% ownership of 16 tenements all in South Australia covering key commodities – graphite, magnesite, copper and gold



# 2. Archer Graphite

#### Tenement holding of 2,154km<sup>2</sup> on the Eyre Peninsula with huge resource potential

#### Overview of Archers Key Graphite Assets

Location	<ul> <li>Near Cleve-Darke Peak-Kimba, Eyre Peninsula, South Australia</li> <li>Close to Whyalla and Port Lincoln</li> </ul>
Total Area	<ul> <li>2,154km<sup>2</sup></li> </ul>
3 x Deposits	<ul> <li>Combined JORC 2012 Resources for Campoona Shaft, Central Campoona and Wilclo South of 8.55Mt @ 9.0% Cg for 770,800t of contained graphite</li> </ul>
10 x Prospects	<ul> <li>Sugarloaf, Campoona North, Wilclo, Balumbah, Francis, Cut-Snake, Argent, Jamieson Tank, Lacroma and Ridgestone</li> </ul>
Land Ownership	<ul> <li>1,403 acres surrounding the Sugarloaf deposit</li> <li>Binding agreement over sufficient land at Campoona Shaft for mining to proceed</li> </ul>
Mining Permit	<ul> <li>Final MLP for Campoona Shaft submitted December 2015</li> </ul>

#### **Details of Key Tenements\***

Name	Permit	Interest	Defined Deposits
Wildhorse Plain <sup>2</sup>	<ul> <li>EL4693</li> </ul>	100%	Campoona Project
Waddikee	<ul> <li>EL4662</li> </ul>	100%	Wilclo South Deposit; Wilclo, Balumbah, Francis, Cut Snake, Argent, Jamieson Tank, Lacroma and Ridgestone prospects
Carapee Hill	<ul> <li>EL4861</li> </ul>	100%	Sugarloaf Deposit & Campoona processing plant
Mt Messenger	<ul> <li>EL5383</li> </ul>	100%	Limited exploration on tenement to date
Cleve West	<ul> <li>EL4893</li> </ul>	100%	1 identified, untested graphite target
North Cowell	<ul> <li>EL4277</li> </ul>	100%	2 identified, untested targets lie within the permit

\* ERA application lodged covers extensions to Central Campoona resource and Sugarloaf

1. Campoona Shaft Resource Announcement 4 August 2014

2. Archer has 100% of mining rights to all minerals except Uranium

Source: Company Presentations and ASX Announcements



#### Locations of Resources and Exploration Targets





## 3. Campoona Shaft MLP – timeline to date



#### From first drill hole to Draft MLP submission in just over 3 years

- Exploration window limited to the period post harvest to end mid late April (i.e., <4 months per year)
- February 2012 first drilling at Campoona Shaft
- September November 2012 baseline Spring ecology studies
- December 2012 maiden JORC Resource
- 31 May 2013 acquired 568 Ha Sugarloaf Property. Purchase provided centralised processing site as well as the land hosting the Sugarloaf Graphite Deposit which has an identified Exploration Target of 40-70Mt at 10-12%C\*

\*The potential quantities and grades presented as the Exploration Target are conceptual in nature, there has been insufficient exploration to define an overall Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource).

- 1 July 2013 signed a legally binding Heads of Agreement for the purchase the "Campoona Property" covering the Campoona Shaft Graphite Project
- 17<sup>th</sup> October 3013 inaugural Community Consultative Committee Meeting. CCC representatives from throughout local community including Cleve Council, farming, business, education, EPNRM. Meetings held bi-monthly.
- Project Updates sent out in Community Newsletters to every PO Box in greater district before CCC Meetings.
- March 2014 commenced Research collaboration with the University of Adelaide into product opportunities including Sugarloaf "carbon" and graphene
- July 2014 acquired EL4662 Waddikee
- February 2015 EL 4693 Wildhorse Plain transferred to Archer
- 14 May 2015 Draft Campoona Shaft MLP submitted



## Campoona community consultation

ARC

#### Longstanding community engagement with excellent community support for project

- Focus group meeting in September 2013
- Established a Community Consultative Committee (CCC) with community representatives and Archer
- CCC meetings held regularly (≈every 2 months) during 2013, 2014 and 2015
- Provided written publications to the region through mail and internet access, including project newsletters accompanying most CCC meetings
- Provided written information in the EP Tribune
- Hosted community open house information day in October 2014
- Provided online technical study information
- Participated in annual Eyre Peninsula Field Days (Cleve)
- Liaised with Cleve Council, local and State government regulators through the life of project to dat.

	Environment Impact Assessment	Campoona Graphite Project
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Community Newsletter No.6 (top) and Community Information day poster (right).	Procedential     P	parameter

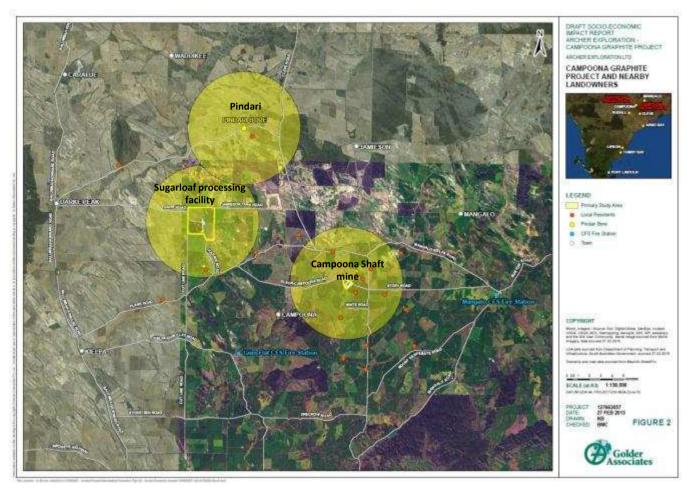


# Campoona Shaft MLP – the elements

#### Lodging of Final MLP for Campoona Shaft expected late November 2015

#### Mining Lease Proposal

- Mineral Claim (MC) Campoona Shaft ≈ 68 ha covering the conventional open pit mine
- Miscellaneous Purpose Licence (MPL) Sugarloaf - covering the Sugarloaf processing site and TSF (within Company owned land)
- Miscellaneous Purpose Licence (MLP) Process Water - covering the Pindari Borefield and process water line to Sugarloaf and potable water line from Jamieson Tank to Sugarloaf. Process water requirements 100ML/yr.



#### "Hub and spoke" mines feeding centralised Sugarloaf mineral processing facility

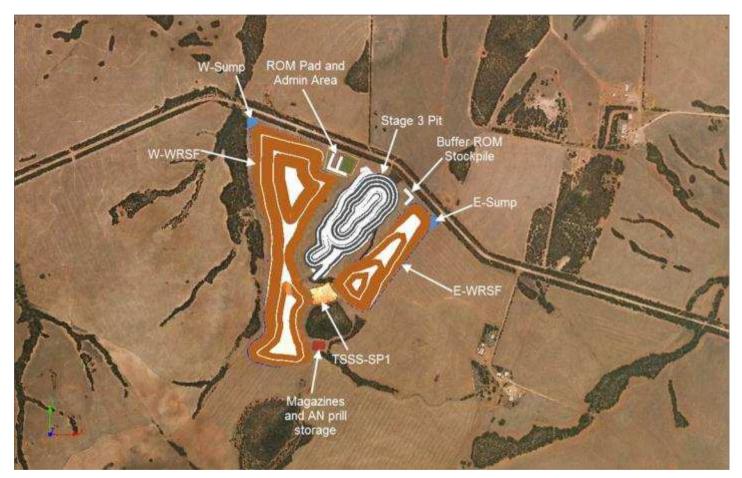


# Campoona Shaft mine

Conventional largely free dig open pit

#### Mining

- Conventional open pit mine largely free dig to 70m below ground level
- Campaign day shift mining (notionally spring and autumn), six days per week
- Dry pit. Rainfall harvested to augment bore water for dust suppression
- Starter pit west of ridge line with waste rock stored in E-WRSF providing further noise attenuation
- E-WRSF constructed Year 1-4. Battered to 20° and progressively rehabilitated.
- Trenches and bunds around WRSFs to prevent silt entering western ephemeral creek.
- ROM stockpile sized to ensure Sugarloaf supplied between mining campaigns



**Conventional 14-year mining operation** 



# Sugarloaf processing facility

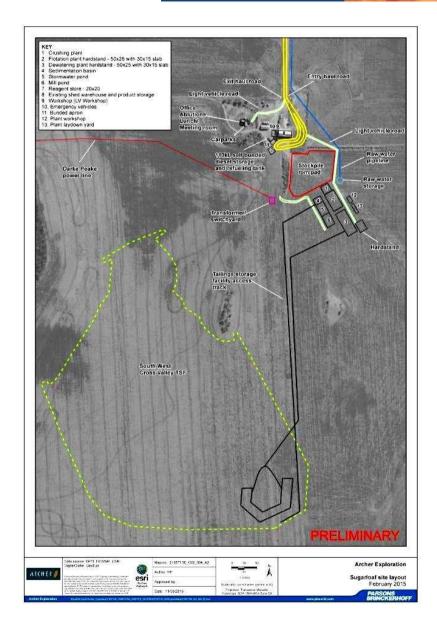
#### Scalable production profile

#### Mineral processing

- Comprehensive metallurgical studies have defined optimum processing conditions
- Process steps:
  - Crushing
  - Blunging
  - Rougher Flotation
  - Concentrate Milling
  - > Cleaner/Re-cleaner Flotation
  - Screening
  - Leaching
  - Drying
  - Bagging
- Flotation recovery and concentrate grade improve as pit is deepened



Free flowing well ordered froth conditions during bulk flotation resulting in less entrainment and excellent launder flow



## Campoona graphite product

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#### Finely crystalline graphite concentrates grading to 98%Cg which when leached will produce ≥99%Cg

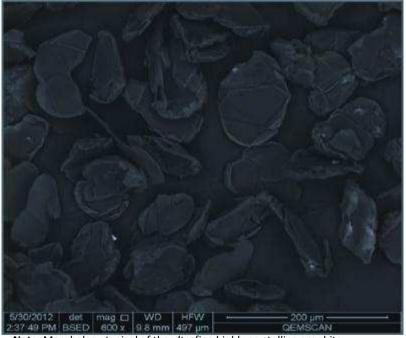
#### **Overview of Campoona Metallurgy Testing**

- Since October 2012, Archer has undertaken rigorous metallurgical bench-scale testing of representative diamond drill core samples of Campoona graphite
  - Archer's aim is to produce graphite products grading to 99.5% carbon, matching the word's highest quality natural graphite concentrates
  - Several successful tests have delivered P80 38 micron graphite concentrates grading ≥99% carbon
- The campaign of metallurgical bench flotation trials demonstrates that the combination of a high-performing graphite flotation followed by acid treatment to remove trace contaminants consistently produces a graphite concentrate product that reports high in the 99+% range over the entire deposit
- Bulk floatation tests provided concentrates grading 92% >98% Cg (concentrate grades and recoveries increase below upper clay-rich horizon)
- Acid cleaning upgrades concentrates ≥ 99% Cg
- Repeatability of results proven over "deposit-wide" comprehensive metallurgical testing

#### **Market Overview**

- High purity graphite concentrates can be provided to specific market segments batteries including Li-ion batteries, high quality lubricants, brake pads, ceramics
- Research agreement with Adelaide University focussing on new product opportunities including graphene – 99.99% C graphene produced
- Positive enquiries increasing as companies test Campoona graphite

#### Highly Crystalline Graphite Concentrate



**Note:** Morphology typical of the ultrafine highly crystalline graphite concentrate (-75 micron) showing very pure crystalline graphite flake. Concentrate processed to remove trace contaminants to achieve a fine natural graphite flake (>99%Cg)

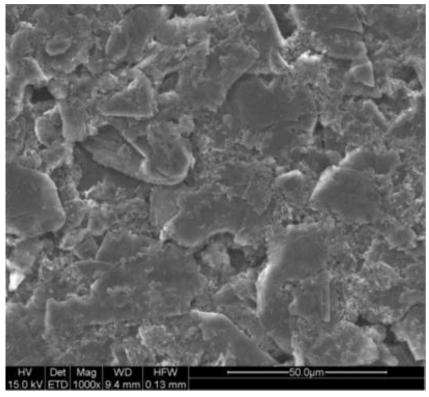


## Campoona graphite specifications

#### Campoona graphite suitable for several applications including batteries and very high quality lubricants

- Micron size of Campoona final product will depend on customer requirements
- Production of up to 10,000 tpa high purity graphite option to start smaller and increase output over time
- Typical specifications are:
  - Carbon 98.5 99.5% Cg
  - Sulphur <0.1%
  - Fe < 100ppm</li>
  - Ni, Cu, V < 10ppm
  - Specific gravity 2.35 g/cc
- Markets include batteries, high quality lubricants and greases, brake pads, ceramics and the steel industry
- Application in lithium-ion batteries tested
  - Battery electrodes were prepared from Campoona natural graphite and other commercially available synthetic graphite powders, which were then used to construct coin cells in a half-cell configuration. The performance of each cell and the properties of the anodes in each cell were then tested. Tests showed that the performance of Campoona graphite in terms of charge capacity, was equivalent to that of the commercially available synthetic graphite.
- Lithium-ion battery use is expected to increase dramatically:
  - Electric cars
  - Lithium-ion batteries for storing electricity generated by roof-top photovoltaic systems have the potential to fundamentally change the retail electricity market and to substantially increase demand for high quality graphite. These systems are commercially available now.

Central Campoona, a faulted off-set of Campoona Shaft, has the same metallurgical performance. Lacroma on EL4662 provides a third future ore opportunity that can be processed through the same plant



SEM image of 99.5% Cg Campoona micronised graphite

## Campoona Project – two step approval process

Lodging the Campoona Shaft Mining Lease Proposal is a significant Project milestone

#### Mining Lease Proposal

- Lodging of Final MLP expected early December 2015
- The essential key outcome of developing the mining lease proposal is a demonstration of a net public benefit for the proposal and a clear identification of the main risks associated with the proposal and their conceptual management, leading to a proposed set of environmental, social and economic outcomes to be achieved for constructing, operating, progressively rehabilitating and completing the mine that are broadly acceptable to stakeholders.

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• Formal evaluation including public commentary will commence on lodgement. Review process to take up to 6 months.

#### Program of Environmental Protection and Rehabilitation (PEPR)

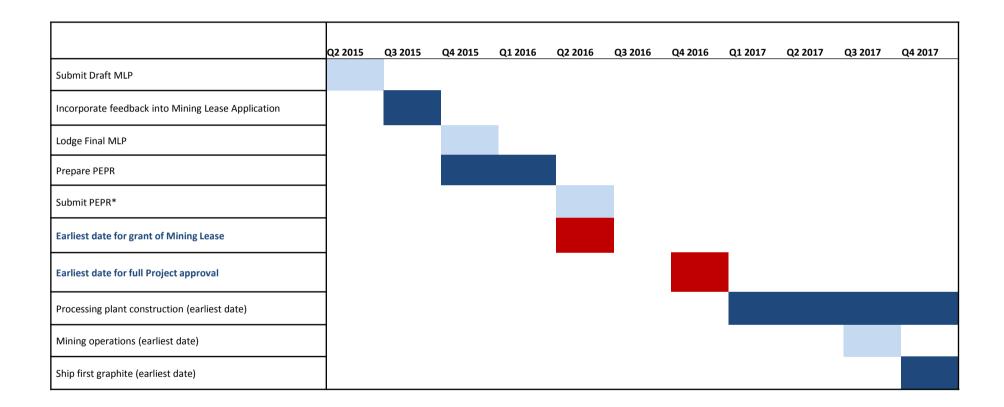
- Next we will need to submit a PEPR that must include a description of the environment to a level of detail appropriate to the risks associated with the proposed operation.
- To complete the PEPR the description of the proposed operation must be of a firm final design and comprise detailed specifications of infrastructure elements, their scale, and the processing and mining techniques to be employed. For Archer this will necessitate off-take agreements to quantify production output and therefore project size.
- The PEPR must summarise the main risks associated with the proposal and the agreed outcomes as identified in the proposal. For each outcome, the PEPR should clearly outline the control measures to be used and demonstrate that they are practical and are likely to achieve the agreed outcomes. Particular emphasis will be placed on developing detailed measurement criteria that will be used by DSD and the Archer to assess whether these outcomes have been achieved.
- PEPR requires "as built" design drawings final plant size dependent on securing off-take.
- The plan is to submit the PEPR submitted in June 2016.

#### **Minimal additional studies to support PEPR**



## Campoona - likely Project timetable

#### Final MLP lodged; PEPR to be lodged ≈ June 2016



\* PEPR requires finalisation of size of operation which in turn is dependent on off-take agreements

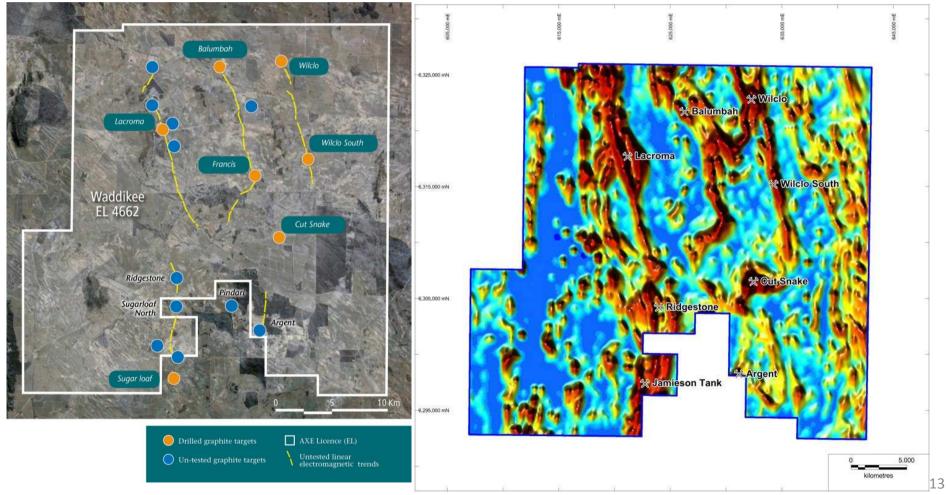
## 4. Future ores - Waddikee Flake



Wilclo South JORC 2012 Resource of 6.28Mt @ 8.8% Cg over a strike of 1.2 kms. Recent drilling extended the strike by a further 1.2 kms. Wilclo to Wilclo- South strike potential is over 11kms. Infill drilling expected to result in significant resource upgrade.

#### Waddikee Flake samples

Large flake graphite was intersected at Wilclo, Wilclo South, Cut-Snake and Argent prospects adding to flake previously identified at Francis.



Source: Company Presentations and ASX Announcements



## Waddikee Flake

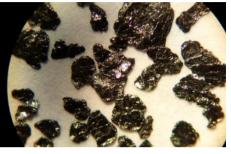
#### Wilclo South: ≈50% of graphite recovered as Extra Large, Large, Medium and Fine Flake

- Wilclo South deposit and Francis prospect produced Extra Large, Large, Medium and Fine Flake graphite at grades of 91-92% Cg from basic Halutain superpanner sorting
  - Grades expected to improve with additional standard processing
  - laboratory tests showed excellent flake recovery
  - > inferred 42-55% of the graphite recoverable as Flake

Graphite size (μm)	Grade (% Cg)	Graphite distribution in flake product (%)
Extra large / Jumbo flake +425µm	92.2	5%
Extra large flake +300µm	91.6	10%
Large flake +180µm	91.8	29%
Fine & Medium flake +75µm	92.3	56%



Flake aggregates from RC drill chips





+425µm fraction showing Extra Large – Jumbo flake

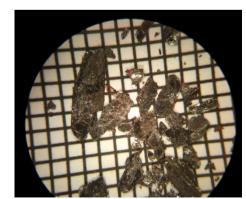
Extra Large Flake +300µm



Large Flake +180µm



Medium Flake +125µm



Argent graphite prospect extremely coarse graphite released by knapping a surface rock. Note: the square scale grid is 1 millimeter

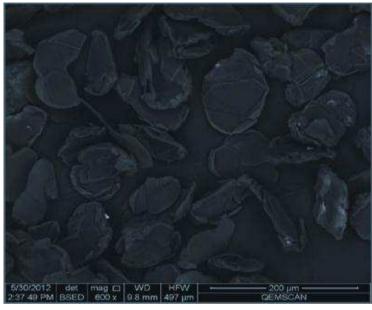


Fine Flake +75µm

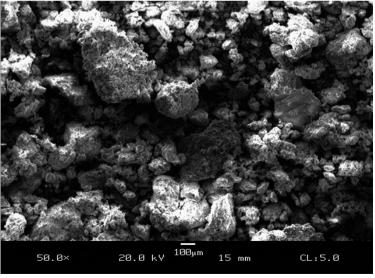
## 5. Sugarloaf carbon – unique attributes

#### Soil conditioning properties

- Initial research included extracting graphene from Sugarloaf carbon and applying graphene coatings on superphosphate to try to slow the release rate of the nutrients. This work was very successful however, the added costs of producing graphene and the costs of applying it to already expensive fertilizers was likely to produce a cost prohibitive product.
- Next research looked at Sugarloaf carbon itself given its unique physical and chemical characteristics that distinguish it from crystalline graphite
- Physically Sugarloaf consists of porous, matted, predominantly nongraphitic carbon with low crystallinity
- Chemically Sugarloaf carbon contains 11 out of the 13 nutrients important for plant growth. For macro and micro nutrients, these are nitrogen (N), potassium (K), phosphorus (P), magnesium (Mg), sulphur (S), iron (Fe), copper (Cu), zinc (Zn), manganese (Mn), boron (B), and calcium (Ca), respectively.
- Run-of-mine (raw) Sugarloaf carbon when added to soils improves soil wettability
- Macro- and micro-nutrients present in raw Sugarloaf carbon occur in both soluble and slow soluble forms provides both immediate release and longer-term release of nutrients
- Initial plant trials have been very encouraging



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Crystalline Campoona graphite

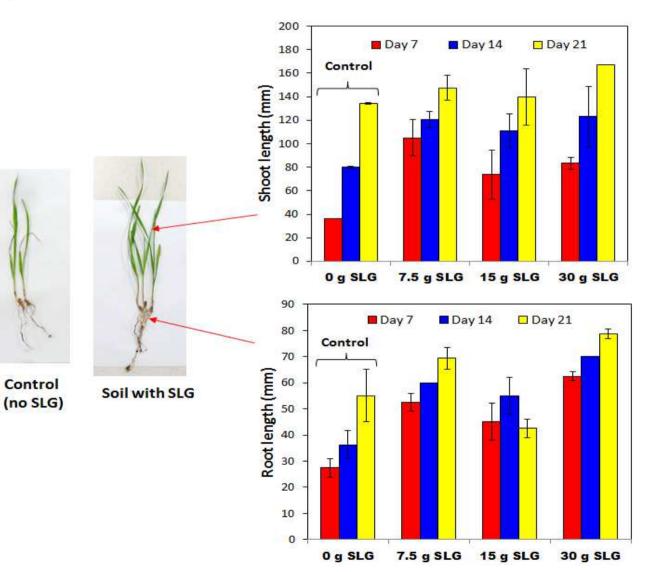
Porous carbon accretions from Sugarloaf



# Sugarloaf plant trials

#### Sugarloaf carbon substantially increases plant growth

- When compared with control samples over 21 days the addition of Sugarloaf carbon:
  - Increased root length by >45%
  - Increased shoot length by >30%
  - **o** Plant stems noticeably thicker
- Analysis of nutrient uptake is still in progress however preliminary results indicate significant nutrient uptake by plants does with Sugarloaf carbon.
- Full results to be reported once collated



## Sugarloaf carbon – enormous potential



#### Soil conditioner

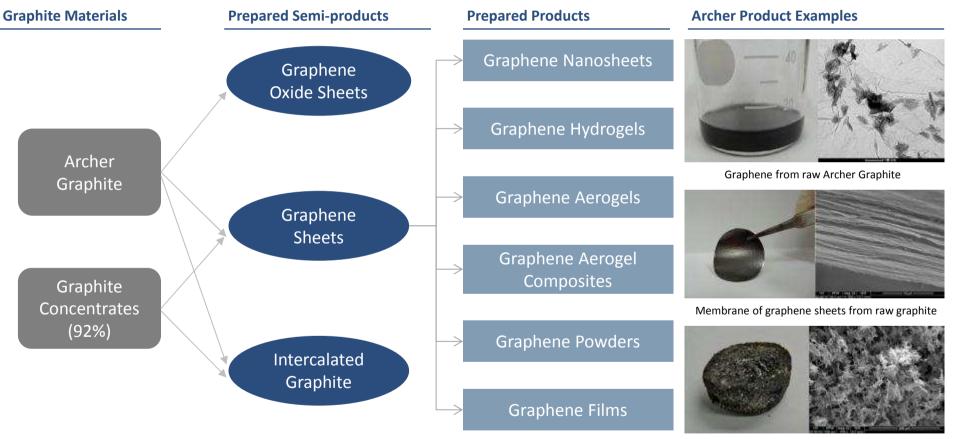
- Many of Australia's soils are ancient and skeletal and have been heavily leached of nutrients. Farming ventures rely on the application of high-cost fertilizers to provide macro-nutrients NPK (+ S, Ca and Mg) and micro-nutrients (trace elements Cu, Fe, Mn, Mo, Zn, B and Cl).
- When nutrient deficiencies occur (macro or trace elements) it can cause dramatic reductions in plant growth
- Compounding the application of expensive fertilizers is that much of the fertilizer can be lost due to adverse weather such as heavy rainstorm event
- Whilst additional research is needed, Sugarloaf carbon looks likely to be able to provide a stable, natural product that will be retained in the soil long-term to build up soil condition and improve water retention
- Sugarloaf is not intended to be a substitute for nitrogen-rich or potassium-rich fertilizers such as urea or superphosphate but is likely to be an
  important long-term soil conditioner that supports their application, enhances soil moisture retention and provides fast and slow release macro- and
  micro-nutrients to plants
- The 40 m thick deposit mostly outcrops or lies under thin cover.
- With an Exploration Target of 40-70 million tonnes grading 10-12% TC, Sugarloaf is a very large mineral occurrence that could support any sized operation for a very, very long time. Depending on the outcome of a current ERA application resource could be substantially larger.
- Further plant trials run under the expert guidance of agronomists are being designed and if they reinforce the results already achieved then commercialization would be highly likely
- Any operation would be low CAPEX (crusher -if not supplied by mining contractor basic administration and workshop facilities) and low OPEX (low strip mining, crushing, packaging and transport). No expensive beneficiation required.
- There would be a ready market awaiting at the mine gate

#### The resultant benefits to the local community and wider state could be enormous

# 6. Campoona readily gives 99.995% graphene

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Archer and the University of Adelaide have a two-year research collaboration into graphite and graphene products.



Graphene aerogel from raw graphite

Campoona high grade concentrates can deliver pure 99.99% graphene

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# Campoona readily gives 99.995% graphene

High grade Campoona graphite concentrate enables production of pure graphene



What A\$10,000 of graphene looks like!

Graphene powder





Pure graphene conductive film



Graphene composite

Pure graphene is rare and its production opens up huge possibilities for the Company



# 7. Archer Graphite - summary

#### Australia's largest JORC 2012 Graphite Resource

#### **Executive Summary**

	Large Position in a		Location	
1	Premium Graphite Location	<ul> <li>2,154km<sup>2</sup> of tenements near Cleve-Darke Peak-Kimba on Eyre Peninsula, South Australia</li> <li>Eyre Peninsula is Australia's premier graphite exploration and production region</li> </ul>	Key Graphite Projects	
2	Multiple Discovered Resources <sup>1</sup>	<ul> <li>Combined JORC 2012 Resources for Campoona Shaft, Central Campoona and Wilclo South of 8.55Mt @ 9.0% Cg to give 770,800t of contained graphite</li> <li>Campoona Shaft Total: 1.65Mt @ 9.2% Cg (151,400t contained graphite)</li> <li>Central Campoona Total: 0.52Mt @ 11.1% Cg (58,000t contained graphite)</li> <li>Wilclo South Total: 6.38Mt @ 8.8% Cg (561,400t contained graphite)</li> </ul>	Kimba Port Piri	
	High Quality Graphite	<ul> <li>Comprehensive metallurgical tests completed that demonstrate the ability to deliver high purity, high value, crystalline fine graphite (plant to be constructed at Sugarloaf)</li> <li>Campoona Shaft graphite compares very well with synthetic graphite in lithium-ion batteries</li> <li>Large to jumbo Flake recovered from Wilclo South and Francis and further Flake deposits indicated at Wilclo, Cut-Snake, Balumbah and Argent</li> </ul>	Port Spencer (development) South Australia	
4	Research Unlocking Product Potential	<ul> <li>Sugarloaf "carbon" has unique physical and chemical properties that indicate potential as broad acre, dryland soil conditioner</li> <li>Pure graphene products derived from leached graphite concentrates</li> </ul>	Advanced Graphite Projects	
-	Exploration & Expansion Upside	<ul> <li>High quality airborne EM and magnetic coverage across key areas</li> <li>Numerous drilled graphite prospects requiring small amount of additional drilling to reach Resource status</li> <li>High quality EM coverage strongly indicates Prospect continuity</li> </ul>	<ul> <li>Campoons Sugarloat Wilcle South</li> <li>Low sovereign risk, good access to infrastructure</li> <li>High quality product</li> <li>Excellent recoveries</li> <li>Combined deposit to support ≈20 year project</li> <li>Predominantly free-dig, open cut mining with low overall strip ratio</li> <li>Final Mining Lease Proposal submitted</li> </ul>	
6 I	Close to Existing Infrastructure Network	<ul> <li>Power and major road infrastructure all located within the perimeter of the tenements with access to various port options</li> <li>Substantial groundwater aquifer (Pindari) located ≈10km north of Sugarloaf plant site to supply the full process water needs of extended project. Agreement signed with SA Water for the supply of potable water to project.</li> <li>Archer owns land at Sugarloaf and has a legally binding agreement to purchase land at Campoona Shaft</li> </ul>		

# 8. Leigh Creek magnesite update



#### Largest cryptocrystalline magnesite deposit in the World with JORC Resource of 453 Mt grading 41.4% MgO

- Leigh Creek was put up for sale and or JV during 2015
- Magnesite is a specialty industrial mineral. The most likely buyers/JV partners include companies already in the magnesia business, companies with access to cheap energy (45% of cash costs related to energy requirements to calcine or deadburn magnesite to produce magnesia products) or from investment funds wishing to purchase world class assets.
- The timing of the sale/JV coincided with a decline in global metals/minerals prices and a general flight away from minerals investment
- A non-binding bid was received from overseas company but was subsequently withdrawn when that company was faced with a significantly devaluing currency
- Closure of coal operations at Leigh Creek whilst unfortunate, presents opportunities to Archer in terms of access to infrastructure (rail line and housing/accommodation)
- Archer signed a non-binding MoU with Leigh Creek Energy (ASX:LCK). LCK is looking to develop an *in situ* gas project at Leigh Creek which, if developed, could supply gas to a magnesia operation based on the Mt Hutton magnesite deposit at Leigh Creek.
- Mt Hutton was previously the subject of a granted Mining Lease. Archer has all of the historic reports including a complete Extractive Mineral Licence Application, that could be readily updated and resubmitted to government as a Mining Lease Application.
- Other new development options are being considered that could accelerate development

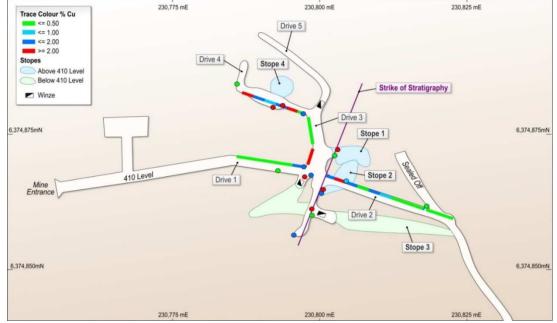
Leigh Creek magnesite is for sale or JV but not at any price. Archer believes Leigh Creek is a very valuable asset that will be retained by the Company unless it receives bids to buy or JV that reflect the Project's valuation

# 9. Spring Creek copper



#### High potential to define un-mined high grade copper mineralization immediately below the shallow underground workings

- The historic Spring Creek copper mine is located 30km south of the township of Wilmington, South Australia
- Copper mining ceased in 1918 when the mine de-watering pump failed and the mine flooded. The government determined that the operator had 12 months to reactivate the mine or face forfeiture. Pumps failed again and the mine was relinquished.
- The historic mining records at Spring Creek document what can be described as a classic supergene copper profile with the uppermost portion comprised solely of copper carbonates [malachite (CuCO<sub>3</sub>·Cu(OH)<sub>2</sub>) and azurite (2CuCO<sub>3</sub>·Cu(OH)<sub>2</sub>)] which pass vertically into copper oxides cuprite [(Cu<sub>2</sub>O) and native copper (Cu)] before passing vertically into transition sulphide zone consisting of chalcocite (Cu<sub>2</sub>S) and covellite (CuS).
- Primary sulphides were never encountered meaning that the primary mineralisation is likely to occur below the flooded workings



Plan view of underground workings, face and point sampling copper assays

- Negotiated with SA Water to access the historic Spring Creek copper mine to conduct underground face sampling
- Three separate drives were sampled and assayed for copper. The results demonstrate that the multiple high grade copper bodies have a halo of mineralisation averaging 1-3% Cu. Point sampling of remnant pillars within one stope accessible on the one level sampled indicate grades of over 8% Cu which mirrors historic mined grades.
- SA Water has expressed concerns stating "while the risk from the drilling may be very low, the consequence for the water supply are significant." SA Water has indicated Archer has to submit a contingency plan for the supply of water in the highly unlikely event that the drilling may impact the water quality. Note holes will be small diameter (60mm OD BQ), drilled without drill additives and grouted immediately on completion.
- Subject to negotiating access to drill from SA Water, Archer plans to source a small underground diamond drill rig and drill a series of fan holes designed to
  intersect extensions to copper lodes below the mined out areas. Drilling from underground will determine the width and grade of the en echelon mineralisation
  within the cross cutting breccia.

## 10. Mt James barite

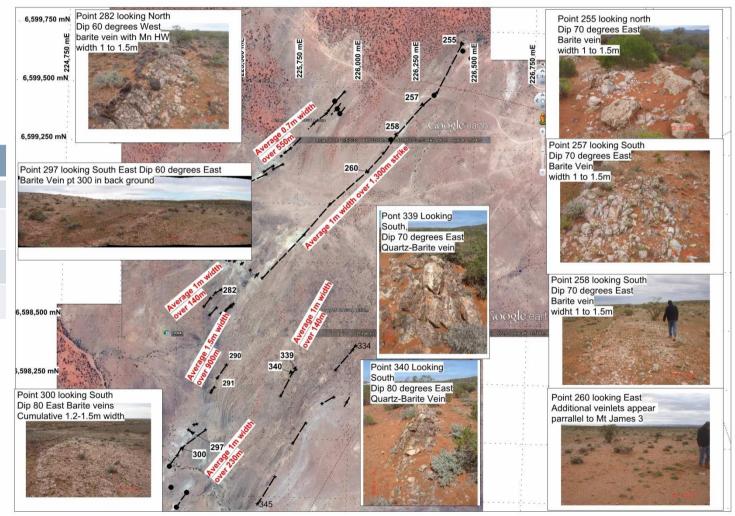


#### Barite (BaSO4) used extensively in oil and gas drilling where its high specific gravity is used to reduce the risk of blow-outs

- The Mt James barite (BaSO<sub>4</sub>) prospect within EL 4869 (Ediacara) has numerous barite veins where widths vary from 0.2m to +1m and strike over many 100's of metres
- American Petroleum Industry (API) Drilling Standards are:

Requirement	Standard
Density	4.20 g/ml, minimum
Water-soluble alkaline earth metals, as calcium	250 mg/kg, maximum
Residue greater than 75µm	Maximum mass fraction 3.0%
Particles less than 6μm	Maximum mass fraction 30%

- Density standard can be met sampled veins report densities from 3.6 to 4.5
- Calcium levels achieved
- Size standards met
- Potential DSO project involving mining, crushing and screening
- Located close to Leigh Creek
- Potential to service Cooper Basin oil and gas drilling



View of distribution of barite veins with photo inserts of outcropping barite

# 11. Key milestones FY 2016

#### Graphite

Campoona Graphite			
<ul> <li>Submit the Final Campoona Mining Lease Proposal</li> </ul>	November 2015		
<ul> <li>Complete purchase of Campoona Shaft land</li> </ul>	May 2016		
<ul> <li>Secure off-take agreements/JV partner</li> </ul>	May 2016		
<ul> <li>Finalise plant capacity and complete "as build" design drawings</li> </ul>	June 2016		
– Submit PEPR	June 2016		
<ul> <li>Sugarloaf carbon</li> </ul>			
<ul> <li>Complete existing lab-scale trial</li> </ul>	December 2015		
<ul> <li>Complete up-scale plant trails</li> </ul>	May 2016		
<ul> <li>Identify pathway to commercialization</li> </ul>	June 2016		
<ul> <li>Archer graphene</li> </ul>			
<ul> <li>Produce a range of pure graphene products</li> </ul>	December 2016		
Magnesite			
<ul> <li>Sell/JV or progress development options</li> </ul>	June 2016		
Key Exploration Targets			
<ul> <li>Spring Creek copper*</li> </ul>	March 2016		
<ul> <li>Napoleon's Hat gold drilling</li> </ul>	April 2016		
<ul> <li>Drill Mt James barite to confirm vein widths and test against API standards</li> </ul>	April 2016		
* subject to negotiating access with SA Water			

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## Disclaimer



#### **Competent persons statement**

The exploration results and Exploration Target 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 styles of mineralisation and types 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.

#### **Forward looking statements**

The information in this presentation is published to inform you about Archer Exploration Limited and its activities. Some statements in this presentation regarding estimates or future events are forward looking statements.

Although Archer Exploration Limited believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results and outcomes will be consistent with these forward-looking statements.