

ASX Code: AXE

#### **Directors**

Greg English Chairman

Gerard Anderson

Managing Director

Tom Phillips AM

Director (Non-Executive)

Alice McCleary

Director (Non-Executive)

CompanySecretary

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)



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#### **HIGHLIGHTS**

- Campoona Shaft Draft Mine Lease Proposal (MLP) lodged with the South Australian government's Department of State Development for review
- The Draft MLP Application is the culmination of 18 months of detailed studies outlining the technical, environmental and social aspects of the proposed mining and graphite manufacturing operations
- The Draft MLP proposes mining of up to 140,000tpa of Campoona Shaft graphite over an initial almost 14-year mine life
- Ore to be processed at proposed Sugarloaf processing facility to produce 10,000tpa of >98.5% Cg graphite concentrate
- Campoona natural graphite has been shown to be suitable for lithium-ion battery anodes
- Up to 42 full and part-time mining and processing jobs and an estimated additional 135 indirect flow-on jobs
- Archer's preparation of a Program of Environmental Protection and Rehabilitation (PEPR) will occur in parallel to the MLP assessment process.

Archer Exploration Limited ("Archer") advises that it has lodged the Draft Campoona Shaft Mine Lease Proposal (MLP) with the South Australian government's Department of State Development for review against the requirements of the Mining Act.

The MLP covers the mining of the Campoona Shaft graphite deposit and ore processing at the Company's Sugarloaf site located near Darke Peak on SA's Eyre Peninsula.

Following the review Archer will finalise the MLP and submit a formal application which will initiate the public consultation and assessment process.



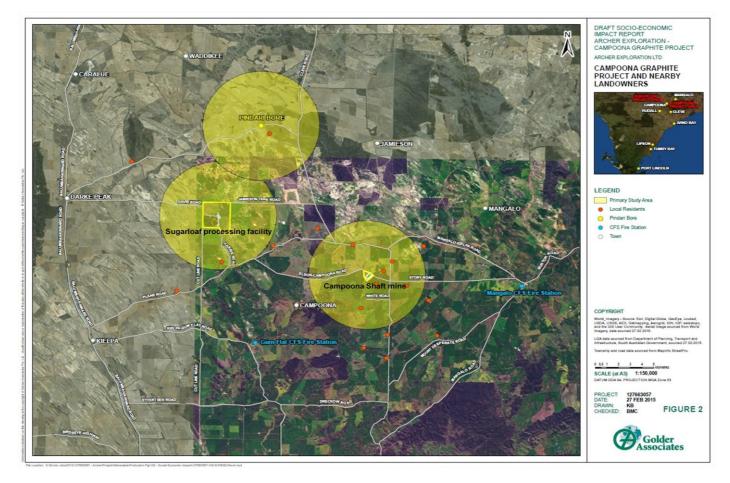


Figure 1. Location of the Campoona Shaft mine, Sugarloaf processing facility and Pindari borefield

**Mining** 

Mining at Campoona Shaft will be via conventional open cut mining methods. Mining will be conducted in campaigns, nominally during autumn and spring. Due to the deep complete oxidation profile of the deposit mining will be largely free-dig. Operations will be conducted on a day shift-only basis, Monday to Saturday. The MLP outlines that 1.65 million tonnes of graphite will be mined over approximately 14 years.

The mining campaigns will extend until such time as sufficient graphite has been stockpiled to ensure continuous feed rates to the Sugarloaf processing facility. Stockpiled graphite will be trucked to the Sugarloaf processing facility located 15 kms west of the mine site.



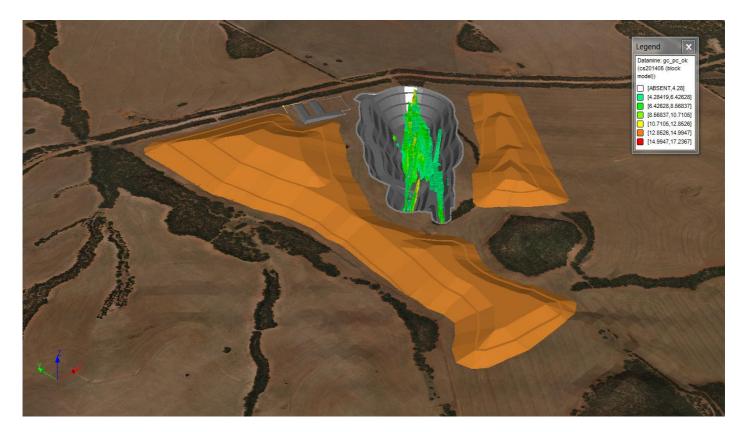


Figure 2. Isometric view looking north of the Campoona Shaft open pit mine showing the steep, westerly dipping graphite orebody as a grade block model within the pit. Open pit is shown in grey, and waste rock storage facilities (WRSF) shown in yellow. The pit contains 1,650,000 tonnes of ROM graphite.

### **Sugarloaf Processing Facility**

The graphite processing and manufacturing facility will be built on Company-owned land at Sugarloaf. The 561 ha property will easily accommodate the 250 ha MPL.

Stockpiled and blended ore averaging around 10% Cg is reclaimed via tyred loader and fed through a toothed-roll crusher. As the graphite is extremely soft, any "lumpy" ore will be broken down during slurry preparation in a blunging machine.

The ore slurry is diluted before pumping to a screen for trash removal before being directed as feed to the flotation and milling process sections.

Multi-stage flotation and two-stage milling are applied to recover the graphite into a concentrate slurry. Gangue material (predominantly quartz and kaolin) are sent to tails as a slurry.

Small dosages of kerosene, diesel and long-chain alcohol are used to improve the grade and recovery of graphite in the flotation process but will be carefully controlled and recycled to ensure no risk to the environment.



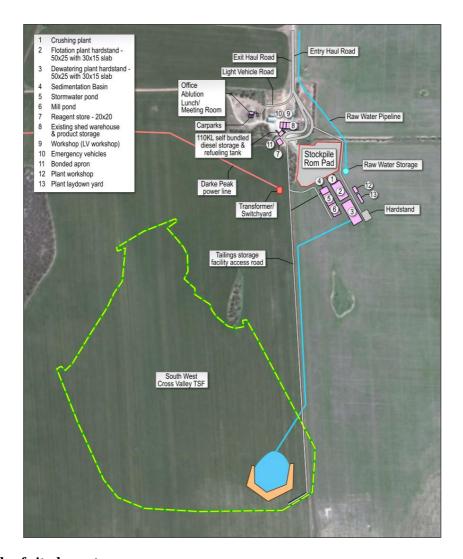


Figure 3. Sugarloaf site layout

Flotation concentrate is dewatered and washed via sedimentation thickeners before transfer to the leaching section.

The tails are also thickened and mixed with the waste streams from leaching before transfer to storage

The value of the graphite concentrate is enhanced by raising the grade from about 93% to 99% carbon via leaching. Leaching with diluted solution of hydrofluoric acid is conducted in a cascade of agitated tanks. Vent gases are captured and neutralized with lime or limestone along with the liquid waste from leaching before mixing with flotation tails slurry.

Leached concentrate is dewatered and washed in a solid-bowl centrifuge.

Final concentrate is stored in a large agitated tank before drying and packaging to customer requirements.

The product will be trucked to Port Adelaide for storage awaiting export.



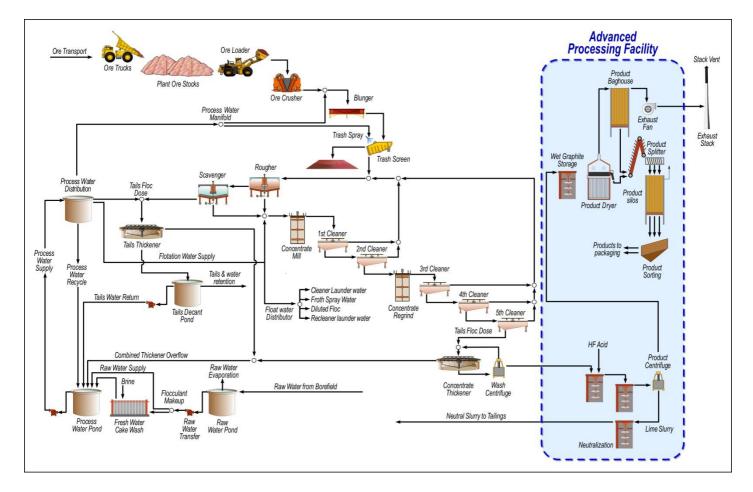


Figure 4. Process flow diagram

Process water requirements of 100ML/yr will be initially sourced from the Pindari borefield located 10 kms north of the Sugarloaf site. Pindari water is saline (around 22,500 TDS) and has no identified alternate beneficial use. As processing commences the process water supply will be augmented by the extensive recycling of decant water recovered from the tailings storage facility.

The proposed Sugarloaf processing facility will require 0.8MW of electricity. Electricity will be delivered to the Sugarloaf site by extending the existing 11kV power line from the Darke Peak water treatment facility to Sugarloaf, a distance of 4.75 kms.

### Land

Archer owns the Sugarloaf property and has a binding Sale and Purchase Agreement for the purchase of the land needed at Campoona Shaft to accommodate the mining operation.

The land required by the greater Project has been extensively cleared for agriculture. Company owned land surplus to operational needs will continue to be farmed on a contract basis.



Archer has been operating in the Cleve District for several years and over that time has developed good working relationships with the vast majority of landholders. This has enabled the Company to access multiple properties for the purposes of conducting exploration including drilling. At Campoona Shaft exploration activities included the drill out of the graphite deposit to JORC 2012 Resource standard, bulk sampling via auger drilling, geotechnical drilling, flora and fauna studies and several other studies associated with defining the aspects and impacts of the proposed mining operation.

### **Community**

Archer is committed to being a valued member of the Eyre Peninsula community and has consulted widely with the local communities since 2011 in a variety of ways. A Community Consultative Committee (CCC) was established in 2013. The CCC membership included representatives of most sections of the community and a representative from Archer. The CCC met bi-monthly to discuss the numerous technical, environmental and social studies undertaken through the development of the mining proposal and to receive feedback and incorporate community expectations back into Project plans. Newsletters providing Project updates were sent to every residence in the wider community to coincide with each CCC meeting.

Community liaison also included a focus group meeting to set the context of the Project, attendance at Cleve Field Days, a Community Open Day, presentations to the Cleve Council and on-line listing of technical reports that make up the MLP when completed.

### **Operating Philosophy**

The Campoona Graphite Project will be operated on a residential basis. Archer plans to source workers locally. The Company will buy locally and source services locally where ever it makes commercial sense to do so.

Mining at Campoona Shaft will use a local contractor to undertake the operations with up to 20 mining personnel required during each campaign. The Sugarloaf processing facility will employ up to 22 full-time staff and process operators over the life of the Project. It is expected that a multiplier of around 3 jobs for every FTE position will mean around an additional 135 position will result as a consequence of the operation.

For further information please contact:

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